



2005 NIDRR Program Directory



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National Institute on Disability and Rehabilitation Research Program Directory 2005

Produced by the
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Introduction

The mission of the National Institute on Disability and Rehabilitation Research (NIDRR) is to generate, disseminate and promote knowledge that will improve the lives of persons with disabilities in their communities. 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 2005 fiscal year.

The contextual paradigm of disability and rehabilitation research, as 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. The new 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 proposed Long Range Plan for 2005, NIDRR-funded research activities fall within three contextual domains: Research and Development, Capacity Building, and Knowledge Translation. Within these arenas, NIDRR's research is conducted via a network of individual research projects and centers of excellence throughout the country. Most NIDRR grantees are universities or providers 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 for information dissemination and utilization centers and projects, field initiated projects, research and development projects, advanced research training projects, Mary E. Switzer fellowships and NIDRR scholars, small business innovative research, and model systems of care. NIDRR also administers the Disability and Business Technical Assistance Centers.

Disability and Rehabilitation Research Projects

The Disability and Rehabilitation Research Projects (DRRP) program allows for projects with special emphasis on research, demonstrations, 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.

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.

Advanced Rehabilitation Research Training Projects

The Advanced Rehabilitation Research Training (ARRT) Program (formerly known as the Research Training Grants Program) expands the capacity of the field of rehabilitation research by providing advanced training opportunities. These projects provide rehabilitation research training for persons with clinical or other experience, who may be lacking certain formal research training. Grants are made to institutions to recruit qualified persons with doctoral or similar advanced degrees with clinical, management, or basic science research experience, and prepare them to conduct independent research on problems related to disability and rehabilitation. This research training may integrate disciplines, teach research methodology in the environmental or new paradigm context, and promote the capacity for Disability Studies and rehabilitation science. These training programs must operate in interdisciplinary environments and provide training in rigorous scientific methods.

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.

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.

Fellowships

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 of doctorate or comparable academic status, who have had seven or more years of experience relevant to rehabilitation research. Merit Fellowships are given to persons with rehabilitation research experience, 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.

NIDRR Scholars

The Scholars program attempts to build research capacity by recruiting undergraduates with disabilities to work in NIDRR-funded Centers and projects and introduces them to disability and rehabilitation research issues. Scholars gain work experience and participating centers receive a small stipend. This program is an innovative approach aimed at generating interest in research careers for persons with disabilities.

ADA Technical Assistance Projects

NIDRR administers a network of grantees to provide information, training, and technical assistance to businesses and agencies with responsibilities under the Americans with Disabilities Act (ADA). Ten regional Disability and Business Technical Assistance Centers (DBTACs) are funded to provide information and referral, technical assistance, public awareness, and training on all aspects of the ADA. Several National Training Projects target particular groups, organizations, or subject areas for ADA training and the ADA Technical Assistance coordinator contract assists all of the grantees with their activities.

Small Business Innovative Research

Small Business Innovative 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.

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.

NARIC and the *NIDRR Program Directory*

The *Program Directory* is compiled by the National Rehabilitation Information Center (NARIC). NARIC functions as NIDRR's library, providing the rehabilitation community with information and referral services to help locate pertinent research related to specific areas of expertise. 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. Copies of NIDRR-supported research products are received by NARIC and added to the reference collection and REHABDATA database. Information about holdings are 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 9, 2005. This directory may include projects that have passed the indicated extension date.

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Employment

For many people with disabilities, employment that is challenging, fulfilling, and fairly and adequately compensated is the ultimate rehabilitation outcome. For those individuals interested in workforce participation, employment shapes the lives of individuals with disabilities at all stages of life. Employment research supported by NIDRR for people with disabilities strives to identify proven job enhancements and career building blocks to sustain them in the workforce. NIDRR supports studies to improve knowledge of societal, environmental, individual, and behavioral factors that serve as barriers or facilitators for employment.

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Rehabilitation Research and Training Centers (RRTCs)
Arkansas

**Rehabilitation Research and Training Center on Improving Vocational
Rehabilitation Services for Individuals Who Are Deaf or Hard of
Hearing**

University of Arkansas
College of Education and Health Professions
4601 West Markham Street
Little Rock, AR 72205
dwatson@uark.edu
<http://www.uark.edu/deafrtc>

Principal Investigator: Douglas Watson, PhD
Public Contact: 501/686-9691; Fax: 501/686-9698

Project Number: H133B010501

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 01 \$600,000; FY 02 \$600,000; FY 03 \$600,000; FY 04 \$600,000; FY 05 \$600,000

Abstract: This program conducts coordinated research and training to enhance the rehabilitation outcomes of persons who are deaf or hard of hearing who are served by VR and related employment programs. When appropriate, the unique needs of specific subgroups within this diverse and heterogeneous population are investigated. The ultimate goal of these efforts is to improve the capacity of the VR system and related programs to address the career preparation, entry, maintenance, and advancement, as well as the community living needs, of the target population. Research activities include: investigating the impact of changes in federal employment and rehabilitation legislation and policy on the delivery of services to the target population; investigating the impact of business practices that contribute to accessible work and workplace supports to enhance the employment of the target population; and identifying, developing, and assessing rehabilitation-related innovations that enhance employment and community living outcomes of the target population.

Rehabilitation Research and Training Centers (RRTCs)
Mississippi

**RRTC on Improving Vocational Rehabilitation Services for Individuals
Who Are Blind or Have Severe Visual Impairments**

Mississippi State University
P.O. Box 6189
Mississippi State, MS 39762
schaefer@ra.msstate.edu
<http://www.blind.msstate.edu>

Principal Investigator: J. Elton Moore, EdD 662/325-2001

Public Contact: Kelly Schaefer 662/325-7825 (V); 662/325-8693 (TTY); Fax: 662/325-8989

Project Number: H133B010101

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 01 \$600,000; FY 02 \$600,000; FY 03 \$600,000; FY 04 \$600,000; FY 05 \$600,000

Other Funding: FY 01 \$100,000 (Rehabilitation Services Administration); FY 02 \$100,000 (RSA); FY 03 \$100,000 (RSA); FY 04 \$100,000 (RSA)

Abstract: This program includes a variety of research and training activities that focus on improving VR services for individuals who are blind or have severe visual impairments. Activities include: (1) investigating and documenting the impact of changes in disability and employment legislation on the unique employment-related needs of individuals who are blind or have visual impairments, as well as their impact on service delivery options and policy; (2) investigating, documenting, and analyzing existent state and federal data sets to determine different employment outcomes for persons who are blind or have visual impairments and the relationship of the outcomes to client and service provider characteristics; (3) investigating and documenting how state VR agencies, other public agencies, and private service providers overcome environmental barriers in order to improve employment outcomes for individuals who are blind or have visual impairments; (4) developing a national information and resource referral database for the training needs of state business enterprise program facilities, developing and delivering training programs to meet the identified training needs, and developing measures that can be used to evaluate the efficacy of the training; (5) conducting three conferences to train VR staff on state-of-the-art information and computer technology for individuals who are blind or have visual impairments; and (6) conducting a coordinated and advanced program of training in rehabilitation research focusing on blindness and low vision, including training in applied research methodology that is designed to increase the number of qualified doctoral-level researchers working in the area of blindness rehabilitation.

Rehabilitation Research and Training Centers (RRTCs)
Montana

Rehabilitation Research and Training Center on Disability in Rural Communities

University of Montana
The University of Montana Rural Institute:
A Center for Excellence in Disability Research, Education and Services
52 Corbin Hall
Missoula, MT 59812-7056
rural@ruralinstitute.umt.edu
<http://rtc.ruralinstitute.umt.edu>

Principal Investigator: Tom Seekins, PhD 406/243-2654

Public Contact: Diana Spas 888/268-2743 (V, information service only); 406/243-5467 (V); 406/243-4200 (TTY); Fax: 406/243-2349

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

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 eleven research projects in rural employment and economic development; rural health and disability; rural community transportation and independent living; and rural 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)
New York

**Rehabilitation Research and Training Center for Economic Research
on Employment Policy for Persons with Disabilities**

Cornell University
Program on Employment and Disability
School of Industrial and Labor Relations
201 ILR Extension Building
Ithaca, NY 14853-3901
smb23@cornell.edu
<http://www.ilr.cornell.edu/ped/dep/rrtc.html>

Principal Investigator: Susanne Bruyère, PhD; Richard Burkhauser, PhD; David Stapleton, PhD
Public Contact: Susanne Bruyère, PhD 607/255-9536 (V); 607/255-2891 (TTY); Fax: 607/255-2763

Project Number: H133B980038

Start Date: December 16, 1998

Length: 60 months

NIDRR Officer: Ruth Brannon

NIDRR Funding: FY 98 \$700,000; FY 99 \$700,000; FY 00 \$700,000; FY 01 \$700,000; FY 02 \$700,000; FY 03 \$0 (No-cost extension through 4/30/2004); FY 04 \$0 (No-cost extension through 9/30/2004); FY 05 \$0 (No-cost extension through 12/31/2005)

Abstract: Using principles of economics, this project conducts policy research on how environmental factors influence the work outcomes of people with disabilities. Research also addresses critical aspects of employment outcomes, recognizing the heterogeneity of people with disabilities, and explains the importance of interactions among the multiplicity of programs intended to meet the employment needs of people with disabilities. Components include: (1) a comprehensive analysis, using existing panel data, of the current employment status of people with disabilities; (2) a longitudinal analysis of the effects of labor market change on the employment and earnings of people with disabilities; (3) a longitudinal analysis of return-to-work after the onset of a disability; (4) a longitudinal analysis of the impact of civil rights protections on the employment and earnings of people with disabilities; (5) identification and analysis of policies that foster or impede the participation of transitioning students in rehabilitation or employment service programs; and (6) analysis of emerging and important issues affecting the employment of people with disabilities.

Rehabilitation Research and Training Centers (RRTCs)
New York

**Rehabilitation Research and Training Center on Employment Policy
and Individuals with Disabilities**

Cornell University
Employment and Disability Institute
School of Industrial and Labor Relations
201 ILR Extension Building
Ithaca, NY 14853-3901
smb23@cornell.edu
<http://edi.cornell.edu/ped/dep/rrtc.html>

Principal Investigator: Susanne Bruyère, PhD; Richard Burkhauser, PhD; David Stapleton, PhD
Public Contact: Susanne Bruyère, PhD 607/255-9536 (V); 607/255-2891 (TTY); Fax: 607/255-2763

Project Number: H133B040013

Start Date: December 01, 2004

Length: 60 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 04 \$700,000; FY 05 \$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. The immediate purpose is to contribute to the success of the transition from caretaker policies to economic self-sufficiency policies. 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; a third-year conference; a conference volume; and technical assistance to consumers on policy research and evaluation methods and data. Short-term project outcomes include: annual interpretation of updated employment rate trends; a synthesis and critique of many relevant evaluation efforts; three or more significant policy options and ideas for next steps; reviews of three or more significant policy or program successes; detailed information on interactions between numerous programs and policies, and how they discourage employment; estimates of impacts of two public policies on employment and earnings for state VR clients; estimates of the impact of the ADA on both employer provision of accommodations and job retention after disability onset; estimates of the return to higher education for those with profound hearing loss; and two additional analyses of the role that human capital plays in determining economic self-sufficiency for adults with disabilities. Intermediate outcomes include use of this information in the policy improvement effort, and long-term outcomes include policy changes that increase the economic self-sufficiency of people with disabilities.

Rehabilitation Research and Training Centers (RRTCs)
New York

**Rehabilitation Research and Training Center on Improving
Employment Outcomes**

Hunter College of CUNY
Research Foundation of CUNY
695 Park Avenue
New York, NY 10021
joneil@hunter.cuny.edu

Principal Investigator: John O'Neill, PhD 212/772-5188

Public Contact: Fax: 212/650-3198

Project Number: H133B040014

Start Date: October 01, 2004

Length: 60 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 04 \$699,981; FY 05 \$699,973

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 a disability 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 is designed to identify a variety of good practices currently being used in the State-Federal VR system across the U.S. 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 vocational rehabilitation delivery systems add to these human capital factors to improve outcomes. A Study of Disability Navigators in One-Stops collects data on Workforce Investment Act regions in which Navigators operate and compares levels of customer satisfaction and employment outcomes between regions that use Navigators and regions that have no such positions.

Rehabilitation Research and Training Centers (RRTCs)
Ohio

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

Wright State University
School of Medicine; Substance Abuse Resources and Disability Issues (SARDI)
3171 Research Park Boulevard, Room 255
Kettering, OH 45420
Jeremy.Trim@wright.edu
http://www.med.wright.edu/citar/sardi/rrtc_about.html

Principal Investigator: Dennis C. Moore, EdD

Public Contact: Connie Hart 937/775-1484 (V/TTY); Fax: 937/775-1495

Project Number: H133B040012

Start Date: December 01, 2004

Length: 60 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 04 \$699,998; FY 05 \$699,983

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 RI, 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 VR unsuccessful closures and their 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**

Virginia Commonwealth University
Rehabilitation Research and Training Center on Workplace Supports
1314 West Main Street, Box 842011
Richmond, VA 23284-2011
tcblanke@vcu.edu
<http://www.worksupport.com>

Principal Investigator: Paul Wehman, PhD

Public Contact: Valerie Brooke, Director of Training 804/828-1851 (V); 804/828-2494 (TTY); Fax:
804/828-2193

Project Number: H133B040011

Start Date: November 01, 2004

Length: 60 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 04 \$699,981; FY 05 \$699,973

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

Iowa

Model Distance-Learning Computer Training Program for Blind and Visually Impaired Individuals

Iowa Department for the Blind
524 Fourth Street
Des Moines, IA 50309
assist@blind.state.ia.us
<http://www.blind.state.ia.us/assist>

Principal Investigator: Curtis Chong

Public Contact: 515/281-1361; Fax: 515/281-5781

Project Number: H133A010104

Start Date: December 01, 2001

Length: 60 months

NIDRR Officer: Joyce Y. Caldwell

NIDRR Funding: FY 01 \$299,565; FY 02 \$299,463; FY 03 \$599,028; FY 04 \$299,778; FY 05 \$299,315

Abstract: This project creates a model distance-learning program that delivers computer training to people who are blind or who have visual impairments. The purpose of this program is to increase IT educational opportunities and employability in the IT field. Project objectives include: (1) developing a model distance-learning computer training program for people who are blind that results in employment in the IT field; (2) developing 13 distance-learning computer training courses for individuals who are blind or who have visual impairments and VR professionals; (3) training and preparing 150 individuals who are blind or who have visual impairments for Microsoft Office certification and thus prepare them for entry-level IT positions; (4) training 50 people who are blind and VR professionals to provide computer training to job seekers who are blind, thus increasing future IT educational opportunities for people who are blind and those who have visual impairments; and (5) disseminating training materials and research results to agencies serving individuals who are blind or who have visual impairments.

Disability and Rehabilitation Research Projects

Iowa

I.T. Works

University of Iowa
Law, Health, Policy, and Disability Center
431 Boyd Law Building
Iowa City, IA 52242
james-schmeling@uiowa.edu
<http://disability.law.uiowa.edu>

Principal Investigator: Peter D. Blanck, PhD, JD 319/335-9043

Public Contact: Michael Morris, JD; James Schmeling, JD 319/335-9043 (Blanck); 202/521-2930 (Morris); 319/335-8459 (Schmeling); Fax: 319/335-9098 (Blanck)

Project Number: H133A011803

Start Date: November 01, 2001

Length: 60 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 01 \$299,935; FY 02 \$299,724; FY 03 \$299,908; FY 04 \$299,788; FY 05 \$299,901

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
Mississippi

Persons Aging with Hearing and Vision Loss

Mississippi State University
Rehabilitation Research and Training Center on Blindness and Low Vision
P.O. Box 6189
Mississippi State, MS 39762
bjlejeune@colled.msstate.edu
<http://www.blind.msstate.edu>

Principal Investigator: B.J. LeJeune, MEd., RTC, CRC

Public Contact: 662/325-2001; 662/325-8693 (TTY); ; Fax: 662/325-8989

Project Number: H133A020701

Start Date: November 01, 2002

Length: 60 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 02 \$500,000; FY 03 \$500,000; FY 04 \$500,000; FY 05 \$500,000

Abstract: This project investigates strategies to improve outcomes for persons who are over 55 with hearing and vision loss, especially those who have a sensory disability and acquire a second as a result of the aging process. The project conducts a variety of research, development, training, and dissemination activities and evaluates both technology and model service delivery approaches for improving employment and community integration options. A Participatory Action Research (PAR) Team provides guidance and direction. The project solicits direct input from key stakeholders as part of the ongoing planning, development, and implementation of research activities. These activities include the use of focus groups, a panel of experts, and a study sample that includes a nationally representative sample of older individuals who are blind or visually impaired and losing their hearing, and those who are deaf or hard of hearing and losing their vision. This is a collaborative project of the Rehabilitation Research and Training Center on Blindness and Low Vision at Mississippi State University, San Diego State University, and the Helen Keller National Center for Deaf-Blind Youths and Adults.

Disability and Rehabilitation Research Projects
Missouri

**Preparing Avenues for Competitive Employment in Information
Technology (PACE-IT) Project**

University of Missouri/Columbia
Educational and Counseling Psychology
205 Lewis Hall
Columbia, MO 65211
hollidayg@missouri.edu
<http://paceit.missouri.edu>

Principal Investigator: Greg Holliday, PhD 573/882-8329

Public Contact: Lee Henson, Project Coordinator 573/884-7278; Fax: 573/884-3399

Project Number: H133A011802

Start Date: November 01, 2001

Length: 60 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 01 \$293,183; FY 02 \$290,191; FY 03 \$297,480; FY 04 \$292,620; FY 05 \$298,703

Abstract: Preparing Avenues for Competitive Employment in Information Technology (PACE-IT) develops a comprehensive, person-centered system that assists local students with disabilities in their transition to professional employment in IT-related careers following graduation. The project ensures that students with disabilities at the University of Missouri-Columbia engage in experiential opportunities in IT-related work settings with appropriate support. Participants also receive individualized accommodations, electronic portfolios, and professional mentoring in their chosen fields to enable them to be competitive in the IT job market upon graduation. The partnership involves university student services; departments of state government, other agencies, and government officials; and area businesses (totaling 21 entities).

Field Initiated Projects (FIPs)

Illinois

**LET'S ROLL: Understanding and Responding to the Needs of People
with Disabilities and the Ticket-To-Work Program**

DePaul University
College of Liberal Arts and Sciences
Psychology Department
2219 North Kenmore Avenue, Suite 420
Chicago, IL 60614
bhernan4@depaul.edu

Principal Investigator: Brigida Hernandez, PhD

Public Contact: 773/325-4840; Fax: 773/325-7888

Project Number: H133G030165

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: The mission of the project is threefold. First, the project builds scientific knowledge regarding the needs of people with disabilities as they pertain to the Ticket-to-Work program and, more generally, vocational rehabilitation services. Second, there is a concentrated emphasis on examining the diversity of needs based on racial/ethnic background and type of disability. Lastly, the project aims to understand and address the capacity of employment networks and offices of rehabilitation services in terms of their outreach and delivery of services.

Field Initiated Projects (FIPs)

Massachusetts

**Exploratory Study of the Relationship Between Stigma at the
Workplace and the Vocational Recovery of People with Psychiatric
Disabilities**

Boston University
Center for Psychiatric Rehabilitation
Sargent College of Health and Rehabilitation Sciences
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Boston, MA 02215
zlatka@bu.edu
<http://www.bu.edu/SARPSYCH>

Principal Investigator: Zlatka Russinova, PhD

Public Contact: 617/353-3549; Fax: 617/353-7700

Project Number: H133G030190

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 03 \$149,985; FY 04 \$149,938; FY 05 \$149,971

Abstract: The purpose of this project is to study the relationship between stigma of mental illness at the workplace and the vocational recovery of persons with psychiatric disabilities. More specifically, the project focuses, on one hand, on operationalizing the traumatic negative impact of stigma on mental health consumers' capacity to obtain and sustain competitive employment, and, on the other hand, on the objective and subjective factors (i.e., supportive work environment, effective coping strategies, etc.) that minimize the interference of stigma with the vocational recovery of persons with psychiatric disabilities. In addition, the study explores the pivotal role of disclosure at the workplace in understanding the complex, multi-faceted relationship between stigma and the vocational recovery among persons with serious mental illness whose disability is often invisible.

Field Initiated Projects (FIPs)

Massachusetts

Development of Materials and Methods Needed to Deliver a Proven Job Retention Vocational Rehabilitation Intervention

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Boston, MA 02118
sallaire@bu.edu

Principal Investigator: Saralynn J. Allaire, ScD
Public Contact: 617/638-5180; Fax: 617/638-5239

Project Number: H133G040216

Start Date: November 01, 2004

Length: 36 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 04 \$136,876; FY 05 \$111,005

Abstract: The purpose of the project is to maximize the full inclusion of persons with chronic diseases at risk for work disability into employment and economic self-sufficiency. The project uses the knowledge and understanding obtained from a recently completed research study showing that a job retention vocational rehabilitation (VR) intervention developed for the study reduced job loss in a sample of employed persons with serious rheumatic diseases. The approach to VR for the target population was innovative in that its goal was to prevent work disability rather than try to correct it. The specific intervention was innovative in that it incorporated strategies derived from both research and rehabilitation counseling expertise. The goal of the project is to develop the methods and materials needed by organizations providing VR services to carry out the intervention tested in the recently completed research study. Its short-term outcomes are increased ability of counselors to effectively deliver job retention VR intervention to employed persons with chronic diseases, improved knowledge of how to inform persons with chronic diseases of the availability of VR services, and increased awareness of the intervention and the requirements for delivering it. The objectives of the project are as follows: (1) to produce a Training Manual that contains information and materials needed to train counselors to carry out the intervention; (2) to produce a User's Manual that contains the materials needed by counselors to carry out the intervention; (3) to assess the satisfaction of recipients with the intervention, including its content; (4) to produce a Recruitment Manual that contains strategy information and materials needed for reaching the target population; (5) to calculate intervention costs; and (6) to conduct dissemination activities to increase awareness of the value of the intervention and requirements for implementing it.

Field Initiated Projects (FIPs)

Montana

Self-Employment Technology Transfer (SETT)

University of Montana
Rural Institute on Disabilities
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Missoula, MT 59812
nancy@ruralinstitute.umt.edu
<http://ruralinstitute.umt.edu>

Principal Investigator: Nancy Arnold, PhD

Public Contact: 406/243-2469; Fax: 406/243-2349

Project Number: H133G000189

Start Date: October 01, 2000

Length: 36 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 00 \$149,970; FY 01 \$149,487; FY 02 \$149,986; FY 04 \$0 (No-cost extension through 11/30/2005)

Abstract: The Self-Employment Technology Transfer (SETT) project has developed and field tested a VR self-employment support model based on extensive research. This project is designed to develop, demonstrate, and evaluate methods for facilitating the widespread adoption by practicing VR counselors of this empirically derived model of standards and practices in a cost-effective manner and in a relatively short time. It is estimated that achieving this goal benefits 25,560 to 62,850 consumers of VR services annually. Further it is believed that such a technology transfer model for disseminating empirically derived social technology from research into practice has the potential to shape the content, methods, and goals of future disability and rehabilitation research. There has been an explosion of interest in self-employment for people with disabilities. More than a half-million people with disabilities report owning their own businesses and people with disabilities are nearly twice as likely to be self-employed as those in the general population. While self-employment is not for everyone, it clearly is a viable option used by many. Yet, VR agencies nationally help fewer than 2.5 percent of their consumer achieve self-employment. Research shows that few of the estimated 9,500 practicing VR counselors have the knowledge or skills to support consumers who choose to pursue self-employment. Anecdotal reports indicate that VR agencies and staff have a significant interest in developing methods to respond to this consumer demand. While a few programs have served as models for promoting self-employment, none are designed specifically for VR counselors or organized for such wide-scale dissemination.

Field Initiated Projects (FIPs)
New Hampshire

**Cognitive Training and Supported Employment in Severe Mental
Illness**

Dartmouth College
PRC, 105 Pleasant Street
Concord, NH 03301-3852

Principal Investigator: Susan McGurk
Public contact: 603/271-5747

Project Number: H133G050230

Start Date: December 01, 2005

Length: 36 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 05 \$149,736

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" program is 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.

Field Initiated Projects (FIPs)
New Hampshire

15-year Course of Competitive Employment for People with Severe Mental Illness

Dartmouth Medical School
Department of Psychiatry
2 Whipple Place, Suite 202
Lebanon, NH 03766

Principal Investigator: Robert E. Drake MD, PhD 603/448-0263

Public Contact: Fax: 603/448-3976

Project Number: H133G050181

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 05 \$149,796

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.

Field Initiated Projects (FIPs)

New York

VRA-NET: Developing a Network of Trained Paraprofessionals to Address Personnel Shortages in Vision Rehabilitation

Lighthouse International
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New York, NY 10022-1202
kseidman@lighthouse.org

Principal Investigator: Karen R. Seidman, MPA

Public Contact: 212/821-9465; Fax: 212/821-9705

Project Number: H133G050058

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 05 \$149,990

Abstract: This project pilot tests a state-of-the art, accessible, online, and mentored training program with students and mentors in state and private agencies for the blind and those with visual impairments around the nation. Lighthouse International's VRA-Net development initiative is based on the successes of previous projects involving the development of both comprehensive curricula and an accessible online training program for Vision Rehabilitation Assistants. The overall goal is to address a severe shortage of trained vision rehabilitation personnel, while increasing the availability of specialized vision rehabilitation services to meet the burgeoning population of adults with visual impairment in the U.S. The objectives of the project are to demonstrate the effectiveness of an accessible, online, mentored, and competency-based paraprofessional training program; promote the employment of persons with visual impairments, other conditions, and from disadvantaged backgrounds by providing a career path for these paraprofessionals in the field of vision rehabilitation; and evaluate and compare the implementation of onsite and remote mentors during the online and mentored training process.

Field Initiated Projects (FIPs)

Oklahoma

Development and Distribution of an Accessible E-Learning Authoring System Software and Model Course for Vocational Rehabilitation Services Personnel

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National Center for Disability Education and Training
106 Constitution, Building 158
Norman, OK 73072
rfcook@ou.edu

Principal Investigator: Rebecca Cook

Public Contact: 405/325-1073; Fax: 405/325-1632

Project Number: H133G030063

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Ellen Blasiotti

NIDRR Funding: FY 03 \$149,991; FY 04 \$149,964; FY 05 \$149,938

Abstract: This project develops and distributes two products that improve e-learning accessibility options and increase employment opportunities for people with severe disabilities. These products directly benefit two groups: (1) Instructional designers, trainers in government and industry, and educators receive an accessible e-learning authoring system. This customized authoring tool integrates Section 508 accessibility standards into an engine that delivers multimedia content from an external database. User-friendly templates and reusable interactive models have built-in accessibility options, thus enabling non-programmers to develop accessible courseware with less time and expense. (2) Vocational rehabilitation services and supported employment personnel receive The Job Development Hour, an accessible model course on CD-ROM that teaches basic strategies of marketing and job development for people with severe disabilities.

Field Initiated Projects (FIPs)

Virginia

Strategies People with Psychiatric Disabilities Use to Maintain Employment and Build Careers

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<http://www.cessi.net>

Principal Investigator: Mary Killeen

Public Contact: 703/619-1703; Fax: 703/619-1702

Project Number: H133G020116

Start Date: September 01, 2002

Length: 36 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 02 \$150,000; FY 03 \$150,000; FY 04 \$150,000; FY 05 \$0 (No cost extension through 02/28/2006)

Abstract: This project investigates the strategies individuals with psychiatric disabilities use to maintain employment over time. The majority of individuals with psychiatric disabilities who are working find their work independently, without the help of specialized employment programs. Little is known concerning the strategies they use to maintain employment over time. Research that has focused on psychiatric disability and employment has looked solely at those populations who are currently attending or have attended vocational rehabilitation or specialized employment programs; individuals who have been most successful at maintaining employment have not been consulted regarding the strategies that worked best for them. This project explores a number of domains, including: (1) coping with stigma in the workplace, (2) managing symptoms as well as medications and their side effects, (3) making decisions regarding disclosure of psychiatric disability in the workplace, (4) negotiating workplace accommodations, (5) developing a social support network, (6) coping with relapse or re-hospitalization with regard to employment, and (7) obtaining education or training (career development). In addition, the project examines whether those who have found work with the help of professionals and those who have found work independently use differing strategies to maintain employment. Researchers ascertain the prevalence of various strategies in each group as well as their importance to participants in maintaining employment over time.

Field Initiated Projects (FIPs)
Virginia

**Telework as an Accommodation for Employees with Disabilities:
Developing Prediction Models for Successful and Satisfying Careers**

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<http://www.worksupport.com>

Principal Investigator: Michael West, PhD

Public Contact: 804/828-1851; Fax: 804/828-2193

Project Number: H133G020158

Start Date: October 01, 2002

Length: 36 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 02 \$149,998; FY 03 \$149,996; FY 04 \$149,998; FY 05 \$0 (No-cost extension through 3/31/2006)

Abstract: This three-year project develops research models to predict successful entry or reentry into employment using telework options. The models include: (1) functional, demographic, and experiential characteristics of participants; (2) telework options, such as telecenters, home-based work, and combinations of home- and office-based duties; (3) types of work performed, such as telephone or on-line technical support, telemarketing, remote data entry, writing, reservations, etc.; (4) support and training provided by the employer and public and private agencies; and (5) monetary factors such as earnings and fringe benefits. "Success" is defined in terms of both sustained labor force involvement and satisfaction with one's job, earnings, benefits, and career path.

Health and Function

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 sponsors research to improve the health and function of individuals with disabilities, as well as to understand and improve the system of health care services delivery, including the delivery of medical rehabilitation services.

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Rehabilitation Research and Training Centers (RRTCs)
California

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

University of California, Davis
Department of Physical Medicine and Rehabilitation (TB191)
School of Medicine
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Davis, CA 95616
nmdinfo@ucdavis.edu
<http://www.nmdinfo.net>

Principal Investigator: Craig McDonald, MD

Public Contact: Sandy Walsh, Coordinator of Information Services 530/752-3447; Fax: 530/752-3468

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

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

Ageing-Related Changes in Impairment for Persons Living with Physical Disabilities

Los Amigos Research & Education Institute, Inc.
7601 East Imperial Highway
800 West Annex
Downey, CA 90242
lcarrothers@agingwithdisability.org
<http://www.agingwithdisability.org>

Principal Investigator: Bryan J. Kemp, PhD

Public Contact: LeeAnn Carrothers, PT, PhD, Training Director 562/401-7402; Fax: 562/401-7011

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

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

**The Consortium for Children and Youth with Disabilities and Special
Health Care Needs.**

Georgetown University
Center for Child and Human Development
3300 Whitehaven Street, NW
Suite 3300
Washington, DC 20007
nrrtc@georgetown.edu

http://www.georgetown.edu/research/gucchd/programs/consortium_for_children.html

Principal Investigator: Phyllis Magrab, PhD

Public Contact: Toby Long, PhD, Training Director 202/687-8742 (V); 202/687-5503 (TTY); ; Fax:
202/687-8899

Project Number: H133B001200

Start Date: July 01, 2000

Length: 60 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 00 \$699,956; FY 01 \$699,947; FY 02 \$699,926; FY 03 \$699,981; FY 04
\$699,893; FY 05 \$0 (No-cost extension through 6/30/2006)

Abstract: The Consortium improves rehabilitation outcomes for children and youth with disabilities and special health care needs by increasing the effectiveness of service system. Using an integrated, multifaceted research approach and related training, dissemination, and technical assistance activities, the Consortium targets five areas: (1) access issues in pediatric rehabilitation, (2) characteristics of health plans and access to services, (3) promising practices in transition from pediatric to adult health care, (4) effective telehealth strategies for interdisciplinary service delivery in remote areas, and (5) training issues in Assistive Technology. Building on this research program, the consortium utilizes a variety of strategies to provide training and technical assistance to the target audience of families, consumers, providers, researchers, policymakers, and managed care organizations to improve rehabilitative services to this population in order to enhance their quality of life and that of their families. The RRTC is run by the Georgetown University's Center for Child and Human Development in collaboration with Brandeis University's Heller School, the University of Florida's Institute of Child Health Policy, and Family Voices.

Rehabilitation Research and Training Centers (RRTCs)
District of Columbia

Access to Rehabilitation and Empowerment Opportunities for Minority Persons with Disabilities

Howard University
1840 7th Street, NW, 2nd floor
Washington, DC 20001
mross@howard.edu
<http://www.law.howard.edu/HURTC/HURTC.html>

Principal Investigator: Dr. M. Gerlene Ross.

Public Contact: 202/865-8140; Fax: 202/806-8148

Project Number: H133B000903

Start Date: October 01, 2000

Length: 60 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 00 \$600,000; FY 01 \$600,000; FY 02 \$600,000; FY 03 \$600,000; FY 04 \$600,000; FY 05 \$0 (No-cost extension through 9/30/2006)

Other Funding: FY 01 \$39,375 (NIDRR)

Abstract: The Howard University Research and Training Center for Access to Rehabilitation and Empowerment Opportunity (HURTC) is implementing a RRTC on Access to Rehabilitation and Empowerment Opportunities for Minority Persons with Disabilities to help them achieve self-determination, economic independence, and full participation in American life. The program of the Center is designed to attain the following objectives: identify methodological problems determining the rehabilitation needs of persons with disabilities from minority backgrounds (including sub-populations within these groups) and propose strategies to address these methodological problems; based on research findings, identify implications for rehabilitation research, training, policy development, and services; assess the outcomes of rehabilitation for persons with disabilities from minority backgrounds as measured by two or more variables (such as functional abilities, wellness, employment, health/wellness, and psychosocial status); analyze the affects of minority status on rehabilitation outcomes; and identify, develop, and evaluate rehabilitation methodologies, models, and interventions for specific minority groups. The HURTC collaborates with the Center for Disease Control, the Center for Minority Health, and a variety of stakeholders including consumers with disabilities, state agencies, continuing education programs, and community-based organizations.

Rehabilitation Research and Training Centers (RRTCs)
Illinois

**RRTC on Technology Promoting Integration for Stroke Survivors:
Overcoming Social Barriers**

Rehabilitation Institute Research Corporation
345 East Superior Street
Chicago, IL 60611
ejr@northwestern.edu
<http://www.rrtc-stroke.org/>

Principal Investigator: Elliot J. Roth, MD 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

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 Centers (RRTCs)
Maryland

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

National Rehabilitation Hospital/MedStar Research Institute
102 Irving Street, NW
Washington, DC 20010
melinda.t.neri@medstar.net
<http://www.sci-health.org>

Principal Investigator: Suzanne L. Groah, MD 202/877-1196

Public Contact: Mel Neri, Project Coordinator, National Rehabilitation Hospital Center for Health and Disability Research, 102 Irving Street, NW, Washington, DC 20010-2949 202/877-1038;
Fax: 202/726-7521

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

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.

Rehabilitation Research and Training Centers (RRTCs)
Missouri

**Missouri Arthritis Rehabilitation Research and Training Center
(MARRTC)**

University of Missouri
Physical Medicine and Rehabilitation
One Hospital Drive, DC330.00
Columbia, MO 65212
holtmeyerk@health.missouri.edu
<http://www.marrtc.org>

Principal Investigator: Jerry C. Parker, PhD

Public Contact: Kim Holtmeyer 573/884-1499; Fax: 573/884-3020

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

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)
Oregon

Rehabilitation Research and Training Center on Health and Wellness in Long Term Disability

Oregon Health and Science University
Oregon Institute on Disability and Development
Child Development and Rehabilitation Center
707 Southwest Gaines
P.O. Box 574
Portland, OR 97207-0574
rtc@ohsu.edu
<http://www.healthwellness.org>

Principal Investigator: Gloria Krahn, PhD, MPH 503/494-8364

Public Contact: Laura Hammond, Center Coordinator 503/494-3882; Fax: 503/494-6868

Project Number: H133B040034

Start Date: October 01, 2004

Length: 60 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 04 \$700,000; FY 05 \$700,000

Abstract: The vision of the RRTC is to contribute to the reduction of health disparities for person with disabilities through an integrated program of research, training, technical assistance, and dissemination. The Center has three inter-related 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.

Rehabilitation Research and Training Centers (RRTCs)
Washington

Multiple Sclerosis Rehabilitation Research and Training Center

University of Washington
Department of Rehabilitation Medicine
Box 356490
Seattle, WA 98185
msrrtc@u.washington.edu
<http://www.msrrtc.washington.edu>

Principal Investigator: George H. Kraft, MD 206/543-7272
Public Contact: 888/634-6778; 206/221-5302; Fax: 206/685-3244

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

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 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.

Disability and Rehabilitation Research Projects

Alabama

UAB TBI Model System

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Spain Rehabilitation Center; Physical Medicine and Rehabilitation
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novack@uab.edu
<http://www.uab.edu/tbi>

Principal Investigator: Thomas A. Novack, PhD

Public Contact: Pamela K. Mott 205/934-3283

Project Number: H133A020509

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$365,000; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: The University of Alabama at Birmingham (UAB) is maintaining and further developing a Traumatic Brain Injury Model System (TBIMS) that improves rehabilitation services and outcomes for persons with TBI. This project provides a multidisciplinary system of rehabilitation care specifically designed to meet the needs of individuals with TBI, and, as demonstrated over the past four years as a TBIMS, adequately enrolls subjects to complete research projects successfully. In addition to contributing data to the TBI National Database, the UAB TBIMS conducts two research projects: (1) an examination of the use of a serotonin agonist medication (sertraline) to lessen the incidence and severity of depression during the first year of recovery following TBI; (2) a study of the impact of a training program in problems solving for caregivers.

Disability and Rehabilitation Research Projects
California

Northern California Traumatic Brain Injury Model System of Care

Santa Clara Valley Medical Center (SCVMC)
Rehabilitation Research Center
751 South Bascom Avenue
San Jose, CA 95128
jerry.wright@hhs.co.scl.ca.us
<http://www.tbi-sci.org>

Principal Investigator: Tamara Bushnik, PhD
Public Contact: 408/793-6433; Fax: 408/793-6434

Project Number: H133A020524

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$364,038; FY 03 \$364,588; FY 04 \$364,745; FY 05 \$364,956

Abstract: This project conducts two studies to better characterize the type and impact of fatigue on the TBI population: (1) a cross-sectional study of people up to ten years post-TBI and (2) a longitudinal study that focuses on the evolution of fatigue over the first two years post-injury. Both studies utilize standardized measurements of fatigue, as well as those for depression/affective disorders, sleep disturbance, activity scales, and measurements of hormone levels reflective of the health of the neuroendocrine system. Two additional studies characterize the impact of late posttraumatic seizures on recovery: (1) a study utilizing data already in the TBIMS National Database that compares the functional, vocational, and medical complication outcomes of those with and without late posttraumatic seizures; (2) a study in collaboration with Denver Hospital Medical Center that interviews individuals at both sites who participated in a previously funded NIDRR grant on seizure risk identification. This study further evaluates barriers to the environment, transportation, and challenges in control of their seizures.

Disability and Rehabilitation Research Projects
Colorado

UCHSC Burn Model System Data Coordination Center (BMS/DCC)

University of Colorado Health Sciences Center
School of Medicine
Department of Preventive Medicine and Biometrics
4200 East Ninth Avenue, Box B119
Denver, CO 80262
rebecca.sloan@uchsc.edu
<http://bms-dcc.uchsc.edu>

Principal Investigator: Dennis C. Lezotte, PhD 303/315-6873

Public Contact: Rebecca Sloan, Project Coordinator 303/315-0320; Fax: 303/315-3183

Project Number: H133A020402

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$249,997; FY 03 \$249,995; FY 04 \$249,997; FY 05 \$249,999

Abstract: The BMS/DCC establishes a data management and analytical support facility for Burn Model Systems clinical and outcomes research projects. Objectives include: (1) to serve the clinical, research, and public communities to which it is responsible; (2) to serve the needs of good scientific procedure in multi-institutional outcomes research; and (3) to support the needs for patient safety and data confidentiality as required by Federal regulations when conducting collaborative clinical studies. The BMS Project is structured as a set of interacting, observational, randomized, and quasi-experimental clinical studies run at different centers that share the common purpose of acquiring and disseminating knowledge about burn injury care and rehabilitation. The project offers support in four important areas: project management, data management, analytical support, and dissemination. Support is provided in developing appropriate integrated systems to affect national data collection, project management, data coordination, technical support, collaborative clinical projects, scientific conduct, scientific publication, and effective dissemination. The UCHSC BMS/DCC continues to accumulate and integrate a central repository of data from the Model Systems to enhance their abilities to make sentinel statements and change the way burn injury rehabilitation is done. While the main function of the DCC is to integrate and manage these data, it also needs to be responsive to the technical and analytical needs of these individual clinical centers. In addition the DCC provides and coordinates statistical support among the clinical and statistical groups from each Burn Center and is prepared to expand this support, adding several new protocols and/or clinical studies where appropriate.

Disability and Rehabilitation Research Projects
Colorado

**Lifetime Outcomes and Needs: Refining the Understanding of Aging
with Spinal Cord Injury**

Craig Hospital
3425 South Clarkson Street
Englewood, CO 80113
susie@craighospital.org
<http://www.craighospital.org>

Principal Investigator: Daniel P. Lammertse, MD; Susan B. Charlifue, PhD 303/789-8220

Public Contact: Susan B. Charlifue, PhD 303/789-8306; Fax: 303/789-8441

Project Number: H133A011108

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 01 \$350,000; FY 02 \$350,000; FY 03 \$350,000; FY 04 \$350,000; FY 05 \$350,000

Abstract: This project explores the incidence and prevalence of several health and psychosocial conditions that accompany living many years with SCI. Also studied in this comprehensive, longitudinal, multicenter effort are the services available to individuals with SCI as they attempt to address these conditions throughout their lives. The study expands the longitudinal database, addressing emerging issues of aging with SCI in greater detail, and expands efforts to share findings with a variety of constituents. The eight areas of focus include: (1) secondary conditions from five to 25 years post-injury, (2) new analytic techniques with longitudinal datasets, (3) chronic pain, (4) access to and satisfaction with health services, (5) personal assistance services, (6) spirituality and its effects on health outcomes and quality of life, (7) the role of perceived stress and self-reported problems on the presence or absence of secondary conditions and in relation to one's overall well-being, and (8) trends in quality of life and health. This longitudinal study builds on two previous data collection points. It includes a broad, comprehensive examination of secondary conditions, both physical and psychosocial, and several new areas of inquiry investigated in-depth.

Disability and Rehabilitation Research Projects
Colorado

The Rocky Mountain Regional Brain Injury System (RMRBIS)

Craig Hospital
3425 South Clarkson Street
Englewood, CO 80113
charrison-felix@craighospital.org
<http://www.craighospital.org>

Principal Investigator: Gale G. Whiteneck, PhD 303/789-8204

Public Contact: Cynthia Harrison-Felix, PhD 303/789-8565; Fax: 303/789-8441

Project Number: H133A020510

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$365,000; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: The Rocky Mountain Regional Brain Injury System (RMRBIS) conducts three research projects: Study 1 examines the effects of Modafinil on fatigue and excessive sleepiness after TBI. Study 2 assesses the effectiveness of a group therapy intervention for social pragmatic communication. Study 3 uses the unique database assets of Craig Hospital and investigates the environmental and clinical factors that influence outcome over a 40-year time frame to understand the process of living and aging with a TBI. In addition to clinical research and service, Craig Hospital, as the RMRBIS, documents an outstanding record of dissemination, for all customers including clinical consumers, community agencies and advocacy groups, other clinical service centers and systems, and professionals engaged in the treatment of persons with TBI.

Disability and Rehabilitation Research Projects
Florida

**Pharmacological Management of Dyslipidemia and Cardiovascular
Disease in Persons with Chronic Cervical SCI: A Multicenter
Collaborative Trial**

University of Miami
School of Medicine
1095 Northwest 14th Terrace, R48
Miami, FL 33136
msnash@miami.edu
<http://www.miamiproject.miami.edu>

Principal Investigator: Mark S. Nash, PhD 305/243-3628

Public Contact: Maria Amadore, Directory of Education, Miami Project to Cure Paralysis 305/243-7108

Project Number: H133A011115

Start Date: October 01, 2001

Length: 36 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 01 \$344,023; FY 02 \$340,953; FY 03 \$271,952; FY 04 \$0 (No-cost extension through 9/30/2005); FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This project researches strategies that reduce cardiovascular disease risks after onset of tetraplegia by increasing high-density lipoprotein cholesterol (HDL-C) levels. The research examines the ability of a pharmaceutical therapy to improve the lipid profiles and forestall cardiovascular disease progression in persons with tetraplegia. Previous research on persons without SCI has shown extended-release niacin effective for elevating HDL-C, lowering total cholesterol, lowering low-density lipoprotein cholesterol (LDL-C), lowering triglycerides, slowing cardiovascular disease progression, and reducing cardiovascular morbidity and mortality. The ability of this drug to improve lipid profiles has never been examined in persons with tetraplegia, although drug benefits similar to those reported in persons without SCI would be of great health benefit to those with tetraplegia.

Disability and Rehabilitation Research Projects
Illinois

Health Services Research DRRP on Medical Rehabilitation

Northwestern University
Rehabilitation Institute Research Corporation
Center for Rehabilitation Outcomes Research
345 East Superior Street
Chicago, IL 60611-2654
a-heinemann@northwestern.edu
<http://www.ric.org/research/outcomes/drrp.php>

Principal Investigator: Allen W. Heinemann, PhD

Public Contact: 312/238-2802; Fax: 312/238-2383

Project Number: H133A030807

Start Date: July 01, 2003

Length: 60 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 03 \$300,000; FY 04 \$300,000; FY 05 \$300,000

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.

Disability and Rehabilitation Research Projects
Maryland

Johns Hopkins University Burn Injury Rehabilitation Model System

Baltimore Regional Burn Center
Johns Hopkins Bayview Medical Center
4940 Eastern Avenue
Baltimore, MD 21224
jfauerba@jhmi.edu
<http://www.jhbmc.jhu.edu/brbc/birms>

Principal Investigator: James A. Fauerbach, PhD 410/550-0894

Public Contact: Bernadette Guthrie 410/550-5298; Fax: 410/550-8161

Project Number: H133A020101

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$298,928; FY 03 \$299,995; FY 04 \$299,753; FY 05 \$298,311

Abstract: This project tests interventions targeting three common postburn secondary complications affecting health and function: generalized deconditioning, muscle atrophy, and acute stress disorder. Testing the effectiveness of these interventions holds promise for improving the health and function of burn survivors as well as enhancing their options for workplace and community reintegration. The JHU-BIRMS includes several projects: (1) testing the efficacy of its augmented exercise program in rehabilitating people with generalized deconditioning, (2) testing the efficacy of enhanced cognitive-behavioral therapy in treating individuals with acute stress disorder and preventing the development of chronic posttraumatic stress disorder, (3) developing a new measure that quantifies the degree of social stigmatization experienced by burn survivors and its impact on emotional adjustment and integration into the workplace and the community (this project involves the Phoenix Society, the largest foundation supporting burn survivors and their significant others), (4) a collaborative effort with the University of Washington on a workplace integration study identifying and quantifying those factors interfering with early and complete return to work, and (5) a collaborative study on health and function with the University of Texas.

Disability and Rehabilitation Research Projects
Maryland

Medicaid Quality Indicators for Individuals with Disabilities

National Rehabilitation Hospital/MRI
102 Irving Street NW
Washington, DC 20010
susan.e.palsbo@medstar.net
<http://www.nrhchr.org>

Principal Investigator: Susan E. Palsbo, PhD

Public Contact: 202/466-1904; Fax: 202/466-1911

Project Number: H133A030804

Start Date: July 01, 2003

Length: 60 months

NIDRR Officer: Ruth Brannon

NIDRR Funding: FY 03 \$300,000; FY 04 \$299,999; FY 05 \$299,999

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.

Disability and Rehabilitation Research Projects
Massachusetts

The Spaulding/Partners TBI Model System at Harvard Medical School

Spaulding Rehabilitation Hospital
125 Nashua Street
Boston, MA 02114
toneilpirozzi@partners.org
<http://spauldingrehab.org/body.cfm?id=185>

Principal Investigator: Mel B. Glenn, MD 617/573-2625

Public Contact: Therese O'Neil-Pirozzi, ScD 617/573-2456; Fax:

Project Number: H133A020513

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 02 \$365,000; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: The Spaulding TBI Model System (TBIMS) provides a comprehensive spectrum of care for people with TBI through the collaborative efforts of three hospitals that are part of Partners Health Care System, Inc., and four organizations that operate a variety of postacute rehabilitation programs. Research at the center includes development of functional neuroimaging as a tool to guide cognitive rehabilitation treatment for people with TBI, and use of functional magnetic resonance imaging (fMRI), with both a cross-sectional and longitudinal component. The cross-sectional component assesses regional brain activation during the memorization of word lists, both under undirected (spontaneous) conditions and following training and cueing to use a categorization strategy. The longitudinal component studies the ability of the fMRI findings to predict outcome among people with TBI who participate in community integration program with a cognitive rehabilitation focus.

Disability and Rehabilitation Research Projects
Michigan

Southeastern Michigan Traumatic Brain Injury System (SEMTBIS)

Wayne State University and Rehabilitation Institute of Michigan
Department of Physical Medicine and Rehabilitation
261 Mack Boulevard
Detroit, MI 48201
rhanks@dmc.org
<http://www.semtbis.org>

Principal Investigator: Robin A. Hanks, PhD 313/745-9763

Public Contact: Deborah Wood, 313/745-1188; Fax: 313/966-7502

Project Number: H133A020515

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 02 \$364,996; FY 03 \$364,995; FY 04 \$364,997; FY 05 \$364,992

Abstract: The Southeastern Michigan Traumatic Brain Injury System (SEMTBIS) program conducts projects developed with the help of SEMTBIS consumers, as well as other members of the Detroit community. Three studies evaluate: (1) a peer-mentoring intervention, (2) a dynamic system of survivor and significant-other well-being, and (3) resumption of driving after brain injury. Study 1 is a randomized controlled trial of a peer-mentoring program for both survivors and their caregivers. Study 2 studies 250 community-dwelling adults with TBI and their caregivers/significant others, exploring the relationship of survivor-caregiver situations with survivor distress and family dysfunction. It also studies whether or not social support acts as a moderating influence upon the well-being of persons with TBI. Study 3 examines correlates of driving after brain injury: barriers, fitness to drive, and community rapport. Participatory action is a central component of project implementation, evaluation, and dissemination. SEMTBIS participates in clinical and systems analysis studies of the TBI Model Systems by collecting and contributing data to the uniform, standardized national database.

Disability and Rehabilitation Research Projects
Minnesota

Mayo Clinic Traumatic Brain Injury Model System

Mayo Medical Center
200 First Street
Rochester, MN 55905
malec.james@mayo.edu
<http://www.mayo.edu/model-system>

Principal Investigator: James F. Malec, PhD

Public Contact: Anne Moessner 507/255-3116; Fax: 507/255-7696

Project Number: H133A020507

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 02 \$364,891; FY 03 \$364,738; FY 04 \$363,786; FY 05 \$364,993

Abstract: This Traumatic Brain Injury Model System (TBIMS) focuses on three local research projects: (1) decision-making and outcomes of inpatient and outpatient rehabilitation pathways, (2) very-long-term (5-15+ years postinjury) process and outcome for people with TBI, identified through the Rochester Epidemiology Project, and (3) telehealth-based (Internet) cognitive rehabilitation. Telehealth is a potentially important innovation in this system's region, where distance limits access to medical and rehabilitation services and many consumers have limited access to health care, insurance, employment, and viable political representation. In addition to professional publications and presentations, continuing dissemination efforts include the Mayo Clinic TBIMS website, the TBI Hotline, the *Messenger* newsletter, contributions to the COMBI web site and COMBI and TBIMS newsletters, and regular participation by Mayo Clinic TBIMS staff at all annual state brain injury association meetings in the extended five-state geographical region. During the next five years, the project plans to develop an advocacy training program to help people with TBI and their families and significant others in the region learn self-advocacy skills. Members of the Mayo TBI Regional Advisory Council were proactively involved in developing this project.

Disability and Rehabilitation Research Projects
Mississippi

Traumatic Brain Injury Model System of Mississippi (TBIMSM)

Methodist Rehabilitation Center
Brain Injury Program
1350 East Woodrow Wilson Center
Jackson, MS 39216
marks@mrrcrehab.org
<http://www.mrrcrehab.org>

Principal Investigator: Mark Sherer, PhD, ABPP-Cn
Public Contact: 601/364-3448; Fax: 601/364-3558

Project Number: H133A020514

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$365,000; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: The TBI Model System of Mississippi (TBIMSM) is a collaborative project of Methodist Rehabilitation Center and the University of Mississippi Medical Center. This project involves three studies. The first study investigates two medications in a parallel group, double blind, placebo controlled, randomized assignment design. The drugs under investigation have differing neurotransmitter effects, although each drug has been reported to have therapeutic benefit. The target population for this study is persons with TBI who are in a state of posttraumatic confusional state (PCS). This is considered a state-of-the-art approach to PCS given the severe lack of controlled research to measure medication usage in PCS. The second study develops and conducts a trial of an intervention to improve the therapeutic alliances between persons with TBI and family members and professional staff serving persons with TBI in a post-acute brain injury neurorehabilitation program (PABIR). The third research project investigates the use of transcranial magnetic stimulation (TMS) to improve the characterization of motor disorders after TBI. Current research suggests that improved use and better understanding of TMS technology will lead to new intervention trials to improve motor function after TBI.

Disability and Rehabilitation Research Projects
New Jersey

JFK-Johnson Rehabilitation Institute TBI Model System

JFK Johnson Rehabilitation Institute
2048 Oak Tree Road
Edison, NJ 08820
kcicerone@solarishs.org
<http://www.njrehab.org/tbims>

Principal Investigator: Keith D. Cicerone, PhD
Public Contact: 732/906-2640; Fax: 732/906-9241

Project Number: H133A020518

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 02 \$365,000; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: This project implements and evaluates innovative rehabilitation interventions that address the spectrum of severity and needs of persons with TBI. The first research study investigates the relationship between neurobehavioral (i.e., standardized rating scale) and neurophysiologic (i.e., functional MRI data) indices of brain function in persons with traumatic minimally conscious state (MCS). The second study addresses current clinical and methodological concerns over the effectiveness of cognitive rehabilitation on cognitive functioning, community integration and social participation, return to school and work, and quality of life after traumatic brain injury. The third study uses qualitative inquiry to describe the quality of life after TBI from the perspective of persons at various stages after their injuries. These findings are triangulated with quantitative indices of community integration and satisfaction with functioning, which should provide a richer and more authentic understanding of what it takes to live a fulfilling life after traumatic brain injury.

Disability and Rehabilitation Research Projects
New Jersey

**A Multicenter Prospective Randomized Controlled Trial of the
Effectiveness of Amantadine Hydrochloride in Promoting Recovery of
Function Following Severe Traumatic Brain Injury**

JFK Johnson Rehabilitation Institute
Center for Head Injuries
2048 Oak Tree Road
Edison, NJ 08820
<http://www.njrehab.org/tbims/index.asp>

Principal Investigator: Joseph T. Giacino, PhD
Public Contact: 732/205-1461; Fax: 732/632-1584

Project Number: H133A031713

Start Date: January 01, 2004

Length: 60 months

NIDRR Officer: Ruth Brannon

NIDRR Funding: FY 03 \$599,862; FY 04 \$599,994; FY 05 \$599,994

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.

Disability and Rehabilitation Research Projects
New York

New York Traumatic Brain Injury Model System (NYTBIMS)

Mount Sinai School of Medicine
Department of Rehabilitation Medicine
Research and Training Center
One Gustave L. Levy Place, Box 1240
New York, NY 10029
wayne.gordon@mssm.edu
<http://www.mssm.edu/nytbims>

Principal Investigator: Wayne A. Gordon, PhD
Public Contact: 212/659-9372; Fax: 212/348-5901

Project Number: H133A020501

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 02 \$365,000; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: This project advances the understanding of TBI and its consequences and improves rehabilitation outcomes. The research projects focus on depression and fatigue, impairments that limit participation in community and vocational activities: Treatment of Post-TBI Depression is a randomized clinical trial to examine the efficacy of sertraline (Zoloft) in the treatment of depression and anxiety after traumatic brain injury. Study of Post-TBI Fatigue and its Treatment investigates the components, consequences, and correlates of post-TBI fatigue, and in a randomized clinical trial, evaluates the benefits of modafinil (Provigil) to treat fatigue in individuals with TBI.

Disability and Rehabilitation Research Projects

North Carolina

Carolinas Traumatic Brain Injury Rehabilitation and Research System

Charlotte Mecklenburg Hospital Authority
Charlotte Institute of Rehabilitation
1100 Blythe Boulevard
Charlotte, NC 28203
fhammond@carolinas.org
<http://www.carolinas.org>

Principal Investigator: Flora M. Hammond, MD

Public Contact: 704/355-4330; Fax: 704/355-0709

Project Number: H133A020522

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 02 \$365,000; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: This project investigates posttraumatic irritability, its relationship to the caregiver as a component of the environment, the reaction to amantadine hydrochloride, and the nature of the problem as experienced by those in the community. The mission of CTBIRRS is to improve care and outcomes for survivors of TBI through medical treatments, services, research, and dissemination to expand and enhance services throughout their lifetime. 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.

Disability and Rehabilitation Research Projects
Ohio

Ohio Regional TBI Model System

Ohio Valley Center for Brain Injury Prevention and Rehabilitation
Department of Physical Medicine and Rehabilitation
Ohio State University
Dodd Hall; 480 West Ninth Avenue
Columbus, OH 43210
lamb-hart.1@osu.edu
<http://www.ohiovalley.org>

Principal Investigator: John D. Corrigan, PhD 614/293-3830

Public Contact: Gary Lamb-Hart 614/293-3802; Fax: 614/293-8886

Project Number: H133A020503

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 02 \$365,000; FY 03 \$364,995; FY 04 \$364,970; FY 05 \$364,885

Abstract: This model system includes two local research projects on substance abuse and persons with TBI. Study 1 is a randomized clinical trial testing interventions to promote retention in substance abuse treatment. This study employs intervention strategies found effective for clients with TBI when first engaging with a treatment program. Study 2 tests the concurrent validity of an instrument that documents the extent of a person's prior history of TBI objectively. This instrument is intended for research on TBI as a mediating factor in substance abuse treatment. This model system utilizes innovative community integration programs: Team Brain Injury (follow-up case management), the TBI Network (substance abuse treatment), and Community Capacity Building (education and advocacy operated in conjunction with the Brain Injury Association of Ohio).

Disability and Rehabilitation Research Projects
Pennsylvania

The Moss Traumatic Brain Injury Model System

Albert Einstein Healthcare Network
Moss Rehabilitation Research Institute
1200 West Tabor Road, Korman Suite 213
Philadelphia, PA 19141
thart@einstein.edu
<http://www.einstein.edu/facilities/mossrehab/index.html>

Principal Investigator: Tessa Hart, PhD
Public Contact: 215/456-6544; Fax: 215/456-5926

Project Number: H133A020505

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 02 \$365,000; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: This project provides cutting-edge care for persons with TBI, conducts research on treatment of TBI in three key areas, and disseminates new knowledge to consumer and professional audiences, using an extensive collaborative network. Seven Trauma Centers and two nationally renowned rehabilitation facilities, MossRehab and Magee Rehabilitation, collaborate in the clinical component of the Moss Traumatic Brain Injury Model System. The Moss Rehabilitation Research Institute administers the research component, which includes collaborative longitudinal data collection, as well as three local research projects on: (1) the use of assistive technology for cognitive and behavioral disabilities, (2) validation of an observational rating scale of attention dysfunction in a psychostimulant treatment trial, and (3) use of botulinum toxin for treating severe spasticity caused by TBI. The Moss TBIMS emphasizes consumer involvement in clinical program improvement, research design, and dissemination via collaboration with the Brain Injury Association of Pennsylvania and other consumers.

Disability and Rehabilitation Research Projects
Pennsylvania

Collaboration of Upper Limb Pain in Spinal Cord Injury

University of Pittsburgh
7180 Highland Drive
Pittsburgh, PA 15206
boninger@pitt.edu
<http://www.herlpitt.org>

Principal Investigator: Michael L. Boninger, MD

Public Contact: Peter Hunt 412/365-4850; Fax: 412/365-4858

Project Number: H133A011107

Start Date: December 01, 2001

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 01 \$349,998; FY 02 \$349,950; FY 03 \$349,954; FY 04 \$349,936; FY 05 \$349,947

Abstract: This collaborative studies project provides an opportunity to gain further insight into the cause and prevention of upper limb repetitive strain injuries in SCI. For the approximately 200,000 individuals with SCI, upper limb pain and injury is very common; some studies find prevalence rates above 70 percent. Prolonged wheelchair use and transfers have long been thought to cause these repetitive strain injuries. The consequences of upper limb pain are so significant that some researchers have suggested that damage to the upper arm may be functionally and economically equivalent to a spinal cord injury of higher neurological level. This collaboration includes the University of Pittsburgh Medical Center Spinal Cord Injury project, the Northern New Jersey Spinal Cord Injury System (NNJSCIS), and the Northwest Regional Spinal Cord Injury System (NWRSCIS).

Disability and Rehabilitation Research Projects
Pennsylvania

University of Pittsburgh Brain Injury Model System (UPBI)

University of Pittsburgh
School of Medicine
3471 Fifth Avenue
Suite 201 Kaufmann Building
Pittsburgh, PA 15213
zafonterd@msx.upmc.edu
<http://www.umc.pitt.edu/tbi/>

Principal Investigator: Ross D. Zafonte, DO

Public Contact: 412/648-6979; Fax: 412/692-4410

Project Number: H133A020502

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 02 \$364,484; FY 03 \$360,375; FY 04 \$362,875; FY 05 \$362,875

Abstract: The research focus of the University of Pittsburgh Brain Injury Model System is on innovation in rehabilitation technology for persons with TBI. The project evaluates the impact of selected innovations in technology on service delivery, functional outcome, and as a therapeutic intervention. It addresses the shortcoming in wheelchair design for persons with brain injury by evaluating a unique, personalized powered mobility system. Collaboration with the Robotics Institute at Carnegie Mellon University allows researchers to perform a randomized trial evaluating the efficacy of virtual reality and robotics for persons with TBI. Finally, the project uses intelligent navigation technology to implement and evaluate a web-based virtual case manager support structure for persons with TBI and their families.

Disability and Rehabilitation Research Projects
Texas

North Texas Burn Rehabilitation Model System (NTBRMS)

The University of Texas Southwestern Medical Center
Department of Physical Medicine and Rehabilitation
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Dallas, TX 75390-9136
radha.holavanahalli@utsouthwestern.edu
<http://www.swmed.edu/ntbrms/welcome.htm>

Principal Investigator: Karen Kowalske, MD 214/648-2288

Public Contact: Radha Holavanahalli, PhD 214/648-9540; 214/648-3654; Fax: 214/648-2005

Project Number: H133A020104

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

Abstract: This project conducts five research projects, two collaborative and three site-specific: (1) barriers to return-to-work following major burn injury; (2) long-term outcome following major burn injury; (3) outcome following deep, full-thickness hand burns; (4) the evolution over time of burn-associated neuropathy; and (5) the socioeconomic determinants of disability in individuals with burn injury. The North Texas Burn Rehabilitation Model System (NTBRMS) is a collaboration of Parkland Health and Hospital System (PHHS) and the University of Texas, Southwestern Medical Center (UTSW). 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 rural care providers through rural clinics and a biannual seminar. Research collaboration occurs locally with the surgeons and academic computing staff, and nationally with the other model systems.

Disability and Rehabilitation Research Projects

Texas

North Texas Traumatic Brain Injury Model System (NT-TBIMS)

The University of Texas Southwestern Medical Center

Department of Neurology

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Principal Investigator: Ramon R. Diaz-Arrastia, MD, PhD 214/648-6409

Public Contact: Caryn R. Harper, MS, Project Administrator 214/648-7613; Fax: 214/648-3143

Project Number: H133A020526

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$364,999; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: The North Texas Traumatic Brain Injury Model System (NT-TBIMS) provides a comprehensive continuum of care for TBI patients 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. Additionally, the NT-TBIMS conducts two research projects aimed at obtaining predictive information regarding outcome after TBI, which is important to the goal of developing novel therapies and tailoring these therapies to individual patients: (1) to determine whether the inheritance of particular alleles in certain candidate genes is associated with a greater risk of poor outcome after TBI; and (2) to determine whether functional magnetic resonance imaging of the brain (fMRI) is predictive of functional recovery after TBI.

Disability and Rehabilitation Research Projects
Texas

Pediatric Burn Injury Rehabilitation Model System

University of Texas Medical Branch
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Principal Investigator: David Herndon, MD 409/770-6731

Public Contact: Pat Blakeney, PhD 409/770-6718 or 713/661-1745; 409/770-6731; Fax: 713/661-2871; 409/770-6919

Project Number: H133A020102

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

Abstract: This program conducts independent and multi-center projects focusing on evaluating and improving the rehabilitation provided to the burned child, striving to decrease disability and improve reintegration into society. The project continues longitudinal assessments of patients, expanding the database that includes measures of cardiopulmonary function, physical growth and maturation, bone density, range of motion, activities of daily living, scar formation, reconstructive needs, and measures of psychosocial adjustment. This data is used to identify areas that require improvement and provide functional outcome measures that can be used in the evaluation of treatment methods. Research activities include: (1) a multi-center project assessing the efficacy of the long-term administration of oxandrolone in the treatment of burn injury with endpoints of improved strength, lean body mass, bone density, and growth; (2) improving rehabilitative outcomes for children by instituting and evaluating major modifications to current treatment for children with large burns; (3) evaluating the use of pressure garments in controlling scar following burn injury; (4) a multi-center study evaluating the relationship between treatment, injury, patient characteristics, and patient outcome in those patients sustaining full thickness hand burns; and (5) evaluating acute stress disorder and posttraumatic stress disorder, including its occurrence, predictive elements, and efficacy of treatment.

Disability and Rehabilitation Research Projects
Virginia

Virginia Commonwealth Traumatic Brain Injury Model System

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Department of Physical Medicine and Rehabilitation
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Richmond, VA 23298-0452
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<http://www.tbi.pmr.vcu.edu>

Principal Investigator: Jeffrey S. Kreutzer, PhD 804/828-9055

Public Contact: Jennifer Marwitz 804/828-3704; Fax: 804/828-2378

Project Number: H133A020516

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$365,000; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: This project, utilizing rigorous scientific methods, examines the benefits of intervention during the acute and post-acute periods after brain injury. TBIMS and other researchers have primarily focused on delineating outcomes. Until recently, concerns about survivors' emotional well-being and adjustment to injury received scant attention. Yet, 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 in three major research areas focus predominantly on survivors. One study examines pharmacological approaches to the treatment of depression, while another examines a structured approach to the treatment of acute cognitive and neurobehavioral problems. Examining the benefits of intervention programs for family members is the third major research area.

Disability and Rehabilitation Research Projects
Washington

University of Washington Burn Injury Rehabilitation Model System

University of Washington
Department of Surgery
Division of Plastic Surgery
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rassilon@u.washington.edu
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Principal Investigator: Loren H. Engrav, MD 206/731-3183
Public Contact: Adrian Nelsen 206/731-2938; Fax: 206/731-3656

Project Number: H133A020103

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

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.

Disability and Rehabilitation Research Projects
Washington

University of Washington Traumatic Brain Injury Model System

University of Washington
Department of Rehabilitation Medicine
Box 356490, BB-953 Health Sciences
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Principal Investigator: Kathleen R. Bell, MD

Public Contact: 206/685-0935; Fax: 206/685-3244

Project Number: H133A020508

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Ruth Brannon

NIDRR Funding: FY 02 \$365,000; FY 03 \$365,000; FY 04 \$365,000; FY 05 \$365,000

Abstract: This program conducts research relevant to TBI, enhances services to consumers, and furthers the National Database and intersystem collaboration. The program's three research projects are: (1) a randomized controlled intervention study examining the effect of exercise on depression after TBI. This low-cost, community intervention seeks to combat depression and emotional distress in persons with stable TBI by employing exercise as a positive approach to improved emotional and physical functioning and socialization. (2) An examination of the characteristics of TBI survivors who are able to return to employment and hold jobs that are stable and complex in nature, utilizing both the UW TBI longitudinal database and the Model System database. (3) An examination of the impact of the Medicare prospective payment system for inpatient rehabilitation on TBI survivors receiving access to acute rehabilitation efforts. The program also contributes to the National Database.

Disability and Rehabilitation Research Projects
Washington

**The Effect of Scheduled Telephone Intervention on Outcomes After
Traumatic Brain Injury (TBI)**

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Principal Investigator: Kathleen R. Bell, PhD
Public Contact: 206/685-0935; Fax: 206/685-3244

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

Abstract: This project evaluates the effect of scheduled telephone intervention (STI), a low-cost, easily implemented intervention in three states 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 one year after TBI. 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 two 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.

Model Spinal Cord Injury Systems
Alabama

UAB Model Spinal Cord Injury Care System

University of Alabama/Birmingham
Spain Rehabilitation Center
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Birmingham, AL 35249-7330
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Principal Investigator: Amie B. Jackson, MD 205/934-3330

Public Contact: Pamela K. Mott, Director, Research Services 205/934-3283 (V); 205/934-4691 (TTY); Fax: 205/975-4642

Project Number: H133N000016

Start Date: October 01, 2000

Length: 72 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 00 \$340,000; FY 01 \$340,000; FY 02 \$340,000; FY 03 \$340,000; FY 04 \$340,000; FY 05 \$340,000

Abstract: The purpose of the University of Alabama at Birmingham Spinal Cord Injury Care System (UAB-SCICS) program is to provide cutting edge, cost effective, comprehensive care from the moment of injury across the life span for persons who incur an SCI; to investigate ways of improving aspects of that system of care through clinical research; and to disseminate project research findings to persons with SCI, their family members, and professional care providers. UAB-SCICS includes two research projects: (1) investigating musculoskeletal/spine changes in post-menopausal women with SCI; and (2) completing a longitudinal investigation of the processes involved in coming to terms with disability over the first year post-injury. UAB-SCICS maintains linkages with emergency medical service agencies throughout the state, with state and local VR and long-term follow-up programs, with clinically oriented research activities within the UAB-SCICS itself, with UAB's companion Medical RRTC on Secondary Conditions of SCI, as well as with clinical research programs being conducted at other Model SCI Systems. The UAB-SCICS currently maintains the National Spinal Cord Injury Statistical Center.

Model Spinal Cord Injury Systems
California

Regional Spinal Cord Injury Care System of Southern California

Los Amigos Research and Education Institute, Inc. (LAREI)
Rancho Los Amigos National Rehabilitation Center
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Downey, CA 90242-4155
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Principal Investigator: Robert L. Waters, MD; Rod Adkins, PhD; 562/401-7048
Public Contact: 562/401-8956; Fax: 562/401-7897

Project Number: H133N000029

Start Date: September 01, 2000

Length: 72 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 00 \$345,000; FY 01 \$345,000; FY 02 \$345,000; FY 03 \$345,000; FY 04 \$345,000; FY 05 \$345,000

Abstract: The Regional Spinal Cord Injury Care System of Southern California's primary mission is to collect initial and follow-up data on persons who have sustained spinal cord injuries and submit it to the national statistics database at the University of Alabama at Birmingham. Another component of the project focuses on literacy in individuals with SCI. Also, the project identifies, evaluates, and eliminates environmental barriers, particularly cultural and social barriers, to enable people with SCI to reintegrate fully into their community, and thus improve their lives. The project has been designed to meet the needs of the approximately 75 percent minority and underserved populations that comprise its clientele, and has samples sufficient for achieving adequate statistical power in the relevant designs and producing meaningful research. Finally, the System contributes new and useful information to the current collection of SCI literature. This project contributes to the national statistics database at the University of Alabama at Birmingham.

Model Spinal Cord Injury Systems
California

Model Spinal Cord Injury System

Santa Clara Valley Medical Center (SCVMC)
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Principal Investigator: Tamara Bushnik, PhD 408/793-6446

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Project Number: H133N000007

Start Date: October 01, 2000

Length: 72 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 00 \$340,000; FY 01 \$340,000; FY 02 \$340,000; FY 03 \$340,000; FY 04 \$340,000; FY 05 \$340,000

Abstract: The system of care at the Santa Clara Valley Medical Center (SCVMC) that extends from the scene of the accident to community reintegration has been developed through a program encompassing services, teaching and demonstration, and clinical research activities in its northern and central California and Nevada catchment area. This effort continues to include community agency staff and consumers and has produced a network of services addressing the needs of individuals with SCI. Based on input from consumers and their family members, community organizations, rehabilitation health professionals, and the rehabilitation literature, the research program studies: (1) the efficacy of peer support, both group and one-on-one mentoring, to improve quality of life, physical and psychosocial status, and community participation and integration; (2) if a regular exercise program can improve the above mentioned community outcomes; (3) the effect of high personal attendant turnover on the above mentioned variables and whether an intervention can decrease that turnover and improve outcomes; and (4) the provision of SCI-specific education and whether improving knowledge improves outcomes. This project contributes to the national statistics database at the University of Alabama at Birmingham.

Model Spinal Cord Injury Systems
Colorado

The Rocky Mountain Regional Spinal Injury System

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Principal Investigator: Daniel P. Lammertse, MD; Gale G. Whiteneck, PhD 303/789-8220

Public Contact: Gale G. Whiteneck, PhD 303/789-8204 (V); 303/789-8575 (TTY); Fax: 303/789-8441

Project Number: H133N000001

Start Date: October 01, 2000

Length: 72 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 00 \$375,000; FY 01 \$375,000; FY 02 \$375,000; FY 03 \$375,000; FY 04 \$375,000; FY 05 \$375,000

Abstract: The Rocky Mountain Regional Spinal Injury System emphasizes research and significant contributions that have been made in the areas of SCI costs of care, aging, outcome assessment, high tetraplegia, neurorehabilitative surgery, and program evaluation, as well as participation in randomized controlled multicenter clinical trials. An integrated research agenda includes a controlled clinical trial of therapy for shoulder pain and evaluations of longitudinal outcomes of surgery for spinal cord myelopathies, recovery from pressure sore surgery, perimenopausal symptoms and treatments in women with SCI, the issues of women who provide assistance to a partner with SCI, and the impact of environmental barriers on the full participation of people with SCI. The project includes two highly regarded 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. These facilities bring together a full complement of disciplines and specialists, medically directed by six full-time physicians specializing in SCI acute care and rehabilitation management, to provide all components of a model system of care. This project contributes to the national statistics database at the University of Alabama at Birmingham.

Model Spinal Cord Injury Systems
Florida

South Florida Regional Spinal Cord Injury Model System

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Principal Investigator: Marca L. Sipski, MD 305/585-1328

Public Contact: 305/585-1339; Fax: 305/585-1340

Project Number: H133N000017

Start Date: October 01, 2000

Length: 72 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 00 \$375,000; FY 01 \$320,000; FY 02 \$320,000; FY 03 \$320,000; FY 04 \$320,000; FY 05 \$320,000

Abstract: The South Florida Spinal Cord Injury System (SFSCIS) is a cooperative effort between the University of Miami School of Medicine, The Miami Project to Cure Paralysis, Jackson Memorial Hospital, and the Miami VA Medical Center. The SFSCIS is a multidisciplinary system of care providing comprehensive rehabilitation services specifically designed to meet the special needs of individuals with spinal cord injuries. The clinical components of the SFSCIS include emergency medical services, acute care, vocational and other rehabilitation services, community and job placement, and long-term community follow-up and health maintenance. A comprehensive prevention program is included in the program. A significant and substantial research program focuses on the maintenance of health and function; three clinical trials and five major research projects are included. Each of these projects centers on studying interventions to improve outcomes in the preservation or restoration of function following SCI. In addition to these research projects, this project contributes to the National Spinal Cord Injury Database. A program designed for widespread dissemination of research and demonstration findings is included. In addition, culturally appropriate methods of education, training, and outreach are interwoven throughout the projects. Finally, the program includes a comprehensive evaluation program.

Model Spinal Cord Injury Systems
Georgia

Georgia Regional Spinal Cord Injury Care System

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<http://www.shepherd.org>

Principal Investigator: David F. Apple, Jr., MD 404/350-7353

Public Contact: Lesley M. Hudson, MA, Project Co-Director 404/350-7591; Fax: 404/355-1826

Project Number: H133N000005

Start Date: September 30, 2000

Length: 72 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 00 \$374,992; FY 01 \$374,992; FY 02 \$374,992; FY 03 \$374,992; FY 04 \$374,992; FY 05 \$374,992

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 program is involved with site-specific research projects on incomplete spinal cord injuries, enhanced long distance technological communications with patients, and the determination of early predictors of secondary complications. As part of the clinical research activity sponsored by the facility's Crawford Research Institute, the program is responsible for ongoing referrals of individuals with acute injury, as well as long-term follow-up and data collection. This project contributes to the national Model Spinal Cord Injury System (SCIS) national database at the University of Alabama at Birmingham.

Model Spinal Cord Injury Systems
Massachusetts

The New England Regional Spinal Cord Injury Center

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Preston F-511

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<http://www.bumc.bu.edu/Dept/Content.aspx?DepartmentID=91&PageID=332>

Principal Investigator: Steve Williams, MD

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(DeJoie); Fax: 617/638-7313

Project Number: H133N000024

Start Date: October 01, 2000

Length: 72 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 00 \$374,514; FY 01 \$300,000; FY 02 \$300,000; FY 03 \$300,000; FY 04 \$300,000; FY 05 \$300,000

Abstract: The New England Regional Spinal Cord Injury Center (NERSCIC) operates through a joint partnership between the Boston Medical Center (BMC) and the Boston University School of Public Health (BUSPH). While acute care and rehabilitation are administered at BMC, BUSPH plays an equally important role in developing research, education, and training projects to meet the needs of people with SCI. Additionally, NERSIC maintains a research partnership with Boston's Spaulding Rehabilitation Hospital and Woburn HealthSouth Rehabilitation Hospital. Additionally, NERSCIC has initiated collaboration with Gaylord Hospital. The Model SCI System includes multiple projects: (1) a pilot study on the effects of Internet access upon the health and social interactions of people with SCI; (2) a study of building accessibility in eastern Massachusetts; (3) the development of a consumer-rated Internet guide based on input from individuals with SCI; (4) an employment study, providing comprehensive services to chronically unemployed individuals with SCI; (5) a study of the relationship between pain severity and participation in paid employment and/or education for persons with SCI. This project contributes to the national statistics database at the University of Alabama at Birmingham. NERSCIC also publishes a quarterly newsletter.

Model Spinal Cord Injury Systems
Michigan

University of Michigan Model Spinal Cord Injury Care System

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Principal Investigator: Denise G. Tate, PhD; David R. Gater, MD, PhD 734/763-0971
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Project Number: H133N000009

Start Date: November 01, 2000

Length: 72 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 00 \$320,000; FY 01 \$320,000; FY 02 \$320,000; FY 03 \$320,000; FY 04 \$320,000; FY 05 \$320,000

Abstract: The University of Michigan Model Spinal Cord Injury Care System provides comprehensive care and services to both children and adults, and is the only facility in Michigan to care for ventilator-dependent persons of all ages with SCI. The project objectives are to: (1) provide a continuum of comprehensive, multidisciplinary services for persons with SCI, from emergency medical services to long-term community follow-up, with a focus upon maintaining health; (2) demonstrate the effects of the continuum of comprehensive services, focusing on its efficacy in promoting employment, health maintenance and wellness, independent living, and community reintegration; (3) conduct significant research, using a participatory action research approach involving consumer input from inception through implementation; (4) operate an efficient service system; and (5) develop and demonstrate methods of community outreach and education in collaboration with the Ann Arbor Center for Independent Living (AACIL) to reach professionals, consumers, and their families in other rehabilitation facilities and Centers for Independent Living in Michigan. These objectives emphasize community reintegration as a key outcome. The Model System is in collaboration with the AACIL, with the goal of promoting community reintegration. This partnership ensures a coordinated approach to clinical care, training, and research that integrates consumer empowerment with comprehensive lifelong follow-up, bringing a consumer-professional synergy to the project that serves as an example for other Model SCI Systems. This project contributes to the national statistics database at the University of Alabama at Birmingham.

Model Spinal Cord Injury Systems
Missouri

Missouri Model Spinal Cord Injury System

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Department of Health Psychology
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Columbia, MO 65212
nossamanl@health.missouri.edu
<http://www.hsc.missouri.edu/~momscis>

Principal Investigator: Laura H. Schopp, PhD, ABPP 573/888-8847

Public Contact: Larry Nossaman 573/884-2899 (V); 573/882-7971 (TTY); Fax: 573/884-2902

Project Number: H133N000012

Start Date: October 01, 2000

Length: 72 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 00 \$300,000; FY 01 \$300,000; FY 02 \$300,000; FY 03 \$300,000; FY 04 \$300,000; FY 05 \$300,000

Abstract: The Missouri Model Spinal Cord Injury System (MOMSCIS) is committed to developing, implementing, and evaluating innovative research promoting independent living and community integration among persons with spinal cord impairment. The study focuses on the effect of a consumer-directed personal assistance services training intervention on consumer satisfaction, independent living, and community integration. The study develops, implements and evaluates the in-person Individualized Management of Personal Assistant/Consumer Teams (IMPACT) workshop. Workshop participants receive information on preventing and treating secondary medical conditions, including pressure sores, urinary tract infections, bowel and bladder management, autonomic dysreflexia, pain management, chronic fatigue, and thermoregulation, and information on relationship issues, such as hiring and firing, communication styles and strategies, assertiveness, and team building. Study objectives are: (1) to determine the effect of the IMPACT workshop on consumer satisfaction, the incidence of secondary conditions, activity, and participation (as defined by the ICF); (2) to determine the effect of the IMPACT workshop on personal assistants' job satisfaction, job stress and attrition; and (3) to provide online resources to the disability community, including an online personal assistant training manual for consumers and assistants, and an online resources database. Activity and participation are measured by the PARTicipation Survey for persons with Mobility Limitations (PARTS/M).

Model Spinal Cord Injury Systems
New Jersey

Northern New Jersey Spinal Cord Injury System

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1199 Pleasant Valley Way
West Orange, NJ 07052-1499
dtulsky@kmrrec.org
<http://www.kmrrec.org/KM/nnjscis/index.php3>

Principal Investigator: David Tulsky, PhD 973/243-6849

Public Contact: David S. Tulsky, PhD 973/243-6849; 973/243-6916; Fax: 973/243-3527

Project Number: H133N000022

Start Date: September 01, 2000

Length: 72 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 00 \$345,000; FY 01 \$344,724; FY 02 \$345,000; FY 03 \$345,000; FY 04 \$345,000; FY 05 \$345,000

Abstract: The Northern New Jersey Spinal Cord Injury System (NNJSCIS) attempts to improve outcomes for persons with SCI through novel interventions and expanded service delivery options. The NNJSCIS is composed of Kessler Medical Rehabilitation Research and Education Corporation, Kessler Institute for Rehabilitation, and University of Medicine and Dentistry of New Jersey-University Hospital. The NNJSCIS has an interdisciplinary system of rehabilitation care specifically designed to meet the needs of individuals with SCI. It includes emergency medical services; acute care; psychological, social, and vocational services; peer support; independent living services; community and job placement, long-term community follow-up; and health maintenance. Some of the research and demonstration projects target three of the most common secondary conditions (pressure ulcers, shoulder pain, and urinary tract infections). Other studies promote wellness by reducing obesity, examine the relation between health literacy and outcomes, and identify risk factors and prevent potential problems. One project operationalizes the newly developed Clinical Practice Guidelines. The NNJSCIS contributes to the National Statistics Data Center.

Model Spinal Cord Injury Systems
New York

Mount Sinai Spinal Cord Injury Model System

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Principal Investigator: Kristian T. Ragnarsson, MD

Public Contact: Marcel Dijkers, PhD 212/659-9340; Fax: 212/348-5901

Project Number: H133N000027

Start Date: October 01, 2000

Length: 72 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 00 \$320,000; FY 01 \$320,000; FY 02 \$320,000; FY 03 \$320,000; FY 04 \$320,000; FY 05 \$320,000

Abstract: The Mount Sinai Spinal Cord Injury Model System (MS-SCI-MS) of the Department of Rehabilitation Medicine of Sinai Hospital (MSH) and the Mount Sinai School of Medicine (MSSM) in New York City provides comprehensive care to meet the diverse needs of persons with SCI in its catchment area. There are four components of the system: (1) comprehensive clinical care; (2) research (both center-specific research and contributions to the national statistics database); (3) dissemination, education, and training; and (4) injury prevention. The comprehensive clinical program stresses interdisciplinary care, and employs a primary team model to enhance coordination among caregivers. Comprehensive outpatient rehabilitation services and long-term follow-up at MSH are also included. Rehabilitation services include an evaluation program for a high-tech wheelchair and seating system, a lower-extremity functional electrical stimulation ergometry program, psychosocial services, extensive VR services, a consumer-directed program to promote community reintegration (DO IT!), and a women's peer group, and formal and informal peer mentoring programs, as well as a Life Challenge program. Specialty medical and surgical services include a fertility program for males with ejaculatory dysfunction, intrathecal pumps for treatment of spasticity, upper extremity reconstruction, and cutting-edge technology. An approach to screening and early intervention of secondary medical conditions is a preventive health care demonstration project. The research program of MS-SCI-MS consists of two studies relevant to one of the most disabling secondary conditions of SCI, chronic pain: (1) meta-analyses of pain reports and pain treatments; and (2) a prospective study of pain. This project contributes to the national statistics database at the University of Alabama at Birmingham.

Model Spinal Cord Injury Systems
Pennsylvania

Demonstration of a Model Spinal Cord Injury System Center

Thomas Jefferson University
Regional Spinal Cord Injury Center of the Delaware Valley
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Principal Investigator: John F. Ditunno, Jr., MD 215/955-5580

Public Contact: Mary Patrick 215/955-6579; Fax: 215/955-5152

Project Number: H133N000023

Start Date: September 01, 2000

Length: 72 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 00 \$370,000; FY 01 \$370,000; FY 02 \$370,000; FY 03 \$370,000; FY 04 \$370,000; FY 05 \$370,000

Abstract: The Regional Spinal Cord Injury Center of Delaware Valley (RSCICDV) is a comprehensive program of coordinated patient care, education, and research activities. The RSCICDV: (1) conducts on-site research focusing on improved outcome measures to meet Federally established objectives; (2) refines and improves the RSCICDV's operational services and demonstration projects; and (3) conducts two development projects including development of an SCI website and development of a Pressure Sore Program. The on-site research includes four experiments: (1) validation of the Walking Index of Spinal Cord Injury (WISCI) scale in a clinical setting for severity and hierarchical ranking; (2) validation of WISCI scale for elements of a disability measure for distance, speed, and endurance into WISCI levels; (3) demonstration that the WISCI scale is responsive to change in a clinical trial setting; and (4) demonstration of consumer preference for walking. The four development projects include: (1) improved access to information via the web site; (2) implementation of a critical pathway for more efficient healthcare delivery; (3) increased employment and advancement of employment through hireAbility; and (4) increased monitoring of pressure sores and strategies for prevention. This project contributes to the national statistics database at the University of Alabama at Birmingham.

Model Spinal Cord Injury Systems
Pennsylvania

University of Pittsburgh Model Center on Spinal Cord Injury

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Principal Investigator: Michael L. Boninger, MD 412/365-4861

Public Contact: Fax: 412/365-4858

Project Number: H133N000019

Start Date: December 01, 2000

Length: 72 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 00 \$320,000; FY 01 \$320,000; FY 02 \$320,000; FY 03 \$320,000; FY 04 \$320,000; FY 05 \$320,000

Abstract: The University of Pittsburgh Model Center on Spinal Cord Injury (UPMC-SCI) represents the efforts of dedicated consumers, clinicians, and researchers. The UPMC-SCI's research focus is on innovations in AT. The research projects evaluate the impact of selected innovations in technology on service delivery and on outcomes such as function, independence, and employment. One project is addressing a shortcoming in AT research through the use of a new dynamic outcome measure developed by David Gray PhD. Researchers are also testing an innovative pushrim-activated, power-assisted wheelchair that has great potential to improve mobility for individuals with tetraplegia. In a third project, researchers are examining an innovative technology in the form of an exercise system (GAMECycle) to increase cardiovascular fitness in a population with SCI. The GAMECycle is an interface between a personal computer and an arm ergometer allowing for computer play while exercising. An additional project is testing a Seating and Mobility Concordance Test (SMCT) to determine if this measure is capable of discriminating among clinicians with differing levels of experience in seating and mobility prescription in SCI. In addition to this research, the center provides a model of care for individuals with SCI. SCI care at the University of Pittsburgh is provided in a multidisciplinary manner with a high level of communication among the constituent services. The fully implemented system of continuity of treatment 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 AT services and VR.

Model Spinal Cord Injury Systems

Texas

Texas Model Spinal Cord Injury System

The Institute for Rehabilitation and Research (TIRR)

1333 Moursund Street

Houston, TX 77030-3408

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<http://www.bcm.tmc.edu/pm&r/sci/research/modelssystem>

Principal Investigator: William H. Donovan, MD 713/797-5912

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Project Number: H133N000004

Start Date: September 01, 2000

Length: 72 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 00 \$330,000; FY 01 \$330,000; FY 02 \$330,000; FY 03 \$330,000; FY 04 \$330,000; FY 05 \$330,000

Abstract: The Texas Model Spinal Cord Injury System (TMSCIS) provides services along the entire continuum of care from emergency medical service to long-term follow-up and management of secondary conditions. TMSCIS performs an analytic longitudinal investigation of disability models to explore and quantify the interaction among various individual and environmental variables. TMSCIS operationalizes the Institute of Medicine model of disability utilizing state-of-the-art measurement techniques and comprehensive statistical approaches to test hypotheses about dynamic interrelations of persons with SCI and their environment. This investigation involves following newly injured persons with SCI for two years after injury. Measurements are taken of pre-injury life conditions, enabling processes, as well as personal, psychological, and physical environments. This project contributes to the national statistics database at the University of Alabama at Birmingham. In addition, the project develops and tests theoretically derived structural models from the national database and other existing data sources.

Model Spinal Cord Injury Systems
Virginia

VCU Model Spinal Cord Injury Center

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Principal Investigator: William O. McKinley, MD; David X. Cifu, MD

Public Contact: Michelle Meade, PhD 804/828-5401; Fax: 804/828-6340

Project Number: H133N000015

Start Date: October 01, 2000

Length: 72 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 00 \$310,000; FY 01 \$310,000; FY 02 \$310,000; FY 03 \$310,000; FY 04 \$310,000; FY 05 \$310,000

Abstract: This project develops and implements a Model Spinal Cord Injury System at Virginia Commonwealth University/Medical College of Virginia (VCU/MCV), that has a concentrated emphasis on employment. Researchers within this Model Systems systematically monitor and assess the impact of interventions, advancing technology, and policy changes on employment following SCI. In addition to contributing to the National Statistical Database at the University of Alabama at Birmingham, the VCU SCI Model System has three research studies. These studies involve the direct utilization of the SCI National Database, a major employment policy study across 18 states, and also an evaluation of technology training on employment of outcome. Involvement of SCI mentors in training new vocational mentors with SCI is also an important aspect of the project. By looking at the issues associated with employment for persons with SCI, this project complements other resources in place within VCU/MCV, including the RRTC on Workplace Supports, long-term relationships with the Virginia Department of Rehabilitation Services, and existing SCI Model Systems delivery of care. A significant number of persons with disabilities are involved as project staff as well as on an Advisory Board. A close relationship with the Mid-Atlantic Paralyzed Veterans Association (PVA) enhances training, dissemination, and other: outreach activities.

Model Spinal Cord Injury Systems
Washington

Northwest Regional Spinal Cord Injury System

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Principal Investigator: Diana D. Cardenas, MD; Charles Bombardier, PhD 206/543-8171
Public Contact: Cynthia Salzman 206/685-3999; Fax: 206/685-3244

Project Number: H133N000003

Start Date: September 01, 2000

Length: 72 months

NIDRR Officer: Kristi E. Wilson, PhD

NIDRR Funding: FY 00 \$330,000; FY 01 \$330,000; FY 02 \$330,000; FY 03 \$330,000; FY 04 \$330,000; FY 05 \$330,000

Abstract: The University of Washington's Northwest Regional Spinal Cord Injury System (NWRSCIS) serves a critical mass of patients with SCI and has all the necessary disciplines to provide state-of-the-art medical, surgical, and rehabilitation care. NWRSCIS has four objectives: (1) examine interventions to improve outcomes in the preservation or restoration of function or the prevention and treatment of secondary conditions; (2) contribute to the national database; (3) maintain specialized clinical programs; and (4) develop and maintain education programs for consumers and families, especially for those who belong to minority and disadvantaged groups. In addition, the Center provides for the widespread dissemination of research and demonstration findings through its publications and website. This project 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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Principal Investigator: Gitendra Uswatte, PhD 205/975-5089

Public Contact: Sonya Williamson 205/934-5601; Fax: 205/975-6140

Project Number: H133G050222

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 05 \$149,891

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 till 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.

Field Initiated Projects (FIPs)

California

Improving Muscular Use and Cardio-Respiratory Demand in Spinal-Cord-Injured Patients Performing Functional Electronically Stimulated Leg

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Principal Investigator: Maury Hull, PhD

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Project Number: H133G020137

Start Date: January 01, 2003

Length: 36 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 02 \$149,971; FY 03 \$146,330; FY 04 \$144,845; FY 05 \$0 (No-cost extension through 12/31/2006)

Abstract: This project develops new stimulation patterns for a functional electrically stimulated (FES) leg cycle ergometer (LCE) that enable persons with spinal cord injuries to exercise with greater benefit. Greater benefit is defined as exercising for a longer period of time and at a higher work rate while involving more leg muscles than is possible with existing ergometers. To reach the general aim, the research is divided into three phases, each directed towards testing a specific hypothesis: (1) normal recumbent pedaling can be simulated using a computational musculoskeletal model of the leg; (2) minimizing muscle fatigue in a forward dynamic simulation of recumbent pedaling yields computed stimulation patterns that enable an individual with SCI to pedal the FES-LCE for longer periods of time, and at higher work rates, than is possible with current stimulation patterns; and (3) using neural stimulation patterns computed from a forward dynamic simulation of recumbent pedaling in which selected muscles of both the upper and lower leg are activated, an individual can pedal the FES-LCE to obtain a greater cardio-respiratory workout than when only upper leg muscles are stimulated.

Field Initiated Projects (FIPs)

California

Development and Evaluation of a Quality of Life Instrument for Individuals with Adult-Onset Hearing Loss

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Principal Investigator: Carren J. Stika, PhD

Public Contact: 858/552-1996; Fax: 858/642-0266

Project Number: H133G030191

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 03 \$149,980; FY 04 \$149,999; FY 05 \$149,995

Abstract: This project develops a standardized, psychometrically rigorous quality of life instrument for individuals with adult-onset hearing loss that is conceptually linked to the full range of functional domains commonly impacted by hearing loss, and which quantifies respondents' perceptions of domain satisfaction and subjective well-being. Further, the quality of life instrument integrates the new paradigm of disability, whereby environmental, cultural, and personal variables are considered in relation to the individual's disability. The enhancement of quality of life has recently been recognized as the essential purpose of health care and rehabilitation. Research is showing that it is the individual's subjective well-being rather than the objective health condition or functional status that determines treatment-seeking behavior, compliance with treatment, and treatment outcome. Individuals with hearing loss represent the single largest disability group in the United States, with prevalence rates rising. Despite the fact that hearing loss often has a profound influence on personal and social adjustment, employment status, and general well-being, few psychological measures currently exist to help assess these effects or evaluate intervention outcomes.

Field Initiated Projects (FIPs)

District of Columbia

Black-White Disparities in Stroke Rehabilitation

National Rehabilitation Hospital/Medstar Research Institute

Research Division

102 Irving Street, NW

Washington, DC 20010

Principal Investigator: Gerben DeJong, PhD 202/877-1960

Public Contact: Donal Lauderdale, MSE 202-877-1425

Project Number: H133G050153

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 05 \$149,569

Abstract: This project analyzes a large existing dataset for disparities in stroke rehabilitation care and outcomes among black and white stroke survivors and determines how rehabilitation treatments and outcomes can be optimized for both groups. Investigators then translate study findings into an actionable quality improvement (QI) plan that rehabilitation centers can use to enhance care for both groups. Researchers use data on 1063 individuals in the 2 racial groups originally acquired from 6 sites in the Post-Stroke Rehabilitation Outcomes Project (PSROP). This project used a practice-based evidence (PBE) method that examined the actual practice of care to identify the practices associated with best outcomes. PBE studies are observational cohort studies that require researchers to specify carefully the nature of the rehabilitation treatments and control exhaustively for the patient differences that may otherwise affect the outcomes. To help generalize the findings of the study, investigators compare study participants with stroke survivors included in eRehabdata, a national database to which 180 rehabilitation facilities report. The study is a collaboration between the National Rehabilitation Hospital in Washington, DC and the Institute for Clinical Outcomes Research in Salt Lake City, UT.

Field Initiated Projects (FIPs)

Georgia

The Impact of Cognitive Impairment and Outcomes Following SCI

Shepherd Center, Inc.
Crawford Research Institute
2020 Peachtree Road, NW
Atlanta, GA 30309

Principal Investigator: Stephen Macciocchi

Public Contact: 404/350-7553

Project Number: H133G030004

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Constance Pledger, EdD

NIDRR Funding: FY 03 \$149,642; FY 04 \$149,920; FY 05 \$142,514

Abstract: This project is designed to determine whether moderate to severe neurocognitive impairment secondary to comorbid (brain injury) and/or premorbid cognitive disorders (learning disability/attention deficit disorder) negatively impacts functional, health, quality of life, and participation outcomes following SCI. Participants are followed (1) to determine the base rate of neurocognitive disorders in persons with SCI and (2) to establish the relative effect premorbid/comorbid neurocognitive impairment has on functional skills, health status, quality of life outcomes at discharge from inpatient rehabilitation, and participation outcomes at one year following discharge.

Field Initiated Projects (FIPs)

Illinois

Muscle Strength, Physical Work Capacity, and Functional Performance in Individuals with Down Syndrome

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Principal Investigator: Bo Fernhall, PhD

Public Contact: 217/333-2131

Project Number: H133G040323

Start Date: October 01, 2004

Length: 24 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 04 \$149,984; FY 05 \$149,591

Abstract: This project evaluates the minimal muscle strength and endurance thresholds required for daily functional performance, such as rising from a chair, ascending or descending stairs, the ability to walk fast enough to cross a street in the time allotted at signaled intersections, and general walk/run performance. The project also evaluates the effect of resistance training on the ability to perform these daily tasks and on quality of life in individuals with Down Syndrome. This project is built on the premise that most individuals with Down Syndrome have low levels of muscle strength which substantially contribute to functional limitations, poor work capacity, and reduced quality of life. Although many other factors contribute to functional limitations and decreased quality of life in people with disabilities, muscle strength is a consistent major contributor, and muscle strength can easily be addressed in intervention programs.

Field Initiated Projects (FIPs)

Illinois

Three Dimensional Assessment and Rehabilitation of Arm Function Following Stroke

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Chicago, IL 60611
r-beer@northwestern.edu

Principal Investigator: Randall F. Beer, PhD 312/238-1412

Public Contact: Fax: 312/238-2208

Project Number: H133G030204

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 03 \$149,957; FY 04 \$149,926; FY 05 \$149,884

Abstract: The goal of this project is to develop and evaluate the Multi-Axis Cartesian-based Arm Rehabilitation Machine (MACARM) - a new device for the quantitative assessment and rehabilitation of three dimensional arm movements following stroke. As a cost-effective alternative to robotic arm technology, the MACARM utilizes a geometric arrangement of relatively simple, single degree of freedom "Active Modules" to achieve a large workspace and high force and positional performance. The MACARM is founded on the Multipurpose Multiaxial Isokinetic Dynamometer (MMID) originally developed as an exercise system for NASA. The objectives of this project are as follows: (1) to modify the MMID hardware to achieve the force and positional accuracy required for upper limb rehabilitation, (2) to develop MACARM software for upper limb assessment and rehabilitation, (3) to validate the static and dynamic force and positional performance of the MACARM, and (4) to test the MACARM with human subjects, including stroke survivors.

Field Initiated Projects (FIPs)

Illinois

Gait Abnormalities in Individuals with Stroke: Implications to Rehabilitation

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Principal Investigator: Yasin Y. Dhaher, PhD

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Project Number: H133G040065

Start Date: October 01, 2004

Length: 36 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 04 \$149,964; FY 05 \$149,981

Abstract: This project assesses hip kinematics using standard motion analysis technology during overground walking, and kinetics measured during constrained (i.e., sagittal plane restricted) simulated treadmill walking using an instrumented robotic gait orthosis. These behaviors are compared to static measures of both volitional and reflex (stretch) measurements at the hip, knee, and ankle joints of the affected limb. Such measurements are performed in individuals with chronic stroke to identify factors that contribute to abnormal frontal plane behaviors. In individuals with acute stroke, research characterizes the mechanisms underlying development of abnormal frontal plane kinematics throughout the natural recovery and rehabilitation processes. Finally, by providing specific gait retraining paradigms at the initial and chronic stages of injury, the project determines the mutability of abnormal gait kinematics throughout the recovery process.

Field Initiated Projects (FIPs)
Maryland

Bilateral Arm Training in Patients with Chronic Hemiparesis

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Principal Investigator: Jill Whitall, PhD
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Project Number: H133G010111

Start Date: October 01, 2001

Length: 36 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 01 \$148,579; FY 02 \$148,742; FY 03 \$150,000; FY 04 \$0 (No-cost extension through 9/30/2005); FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This project uses a randomized controlled study to test the validity of low intensity repetitive bilateral arm training with rhythmic auditory cuing to improve upper extremity (UE) motor function. This training program is based on principles of motor learning and control. A long-term objective of this research program is to understand the principles and mechanisms underlying UE stroke rehabilitation and to provide a scientific basis for planning treatments for stroke rehabilitation.

Field Initiated Projects (FIPs)

Massachusetts

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

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Clinical Epidemiology and Research Training Unit
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Principal Investigator: David J. Hunter, MD, PhD

Public Contact: 617/638-5180; Fax: 617/638-5239

Project Number: H133G040201

Start Date: December 01, 2004

Length: 36 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 04 \$150,000; FY 05 \$150,000

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 Generation II, a knee bracing company.

Field Initiated Projects (FIPs)

Michigan

Psychological and Physiological Aspects of Menopause in Women with Spinal Cord Injury

University of Michigan
Department of Physical Medicine and Rehabilitation
300 North Ingalls, Room NI2A09
Ann Arbor, MI 48109-0491

Principal Investigator: David R. Gater, MD, PhD

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Project Number: H133G040274

Start Date: October 01, 2004

Length: 36 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 04 \$149,924; FY 05 \$149,432

Abstract: The overall goal of this project is to test the general hypothesis that SCI will moderate the relationship of menopause and health-related outcomes. This research involves two interrelated studies of women with SCI: Study 1 is aimed at examining physical (e.g., secondary conditions), and psychological outcomes (e.g., depression, perceived stress), while Study 2 is aimed at examining physiological outcomes (e.g., body composition, fitness levels). These studies involve a total of 227 women with SCI, men with SCI, and women without disabilities. Study 1 involves three collaborating centers (University of Michigan, Craig Hospital, and Santa Clara Valley Medical Center) in the collection of longitudinal survey data from 207 participants to assess the ability to reliably distinguish secondary conditions of SCI from menopause symptomatology and experience of menopause symptomatology in women with SCI (women without disabilities serve as controls). Men with SCI serve as controls in the first part of this study. Study 2 (University of Michigan only) collects longitudinal data to investigate physiological outcomes menopause in a total of 20 women.

Field Initiated Projects (FIPs)

Michigan

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: Richard Johnson, EdD

NIDRR Funding: FY 05 \$148,810

Abstract: This project implements a ten-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 six days a 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

Functional Assessment and Treatment of Neurogenic Hypotension Due to Spinal Cord Injury

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Principal Investigator: Edward Nieshoff, MD

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Project Number: H133G020128

Start Date: September 01, 2002

Length: 36 months

NIDRR Officer: Constance Pledger, EdD

NIDRR Funding: FY 02 \$116,835; FY 03 \$116,118; FY 04 \$119,442

Abstract: This project characterizes hypotensive phenomena associated with SCI and evaluates the effects of midodrine, an alpha-sympathomimetic medication, on them. Specifically, cardiovascular autonomic insufficiency due to SCI is manifested by (1) orthostatic hypotension, which impedes early rehabilitation efforts and causes subjective distress, and (2) exertional hypotension, which contributes to pathological fatigue and limited exercise performance. Thus, two corresponding protocols are employed to evaluate the effects of anti-hypotensive treatment with midodrine on each impairment, using two methods of hemodynamic challenge: head-up tilt table testing is used to elicit orthostatic hypotension, and arm-crank ergometry to elicit exertional hypotension. In each protocol, a randomized crossover within-subjects design allows for comparison of the effects of three interventions (compression garments, midodrine 10mg, and placebo) on subjective and objective responses. Ability to tolerate head-up tilt is assessed by heart rate, blood pressure, and symptoms during inclination; exercise tolerance is evaluated by oxygen consumption and perceived exertion in addition to the latter. Similar cardiovascular autonomic insufficiency in non-paralyzed populations responds dramatically to treatment with the midodrine, with increased ability to engage in physical activity. This project is the first controlled trial of midodrine in SCI.

Field Initiated Projects (FIPs)

Minnesota

Effect of Electrical Stimulation on Brain Reorganization in Subjects with Stroke

University of Minnesota
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carey007@umn.edu

Principal Investigator: James R. Carey, PhD

Public Contact: 612/626-2746; Fax: 612/625-7192

Project Number: H133G010077

Start Date: September 01, 2001

Length: 36 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 01 \$149,995; FY 02 \$149,993; FY 03 \$149,985; FY 04 \$0 (No-cost extension through 8/31/2005); FY 05 \$0 (No-cost extension through 2/28/2006)

Abstract: This project studies the effects of training finger movement control in subjects with stroke using a finger movement tracking paradigm on manual skill and also on brain reorganization, as measured by functional magnetic resonance imaging. Although brain imaging studies show evidence of brain reorganization in individuals who have recovered from stroke, these studies have not examined the subjects before and after their rehabilitation. Electrical stimulation has been found to be effective in helping recover hand function in many but not all individuals with stroke. This project instructs subjects with stroke in aggressive (six hours per day) electrical stimulation treatment to be done in their own home. Furthermore, it explores whether the sensory bombardment that occurs centrally with electrical stimulation causes an expansion of cortical activity and whether this might be the mechanism for improved manual control following treatment. Subjects with stroke are assigned randomly to either an electrical stimulation group or a control group. Appropriate tests of manual performance as well as brain imaging using a 4 Tesla magnet are conducted at pretest, post-test, and follow-up. This research has the potential of uncovering important information on recovery from stroke that invites many more studies in the future.

Field Initiated Projects (FIPs)

Minnesota

Home-Based Tracking Training to Stimulate Neuroplasticity and Improve Function in Stroke

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carey007@umn.edu

Principal Investigator: James R. Carey, PhD, PT
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Project Number: H133G020145

Start Date: September 01, 2002

Length: 36 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$149,929; FY 03 \$149,989; FY 04 \$149,416; FY 05 \$0 (No-cost extension through 7/31/2006)

Abstract: This project examines: (1) whether home-based joint movement tracking training is effective in promoting improved hand function and brain reorganization in subjects with chronic stroke, and (2) whether the mechanism of any such improvement is learning-dependent or use-dependent. Recent research has shown that repetitive efforts by subjects with chronic stroke using their paretic hand at a finger movement tracking task produced significant improvements in hand function and brain reorganization. The training technique requires patients to learn how to create precision movements of the index finger to track target waveforms on a computer screen. This project investigates whether home-based tracking treatment using a laptop computer and telecommunication technology can be as effective as earlier work with clinic-based treatment. Equally important, this project determines whether it is the motor learning or the repetitive movement that serves as the mechanism of improvement.

Field Initiated Projects (FIPs)

Nebraska

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

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Principal Investigator: Nicholas Stergiou, PhD; Wayne A. Stuberger, PhD, PT; Regina T. Harbourne, PT 402/554-3247

Public Contact: Lisa Holst 402/554-3075; Fax: 402/554-3693

Project Number: H133G040118

Start Date: December 01, 2004

Length: 36 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 04 \$150,000; FY 05 \$150,000

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)

New Jersey

Practical Clinical Trial of Cognitive Rehabilitation in Neuralgic Illness

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<http://www.njrehab.org/tbims>

Principal Investigator: Keith D. Cicerone, PhD

Public Contact: 732/906-2640; Fax: 732/906-9241

Project Number: H133G050063

Start Date: November 01, 2005

Length: 36 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$150,000

Abstract: This project conducts a prospective, randomized, practical clinical trial of intensive cognitive rehabilitation for persons with (non-traumatic) neuralgic illness. Neuralgic illness is a common condition that impacts personal autonomy, social relatedness, and quality of life. Impairments of cognitive functioning are common after neuralgic illness, and are associated with persistent disability. The project evaluates the effectiveness of a program of Intensive Cognitive Rehabilitation (ICRP) compared with a standard rehabilitation program (SRO) for persons with neuralgic illness. Participants enrolled from clinical and community-based referrals are randomly assigned to receive a 17-week program of either ICRP or SRO. A broad range of health-related outcome measures are used, including neuropsychological functioning, community integration and social participation, perceived quality of life, and patient-centered view of change.

Field Initiated Projects (FIPs)

New York

**Randomized Controlled Trial of Anti-Fatiguing Exercise to Improve
Function in Multiple Sclerosis Patients**

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Principal Investigator: Nadine M. Fisher, EdD

Public Contact: 716/829-3141, ext. 145; Fax: 716/829-3217

Project Number: H133G010132

Start Date: October 01, 2001

Length: 36 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 01 \$150,000; FY 02 \$150,000; FY 03 \$150,000; FY 04 \$0 (No-cost extension through 9/30/2005); FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: The goals of this study are: (1) to measure the changes in fatigue that result from a simulated workday and the next morning (incomplete recovery and residual fatigue); and (2) to study the effectiveness of a 12-week program of anti-fatiguing resistance exercises. Multiple Sclerosis (MS) is a demyelinating disease of the central nervous system; the most common symptom of MS is a generalized sense of fatigue and reduced function. Few studies have considered the role of exercise as a treatment for fatigue in people with MS. Subjects with MS are randomly assigned an exercise group and receive an individualized progressive resistance training program of anti-fatiguing exercises to perform three days per week in the lab or at home.

Field Initiated Projects (FIPs)

New York

Impact of Cooling and Exercise on Fatigue in Individuals with Multiple

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Principal Investigator: Nadine M. Fisher, EdD

Public Contact: 716/829-3141, ext. 145; Fax: 716/829-3217

Project Number: H133G050198

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 05 \$149,999

Abstract: Multiple Sclerosis (MS) is an inflammatory, demyelinating disease of the central nervous system. The most common symptom of MS is a generalized sense of fatigue. Some distinguishing features of fatigue in MS are that it comes on easily, prevents sustained physical functioning, interferes with an individual's responsibilities and role performance, and is worsened by heat. To manage fatigue, it has been suggested that individuals with MS should participate in aerobic exercise, plan for rest periods, improve sleep, and avoid heat. The goals of this research study are (1) to assess how work capacity (exercise) and fatigue are affected by different cooling strategies (Phase I), and (2) to determine the effects of a 12-week aerobic exercise program on heat flux and changes in skin and core body temperature (Phase II). In Phase I, 60 subjects with mild to moderate MS-related disability are assessed for physiological changes during four cooling conditions (no cooling, pre-cooling, cooling during exercise, ad libitum cooling). After completion of Phase I, the subjects are randomly assigned to exercise without cooling, exercise with cooling, or control groups for Phase II (a 12-week aerobic cycling exercise program). For Phase II, a baseline maximal graded exercise test to assess cardiovascular function and measures of fatigue and temperature are conducted prior to randomizing the subjects into the three groups. Positive results of the study will lead to a better understanding of treatment (cooling) possibilities and exercise rehabilitation procedures available for individuals with MS.

Field Initiated Projects (FIPs)

Ohio

**Empowering Persons with a Spinal Cord Injury Through a Shared
Decision-Making Program**

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Public Contact: Mary Jo Roach, PhD, Project Manager 216/778-8781; Fax: 216/778-3945

Project Number: H133G020029

Start Date: September 01, 2002

Length: 36 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 02 \$149,759; FY 03 \$149,759; FY 04 \$149,759; FY 05 \$0 (No-cost extension through 8/31/2006)

Abstract: This project systematically summarizes information concerning the various aspects of bladder management and SCI and prepares it in a format that allows persons with SCI to make more informed decisions about this issue. A panel of clinicians, experts in the care of persons with SCI, meet to develop a table of estimates concerning costs, complications, long-term risks, and effects on other aspects of care for each of the four commonly used approaches to bladder management and two emerging technologies. This panel is supported by a team that abstracts relevant literature and assists with decision analysis, when needed. These clinical estimates are shared with three focus groups of persons with SCI. The focus groups discuss the clinical findings and add relevant information about how the clinical aspects integrate with personal, vocational, and preference issues for individuals with SCI. The investigators use these two sets of information to develop a script for a multimedia presentation tailored to address the specifics of any individual's clinical situation. The multimedia presentation is evaluated for its ability to enhance informed decisions among persons with SCI concerning bladder management.

Field Initiated Projects (FIPs)
Pennsylvania

**Opening the “Black Box:” The Content and Process of Learning in
Inpatient Traumatic Brain Injury Rehabilitation**

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Principal Investigator: Tessa Hart, PhD

Public Contact: 215/456-6544; Fax: 215/456-5926

Project Number: H133G020052

Start Date: October 01, 2002

Length: 36 months

NIDRR Officer: Ruth Brannon

NIDRR Funding: FY 02 \$144,312; FY 03 \$147,355; FY 04 \$140,425; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This project aims to perform a systematic study of the content and process of learning events and teaching strategies in inpatient TBI rehabilitation, and to develop reliable tools by which they may be characterized. Much of the content and process of rehabilitation for TBI remains within a “black box” of unspecified therapy approaches and modalities. This project uses a variety of innovative strategies to open the “black box,” to collect and analyze data on content and process variables for both qualitative and quantitative purposes. Following a participatory action research model, the project utilizes a project team composed of experienced clinicians in the field of TBI rehabilitation. The team uses converging task analysis methods including group process, interviewing, and field observation to develop a systematic, hierarchically organized classification of learning events used in inpatient TBI rehabilitation, and a classification system and operational definitions of key therapist behaviors in the areas of task setup, task guidance, and task feedback/reinforcement. Particular attention is devoted to aspects of content and process relevant to errorless learning, on the assumption that this strategy will be particularly valuable to future research efforts. The team is assisted throughout by distinguished consultants with expertise in TBI and cognitive rehabilitation, errorless learning, and rehabilitation research methodology.

Field Initiated Projects (FIPs)
Pennsylvania

Naturalistic Action Impairment in Left Hemisphere Stroke: Cognitive Predictors and Consequences

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Project Number: H133G030169

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 03 \$149,936; FY 04 \$149,319; FY 05 \$149,966

Abstract: This project: (1) provides a detailed analysis of the cognitive and neuroanatomical predictors of naturalistic action (NA) performance in well-characterized individuals who have suffered left hemisphere stroke; (2) clarifies the relationships between left hemisphere apraxia and the performance of NA; (3) identifies the left hemisphere neuroanatomic structures associated with NA impairment; (4) improves the construct validity of the Naturalistic Action Test, a published measure of NA developed by the investigators, by establishing its relationship to tests of apraxia, and extending what is known of its relationships to measures of attention and executive function; and (5) educates rehabilitation professionals and caregivers about results these research goals. Acquired impairment in activities of daily living and instrumental activities of daily living such as meal preparation, dressing, and shopping is a common and persistent consequence of stroke, affecting approximately 50 percent of the nearly four million Americans living with the effects of stroke. Impairment in these NA activities has important consequences for caregiver burden and independence, and predicts future risk of failure to return to work, nursing home admission, and death.

Field Initiated Projects (FIPs)
Pennsylvania

**Use of Functional Neuroimaging to Assess the Status of the Attention
Networks Following Traumatic Brain Injury**

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Principal Investigator: John Whyte, MD, PhD
Public Contact: 215/456-5924; Fax: 215/456-5926

Project Number: H133G050219

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$149,975

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.

Field Initiated Projects (FIPs)
Pennsylvania

**A Study of Biophysical and Microvascular Function of Individuals with
SCI: Implications for Alternating Pressure Support Surfaces**

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Project Number: H133G040222

Start Date: October 01, 2004

Length: 36 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 04 \$149,246; FY 05 \$149,115

Abstract: The specific aims of this research study are to: (1) characterize blood flow control mechanisms (e.g. metabolic, neurogenic, and myogenic controls) via laser Doppler blood flow using Wavelet analysis in individuals with SCI; (2) investigate the use of alternating pressure for enhancing skin blood flow in SCI; (3) compare the effect of neurogenic control of cutaneous microcirculation on the strength of blood flow responses to alternating pressure in SCI with T-6 above and below; and (4) compare the effect of soft tissue properties on the strength of blood flow responses to alternating pressure in SCI with T-6 below and unimpaired subjects. These studies provide insight into mechanisms important to the configurations of optimal parameters for enhancing blood flow in SCI population, and provide a valid method for the evaluation of alternating pressure devices.

Field Initiated Projects (FIPs)

Rhode Island

Project Shake It Up! Health Promotion and Capacity Building for Persons with Traumatic Spinal Cord Injury and other Neuromuscular Disabilities

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Project Number: H133G010094

Start Date: January 01, 2002

Length: 36 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 01 \$149,783; FY 02 \$148,927; FY 03 \$149,939; FY 04 \$0 (No-cost extension through 12/31/2005)

Abstract: Project Shake It Up promotes health and capacity building for people with SCI and other neuromuscular disabilities through physical activity, recreation, improving independent living skills, developing peer support networks and promoting self-advocacy. Project Shake It Up also builds the capacity of two local nonprofit organizations controlled and staffed primarily by individuals with disabilities: Shake-A-Leg, Inc., whose focus is rehabilitation and recreation, and PARI, a center for independent living. Project objectives include: (1) developing a culturally competent training and recreation program, including a manual that addresses independent living issues such as disability rights, self-advocacy, education, employment, transportation, sexuality, alcohol and substance use, and health promotion; (2) implementing and evaluating the Shake It Up program for health promotion, physical activity, and alcohol and substance use reduction; (3) establishing peer-support networks to provide long-term support for intervention participants; (4) increasing the capacity of Shake-A-Leg and PARI to promote alcohol and substance use reduction through health promotion and empowerment; and (5) disseminating the program nationwide by making the manual for the Shake It Up model widely available.

Field Initiated Projects (FIPs)

South Carolina

Aging After Spinal Cord Injury: Three Decades of Longitudinal Research

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Public Contact: Jennifer Coker, MPH 843/792-2605; Fax: 843/792-1107

Project Number: H133G020239

Start Date: September 01, 2001

Length: 36 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 02 \$149,858; FY 03 \$149,998; FY 04 \$0 (No-cost extension through 12/31/2005)

Abstract: This study performs a sixth data collection in the ongoing Minnesota longitudinal study in order to identify how the life situation of people with SCI has changed over the past three decades, with an emphasis on evaluating the roles of aging and environmental change. This study has used a revolving prospective panel design that follows participants longitudinally over time, adding new samples at different times to counteract attrition. The study was initiated in 1973, with three subsequent follow-ups carried out over a 25-year period (1984, 1988, 1993, and 1998). A Southeastern sample was added in 1993 to add a more diverse participant sample with a larger portion of women and minorities. The 699 respondents from the 25-year follow-up and a new sample of 500 individuals with SCI are asked to complete materials. This sixth study stage is the most extensive follow-up yet performed, with the addition of several new measures that include: (1) portions of the Behavioral Risk Factor Surveillance System (BRFSS); (2) expanded assessment of employment history; (3) a measure of depression that was specially designed to avoid items that are confounded with health conditions (the Older Adult Health and Mood Questionnaire); and (4) a standardized measure of environment, the Craig Hospital Inventory of Environmental Factors. This study also has the added benefit of greater consumer involvement at each step of the study. Results of the study enhance both rehabilitation professionals' and consumers' understanding of the consequences of aging with SCI and lay the foundation for future interventions.

Field Initiated Projects (FIPs)

South Carolina

Risk for Early Mortality After Spinal Cord Injury

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Project Number: H133G030117

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 03 \$149,984; FY 04 \$149,996; FY 05 \$149,964

Abstract: This project identifies the relationships of life adjustment, quality of-life, activities, fitness, and secondary conditions with length of survival and causes of death after SCI. Two studies utilize distinct prospective data sets. The data for study 1 was collected from 362 participants in 1990/1991, whereas the data for study 2 was collected from 597 participants in 1995/1996. Similar, but not identical, measures were obtained from each of the two study samples. Current mortality status is identified using the National Death Index and the Master Beneficiary Record and Summary Earnings files from the Social Security Administration. The most basic biographic and injury related variables are entered as a block first as statistical controls. The general life adjustment and health variables and the more specific secondary conditions variables, none of which have been the focus of previous studies, are investigated in more detail in relation to mortality, as they hold the greatest promise for intervention.

Field Initiated Projects (FIPs)

South Carolina

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

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)

Tennessee

The Relationship Of Minimal Sensorineural Hearing Loss (MSHL) to Psycho-educational Development

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Project Number: H133G050211

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 05 \$150,000

Abstract: The objectives of this study are to identify young school-aged children with minimal sensorineural hearing loss (MSHL) and to assess the relationship of MSHL to psycho-educational development. MSHL is defined for three distinct populations of children: (1) children with unilateral sensorineural hearing loss, (2) children with bilateral minimal sensorineural hearing loss with thresholds averaging 20-40 dB, and (3) children with high frequency sensorineural hearing loss above 2000. The project identifies young children with MSHL and their counterparts with normal hearing matched for age, sex, gender, and SES controls in kindergarten, first, and second grade. The educational and functional status of these two groups is then compared. During a two-year period, approximately 300 children undergo a series of evaluations at least one year apart. The results from this project disclose new information concerning the psycho-educational problems experienced by young children with MSHL. In addition, the longitudinal data from this project provides new knowledge about the developmental trajectory of children with MSHL. Moreover, the data provided by this research allows for the development of a profile specifying the characteristics of young children with MSHL who are at significant risk of developing later academic and functional deficits. Finally, findings from this study facilitate the development of effective identification and intervention strategies for this population of children.

Field Initiated Projects (FIPs)

Texas

Cost Effectiveness Of Rehabilitation Following Traumatic Brain Injury

The Institute for Rehabilitation and Research (TIRR)

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Project Number: H133G030144

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: This project researches the effectiveness of rehabilitation on two new cohorts of persons with TBI who have either received or not received comprehensive inpatient rehabilitation. At one year post injury, costs for services the persons with TBI are likely to receive and vocational losses are calculated and adjusted for demographic, socioeconomic, and neurological variables. The differences between the costs and vocational losses between the two groups are then compared to the actual reimbursements for comprehensive inpatient rehabilitation services.

Field Initiated Projects (FIPs)

Washington

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

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. The objective of this project is to determine the efficacy of this therapy in the prevention of hypertrophic scarring in healed burns so that prescription of them may be based upon sound data or discontinue their use.

Field Initiated Projects (FIPs)

Wisconsin

**Enhanced Upper Limb Motor Control by Reduced Synergistic Muscle
Patterns and Spasticity After Chemodenervation**

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Project Number: H133G020112

Start Date: September 01, 2002

Length: 36 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 02 \$149,995; FY 03 \$149,995; FY 04 \$149,991; FY 05 \$0 (No-cost extension through 8/31/2006)

Abstract: This research project assesses the impact of chemodenervation treatment on motor control in patients with spastic hemiparesis. Moreover, the project examines the neurophysiological mechanisms of improved motor control following chemodenervation treatment by utilizing state-of-the-art biomechanical analyses of motor abilities in combination with clinical measurements and consumer feedback related to patients with functional limitations attributed to spasticity. The study identifies changes in spasticity, limb synergy, and functional reaching tasks using clinical and biomechanical measurements. This project aims to improve chemodenervation techniques through the knowledge imparted by the research.

Field Initiated Projects (FIPs)

Wisconsin

Fracture Risk Prediction in Children and Adults with Osteogenesis Imperfecta (OI)

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Project Number: H133G050201

Start Date: November 01, 2005

Length: 36 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 05 \$150,000

Abstract: This project develops an accurate biomechanical model of the lower extremities to better understand, predict, and ultimately rehabilitate and better control fracture occurrence in children and adults with Osteogenesis Imperfecta (OI). State-of-the-art technologies including nanoindentation, 3-D gait analysis, and finite element analysis are employed in the development process, in addition to an array of clinical assessment tools. A primary design goal includes model flexibility for more universal yet specific application in children and young adults with OI. This work uses the novel technology of nanoindentation to better characterize the structural properties of OI bone in children and young adults. For this parallel portion of the work, bone samples are gathered during routine reparative surgery from thirty-four individuals (children and young adults) with OI who have experienced fractures. The bone is then analyzed to determine strength, stiffness, modulus, and brittleness/ductility at the trabecular level. Results are compared to current published studies and used to significantly enhance the existing data. This project constructs a finite element model of the lower extremities. In addition to published material property data, input for the model comes from 3-D quantitative gait studies (for constraints and boundary conditions) and the parallel nanoindentation studies (for material property data). The resulting model accurately reflects the structural anatomy, mechanical properties, and loads on the long bones of the lower extremities. The model is flexible and specifically fit to the study participants' bony geometry on the basis of radiographs. During the course of the study, the model boundary conditions will be altered to explore the influence of factors such as bone size, geometry (bowing), bone structure, and functional loading on the development of fractures. A comparison of model parameters to clinical assessment results provides critical insight with regard to fracture development, therapeutic intervention, and longer-term outcomes.

Small Business Innovative Research (SBIR), Phase I
Delaware

A Low Cost, High Resolution Pressure Mapping System for the Prevention of Pressure Ulcers

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Project Number: H133S040134

Start Date: October 01, 2004

Length: 24 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 04 \$249,928; FY 05 \$249,197

Abstract: Pressure ulcers are a serious medical problem with annual treatment costs over \$1 billion dollars. While the exact etiology involves a complex combination of factors, it is generally accepted that prolonged pressure to soft tissues results in discrete areas of acute ischemia. If the pressure is not relieved and the blood supply restored in a critical length of time, endothelial cell damage will result and eventually necrosis will occur. While it is a common and serious condition for individuals who are confined to beds or wheelchairs the occurrence of pressure sores can be drastically reduced by frequent changes in one's body position. As a result, a number of companies have developed pressure-mapping systems to provide caregivers, patients and researchers important feedback regarding physical position history. This project builds upon previous research to develop a novel optically based pressure mapping system and compare its performance to existing systems in clinical settings. The design, based on mature optical technology, has the physical characteristics of a thin sheet of flexible plastic. Given its sensitivity to pressure, this technology can be adapted for medical device applications. If successful, these disposable sensor sheets can be inexpensively applied to large areas, unobtrusively conform to any surface with minimal alteration of the tissue interface, and provide high resolution pressure maps.

Small Business Innovative Research (SBIR), Phase II
Oregon

An Innovative Dialysis Regeneration Cartridge for Portable Hemodialysis

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Project Number: H133S030019

Start Date: October 01, 2003

Length: 24 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 03 \$275,219; FY 04 \$224,627; FY 05 \$0 (No-cost extension through 12/31/2005)

Abstract: This project realizes the development of a light-weight and efficient portable hemodialyzer for children and adults suffering from end stage renal disease (ESRD); greatly improving their quality of life by facilitation hemdailysis in any location. Many ESRD patients and their families are severely limited in their mobility and freedom of life due to the time and effort involved in receiving life-sustaining hemodialysis treatment several times a week at clinics or hospitals. This disabling burden on patients and their families could be significantly lessened if patients had the option of receiving treatment "on the spot," whether at work, school or home, using a portable hemodialyzer. The overall objective of this project is to develop an innovative portable hemodialyzer based on a highly efficient dialysis regeneration cartridge (DRC). The technical objectives for this phase of research are: (1) to perform scale-up production of the DRC and to construct the full-scale DRC, (2) to test the biocompatibility and stability of the DRC, (3) to construct a prototype portable hemodialyzer that contains the DRC and test in vitro, (4) to construct a mini-DRC and test its efficacy and quality in vivo using animal models, and (5) to summarize Phase II work and evaluate the process.

Technology for Access and Function

NIDRR supports technology-related research at both individual and systems levels. At the individual level, assistive technology is used to enhance the physical, sensory, and cognitive abilities of people with disabilities and to assist them to participate in and function more independently in the home, at work, in recreational settings, and at cultural and religious events. At the systems level, technology research and development activities are applied 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, information technology, and the built environment.

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Rehabilitation Engineering Research Centers (RERCs)
California

**RERC on Spinal Cord Injury: Keep Moving: Technologies to Enhance
Mobility and Function for Individuals with Spinal Cord Injury**

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Project Number: H133E020732

Start Date: November 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$899,974; FY 03 \$899,932; FY 04 \$899,882; FY 05 \$899,961

Abstract: This RERC improves the lives of individuals with SCI by promoting their health, safety, independence, and active engagement in daily activities. Activities include: (1) monitoring trends and evolving product concepts that represent future directions for technologies in SCI, (2) conducting research to advance the state of knowledge, (3) disseminating the information to the population, (4) developing and testing prototype devices that are useful and effective and transferring them to the marketplace, (5) advancing employment opportunities for individuals with SCI, and (6) developing ways to expand research capacity in the field of SCI. The R&D program is focused on a key issue for individuals with SCI, the need to maintain mobility for as long as possible in order to enhance independent function. A survey of the user population determines where areas of greatest need exist. An active Mobile Arm Support for adults allows those with limited arm function greater independence. The shoulder-preserving wheelchair, gait training robotic assist device, and adaptive exercise equipment are all specifically geared to preserve or enhance mobility in individuals with SCI. A project on optimized wheelchair suspension keeps people mobile by increasing comfort and reducing tissue loading.

Rehabilitation Engineering Research Centers (RERCs)
Colorado

Rehabilitation Engineering Research Center on Cognitive Technologies

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Project Number: H133E040019

Start Date: November 01, 2004

Length: 60 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 04 \$850,000; FY 05 \$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; (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

Rehabilitation Engineering Research Centers (RERCs)
District of Columbia

Rehabilitation Engineering Research Center on Hearing Enhancement

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Principal Investigator: Matthew H. Bakke, PhD

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Project Number: H133E030006

Start Date: October 01, 2003

Length: 60 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 03 \$949,999; FY 04 \$949,024; FY 05 \$949,480

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 will reach a diverse audience of people, both consumers and professionals.

Rehabilitation Engineering Research Centers (RERCs)
Florida

**Rehabilitation Engineering Research Center on Technology for
Successful Aging**

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Project Number: H133E010106

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Margaret Campbell, PhD

NIDRR Funding: FY 01 \$900,000; FY 02 \$900,000; FY 03 \$899,999; FY 04 \$900,000; FY 05 \$899,999

Abstract: The RERC-Tech-Aging conducts research, development, education, and information dissemination work on technology for successful aging. Projects of the RERC focus on the closely related areas of communications, home monitoring, and “smart” technologies. The technology driving the focus for this RERC is developing rapidly and requires an understanding of current and emerging technology areas, including wireless technology, computers, sensors, user interfaces, control devices, and networking. Successful integration of this technology into products and systems for older persons requires an understanding of their complex health, independence, and quality-of-life issues. The RERC-Tech-Aging tests currently available home monitoring products and demonstrates their effectiveness in relation to independence, quality of life, and health related costs. The RERC-Tech-Aging also identifies needs and barriers to home monitoring and communication technology, and addresses needs of special populations including rural-living, elders, and people aging with disability. The RERC-Tech-Aging brings together national expertise to meet this challenge, including major universities, industry leaders working in this area, major aging or aging-related organizations, major federal agencies that relate to funding or services in this area, other NIDRR-funded RERCs and RRTC, and service-related organizations that assist in identifying study participants.

Rehabilitation Engineering Research Centers (RERCs)
Georgia

**Rehabilitation Engineering Research Center on Mobile Wireless
Technologies for Persons with Disabilities**

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Project Number: H133E010804

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 01 \$1,000,000; FY 02 \$1,000,000; FY 03 \$1,000,000; FY 04 \$1,000,000; FY 05 \$1,000,000

Abstract: This RERC develops appropriate and effective applications of wireless technologies that enhance the independence of people with disabilities. With an overall goal of promoting independence and autonomy of people with disabilities, the RERC has two primary aims: (1) ensure equitable access to mobile wireless products and services by people with disabilities of all ages and abilities; and (2) investigate promising applications of mobile wireless technologies in support of employment, independent living, and community integration of people with disabilities. To accomplish these aims, the RERC is organized into three main sections: (1) the Research Section investigates needs, policies, and promising applications of mobile wireless technologies to promote independence. Research initiatives include assessment of user needs, evaluation of emerging technologies, and policy initiatives that influence the practices, policies, and regulations that affect accessibility of wireless technologies, (2) the Development Section includes projects that address universal access, investigation of new applications of wireless technologies, and innovative design solutions to support independent living of people with disabilities, (3) the Training and Dissemination Section promotes the synthesis of new knowledge into practice.

Rehabilitation Engineering Research Centers (RERCs)
Georgia

**Rehabilitation Engineering Research Center on Workplace
Accommodations**

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Project Number: H133E020720

Start Date: November 01, 2002

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 02 \$899,997; FY 03 \$900,000; FY 04 \$899,999; FY 05 \$899,999

Abstract: This RERC identifies, designs, and develops devices and systems to enhance the workplace productivity of people with disabilities. Universal design is a primary focus of the Center: making the design of products and environments usable by all workers to the greatest extent possible, without the need for adaptation or specialized design. The RERC's research projects evaluate existing workplace products and services and determine areas where further product development is needed. The Center also studies archival materials to identify factors that contribute to successful or unsuccessful outcomes, and analyzes policies and practices that may influence the nature and availability of workplace accommodations for persons with disabilities. The RERC's development activities focus on Remote Services and Universal Design in the Workplace. The Remote Services projects investigate ways that remote technologies such as videoconferencing and telework can be used to facilitate employment and provide technical support services to people with disabilities. The Universal Design projects work with manufacturers to develop new generations of universally designed and accessible products. Digital human modeling tools developed by the project provide visualizations of products or systems with human interaction and movement and reduce the need for preliminary physical prototypes. Products are developed for workers in office, manufacturing, retail/sales, service industry, and other environments. Finally, training, technical assistance, and dissemination activities on workplace accommodations and universal design promote the transfer of new knowledge into practice.

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

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 Centers (RERCs)
Illinois

**Rehabilitation Engineering Research Center on Recreational
Technologies and Exercise Physiology Benefiting Persons with
Disabilities (RERC RecTech)**

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Project Number: H133E020715

Start Date: November 01, 2002

Length: 60 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 02 \$899,536; FY 03 \$899,725; FY 04 \$899,942; FY 05 \$899,756

Abstract: This program researches access to recreational opportunities and physical endurance of people with disabilities, targeting four primary areas: (1) increased access to fitness and recreation environments; (2) interventions to increase physical activity and recreation participation; (3) adherence strategies to reduce physical activity relapse and dropout rates; and (4) randomized clinical trials to evaluate improvements in health and function. Research and development projects include: (1) a comprehensive needs assessment that involves ongoing assessment of consumer needs as they pertain to existing and emerging recreational and fitness technologies; (2) research on the use of information technology and a newly designed environmental accessibility instrument for facilitating access to recreational and fitness environments and promoting improved health and function; (3) research on the use of “teleexercise” technology for promoting participation and for monitoring intensity and physiological/psychological outcomes of home-based exercise programs; (4) development of broadly applicable aftermarket accessory kits for adapting existing cardiovascular exercise equipment for use by people with disabilities and determining the efficacy of the new adaptations in improving fitness; (5) development of technology to allow users adaptive control of exercise machines; and (6) development of an online RecTech solutions database of currently available recreational and fitness technologies to make available solutions more accessible to consumers. Two training projects promote capacity building for future recreation, fitness, exercise physiology, engineering, and rehabilitation professionals, and two additional training projects support professional development.

Rehabilitation Engineering Research Centers (RERCs)
Illinois

**RERC on Rehabilitation Robotics and Telemanipulation: Machines
Assisting Recovery from Stroke (MARS)**

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Project Number: H133E020724

Start Date: November 01, 2002

Length: 60 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 02 \$805,453; FY 03 \$874,845; FY 04 \$896,518; FY 05 \$888,042

Abstract: MARS-RERC focuses its research and development on restoring function in hemispheric stroke survivors. Five projects assess different approaches that have the potential to improve performance of the upper extremity, and one project attempts to restore gait and fluid locomotion to the lower extremities. These projects include: ARM Guide, robotic therapy for force training of the upper extremity in chronic hemiparetic stroke; Lokoma, gait restoration in hemiparetic stroke patients using goal-directed, robotic-assisted treadmill training; Augmented Reality Robotic Rehab, development of a robotic system with an augmented reality interface for rehabilitation of brain-injured individuals; Robotic Assisted Finger Extension, rehabilitation of finger extension in chronic hemiplegia; and Java Therapy, a home-based telerehabilitation system for improving functional hand and arm movement recovery following stroke. In addition to these projects, MARS-RERC is training undergraduate engineering students, medical students, physician residents, graduate students in engineering and neuroscience, and allied health clinicians, including physical and occupational therapists in the area rehabilitation robotics. The broad intent of MARS-RERC is to develop robotic devices or machines that assist the therapist in providing treatments that are rationally based, intensive, and long in duration. This project is a collaboration of the Rehabilitation Institute of Chicago (RIC), the Catholic University of America (CUA) and National Rehabilitation Hospital in Washington, D.C., the University of Illinois at Chicago (UIC), and the University of California at Irvine (UCI).

Rehabilitation Engineering Research Centers (RERCs)
Illinois

Rehabilitation Engineering Research Center in Prosthetics and Orthotics

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Project Number: H133E030030

Start Date: October 01, 2003

Length: 60 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 03 \$949,998; FY 04 \$950,000; FY 05 \$949,999

Abstract: This Center conducts ten research projects, three of which are pilot studies. In the area of human locomotion the objectives are to conduct quantitative studies that include non-disabled gait, modeling of gait, roll-over shape influence on transtibial amputee gait, gait initiation, shock absorption studies, the role of the spine in walking, transfemoral socket design studies, and evaluation of stance-control orthotic knee joints. Pilot studies, where preliminary data is not available, are proposed on partial foot prosthesis/orthosis systems, on evaluation of Ankle Foot Orthoses and on the design of a Shape & Roll foot for children. Six developmental projects include a simple gait monitoring instrument (Direct Ultrasound Ranging System), a new prosthetic ankle joint that adapts to inclines, and a manual through which individuals in low-income countries can make their own artificial feet. In addition, two upper-limb prosthetics development projects are proposed that deal with reaching, manipulation, and grasping. Finally, an outcomes measurement tool is developed for prosthetics and orthotics (P&O) facilities in their reporting to the American Board of Certification. The vision for this RERC is to improve the quality of life for persons who use prostheses and orthoses through creative applications of science and engineering to the P&O field. The goal is to uncover new knowledge and understanding in P&O and to bring more quantification to the field, which will enable them to develop new concepts and devices to improve the quality, cost-effectiveness, and delivery of P&O fittings.

Rehabilitation Engineering Research Centers (RERCs)
Illinois

Rehabilitation Engineering Research Center on Technology Access for Landmine Survivors

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Project Number: H133E030017

Start Date: November 01, 2003

Length: 60 months

NIDRR Officer: Robert J. Jaeger, PhD

NIDRR Funding: FY 03 \$950,000; FY 04 \$950,000; FY 05 \$950,000;

Abstract: The Center strives to improve the quality and availability of amputee and rehabilitation services for landmine survivors by focusing on the development of “appropriate technology”, i.e. technology that is most suitable to the limited technical and human resources available in most mine-affected regions through the application of research methodologies, the development of mobility aids, and the creation of educational materials, all of which are designed specifically for mine-affected populations and disseminated through a network of rehabilitation service providers in mine-affected regions. Laboratory-based research projects investigate issues of importance relating to transtibial alignment, ischial containment socket trim lines as they relate to the gait of transfemoral amputees, and the evaluation of a non-toxic resin for the direct lamination of prosthetic sockets. Field-based research evaluates an anatomically-based transtibial alignment methodology and a wheelchair prototype manufacturing and dissemination strategy. Development projects, many of which contain research components, can be classified into two areas: those that improve the service delivery through improved fabrication techniques, and those that develop appropriate prosthetic components and mobility aids. In order to promote the successful transfer of techniques and technologies that are developed, the RERC creates training materials that describe the manufacture, assembly, and use of the technique or devices developed under the research and development program. Additionally, because the current number of trained prosthetic technicians in developing countries is far from sufficient to adequately meet the needs of landmine survivors, the center produces education and training materials covering the basic science of prosthetics and orthotics. All materials are adapted to the specific languages, culture, and needs of the mine-affected regions served by the RERC and distributed through a blended distance learning network.

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

Abstract: The Rehabilitation Engineering Research Center on Technology for Children with Orthopedic Disabilities 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 on Children with Orthopedic Disabilities' 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 and Research Center (RERC) on Universal
Design and the Built Environment at Buffalo**

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Project Number: H133E990005

Start Date: November 01, 1999

Length: 60 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 99 \$599,965; FY 00 \$599,952; FY 01 \$599,932; FY 02 \$799,835; FY 03 \$799,953; FY 04 \$0 (No-cost extension through 10/31/2005); FY 05 \$0 (No-cost extension through 3/31/2006)

Abstract: The RERC on Universal Design and the Built Environment promotes the adoption of universal design. Research programs include the Prototype Anthropometric Database Project, a research database on anthropometrics of wheelchair users for application to ergonomic design, and The Buildings in Use Project that demonstrates the benefits of universal design by conducting post-occupancy evaluations of buildings currently in use. Product development efforts include development of prototypes for innovative universally designed products, evaluation and testing of these prototypes, and commercialization assistance to facilitate bringing each prototype to market. The Visitability Initiative conducts training and action research in eight cities to develop visitability demonstration projects, and is a collaboration with Concrete Change, a consumer advocacy organization focusing on making housing “visitable” by people with disabilities. The RERC’s activities also include universal design education and technical assistance, along with publication and dissemination of universal design resources.

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

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 RERC's 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

Rehabilitation Engineering Research Centers (RERCs)
New York

**Rehabilitation Engineering and Research Center (RERC) on Universal
Design and the Built Environment at Buffalo**

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Principal Investigator: Edward Steinfeld, ArchD 716/829-3485

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Project Number: H133E050004

Start Date: November 01, 2005

Length: 60 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 05 \$949,996

Abstract: The RERC on Universal Design and the Built Environment 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

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<http://www.aac-lerc.com>

Principal Investigator: Frank DeRuyter, PhD 919/684-6271

Public Contact: Kevin Caves, ME, ATP 919/681-9983; Fax: 919/681-9984

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

Abstract: The mission of this RERC is to assist people who use alternative and augmentative communication (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)
Oregon

National Center for Accessible Public Transportation

Oregon State University
Apperson Hall 202
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<http://ncat.oregonstate.edu/>

Principal Investigator: Katharine Hunter-Zaworski, PhD

Public Contact: Julie Barlow 800/916-0099; Fax: 541/737-3052

Project Number: H133E030009

Start Date: October 01, 2003

Length: 60 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 03 \$949,479; FY 04 \$949,259; FY 05 \$949,044

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 (OTRB) account for nearly all of the 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 six-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 six different groups that are directly involved with accessibility issues including travelers with disabilities, non-travelers with disabilities, and employees of airlines and airports, OTRB operators, OTRB manufacturers, aircraft manufacturers, and rail operators. 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 already begun, assisting with the accessibility specifications for the next generation of Boeing and Airbus planes.

Rehabilitation Engineering Research Centers (RERCs)
Pennsylvania

Rehabilitation Engineering Research Center on Wheeled Mobility

University of Pittsburgh
School of Health and Rehabilitation Sciences
Rehabilitation Science and Technology
Forbes Tower, Suite 5044
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dbrienza@pitt.edu
<http://www.ercwm.pitt.edu>

Principal Investigator: David M. Brienza, PhD; Clifford Brubaker, PhD

Public Contact: Mary Jo Geyer, PhD, Associate Director 412/383-6571 (V); 412/383-6598 (TTY);
Fax: 412/383-6597

Project Number: H133E990001

Start Date: January 01, 1999

Length: 60 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 99 \$900,000; FY 00 \$900,000; FY 01 \$900,000; FY 02 \$1,064,561; FY 03 \$115,743; FY 04 \$0 (No-cost extension through 12/31/2005)

Abstract: The RERC on Wheeled Mobility investigates the use of dynamic seating for reducing spasticity and enhancing seating comfort; investigates the biomechanical characteristics of soft tissue related to the risk of developing pressure ulcers and the relationship between pressure measurements and pressure ulcer incidence, develops and validates the use of outcomes measures for seating and mobility intervention; and investigates the use of the web as a seating decision support tool for consumers. This project also develops and evaluates a comparative data source for use in decision support of wheelchair selection, an interface for integrating external devices with powered wheelchairs; wheelchair seating standards, standardized postural measures, injury prevention wheelchair technologies, and enhanced controls for powered wheelchairs.

Rehabilitation Engineering Research Centers (RERCs)
Pennsylvania

**Rehabilitation Engineering Research Center on Wheelchair
Transportation**

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Rehabilitation Science and Technology
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Pittsburgh, PA 15203
rerc@shrs.pitt.edu
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Principal Investigator: Patricia Karg 412/586-6906

Public Contact: Debbie Keelan 412/586-6905; Fax: 412/586-6910

Project Number: H133E010302

Start Date: November 01, 2001

Length: 60 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 01 \$868,840; FY 02 \$899,057; FY 03 \$897,745; FY 04 \$899,264; FY 05 \$898,054

Abstract: This RERC aims to improve the safety of wheelchair users who remain seated in their wheelchair while using public and private motor-vehicle transportation. RERC tasks investigate and develop new wheelchair tiedown and occupant restraint system technologies, including wheelchair-integrated restraints and universal docking concepts, that enable wheelchair users to secure and release their wheelchair independently and quickly, and use an effective occupant restraint system without the need for assistance. The RERC also researches the issues and factors involved in providing improved occupant protection to wheelchair-seated drivers and passengers in rear and side impacts, and uses a multifaceted approach, including in-depth investigations of real-world accidents, to investigate the incidence, severity, and causes of injuries to wheelchair-seated occupants in different sizes of vehicles and in different types of crashes and non-impact incidents experienced during vehicle motion. In particular, this RERC explores the need for, and suitability of, using different levels of wheelchair securement and occupant restraint in larger public transit vehicles, with the goal of recommending and developing equipment and systems that provide for a safe ride and that are more compatible with the operational needs of the transit environment. The program includes a comprehensive research and development effort that involves consumers, manufacturers, students, clinicians, transport providers, and rehabilitation technology experts. The RERC also has active programs of information dissemination, training, and technology transfer using personnel, mechanisms, and facilities that have been previously established at the University of Pittsburgh/University of Michigan.

Rehabilitation Engineering Research Centers (RERCs)
Pennsylvania

Rehabilitation Engineering Research Center on Telerehabilitation

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School of Health and Rehabilitation Sciences
Rehabilitation Science and Technology
Forbes Tower, Suite 5044
Pittsburgh, PA 15260
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Principal Investigator: David M. Brienza, PhD 415/383-6591

Public Contact: Jean Webb 412/383-6586 (V); 412/383-6598 (TTY); Fax: 412/383-6597

Project Number: H133E040012

Start Date: December 01, 2004

Length: 60 months

NIDRR Officer: Robert J. Jaeger, PhD

NIDRR Funding: FY 04 \$849,890; FY 05 \$849,930

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 Centers (RERCs)
Wisconsin

Rehabilitation Engineering Research Center on Universal Interface and Information Technology Access

University of Wisconsin/Madison
Trace Research and Development Center
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Principal Investigator: Gregg C. Vanderheiden, PhD 608/263-5788

Public Contact: Kate Vanderheiden 608/265-4621 (V); 608/263-5408 (TTY); Fax: 608/262-8848

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

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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Principal Investigator: Gregg C. Vanderheiden, PhD (Trace); Judy Harkins, PhD (Gallaudet University) 608/263-5788 (Trace); 202/561-5257 (Gallaudet)

Public Contact: Kate Vanderheiden 608/265-4621 (V); 608/263-5408 (TTY); Fax: 608/262-8848

Project Number: H133E040013

Start Date: October 01, 2004

Length: 60 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 04 \$850,000; FY 05 \$850,000

Abstract: The focus of this RERC is on advancing 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.). Research and development projects cover three areas: (1) development of tools, techniques, and performance-based measures that can be used to evaluate current and evolving telecommunication strategies including visual communication and cognitive access; (2) solving the problems faced by individuals using hearing aids or cochlear implants with digital phones (including development of tools that users can employ to match appropriate hearing technologies with telecommunication technologies); and (3) improving access to emerging telecommunications for people with visual, hearing, physical, and cognitive disabilities – particularly digital and IP-based systems including emergency communication. The RERC looks at advances that have both short- and long-term outcomes related to assistive technologies (AT), interoperability, and universal design of telecommunications. In addition, the RERC provides technical assistance to government, industry, and consumers, training for industry, and education for new researchers in this field. The RERC is a collaboration of the Trace Center at the University of Wisconsin and the Technology Access Program at Gallaudet University.

Rehabilitation Engineering Research Centers (RERCs)
Wisconsin

**Rehabilitation Engineering Research Center on Accessible Medical
Instrumentation**

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Principal Investigator: Jack Winters, PhD; Molly Follette Story, MS 414/288-6640 (Winters); 707/
578-6839 (Story)

Public Contact: June Isaacson-Kailes 310/821-7080 800/832-0524; Fax: 909/469-5503

Project Number: H133E020729

Start Date: November 01, 2002

Length: 60 months

NIDRR Officer: Robert J. Jaeger, PhD

NIDRR Funding: FY 02 \$901,131; FY 03 \$899,614; FY 04 \$899,155; FY 05 \$899,870

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.

Disability and Rehabilitation Research Projects
California

Wayfinding Technologies for People with Visual Impairments: Research and Development of an Integrated Platform

Sendero Group, LLC
1118 Maple Lane
Davis, CA 95616-1723
mikemay@sendergroup.com
<http://www.sendergroup.com>

Principal Investigator: Michael May
Public Contact: 530/757-6800; Fax: 530/757-6700

Project Number: H133A011903

Start Date: December 01, 2001

Length: 60 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 01 \$449,065; FY 02 \$449,895; FY 03 \$449,444; FY 04 \$445,486; FY 05 \$447,929

Abstract: This project develops a hardware and software platform that provides accessible location and navigation information for people who are blind or who have visual impairments who are traveling in indoor and outdoor environments. Development activities focus on creating an effective user interface and developing a common hardware and software platform that exploits the Global Positioning System (GPS) and other current and emerging navigation technologies. Specific activities include integrating navigation aids that have been developed by Sendero LLC (GPS Talk) and by the University of California-Santa Barbara/CMU group headed by Jack Loomis (the Personal Guidance System, or PGS). The platform also accesses information from other devices, including Talking-Signs™ type devices, intersection signalization controls, an indoor digital sign system to be developed during this project at the University of Minnesota, a spatialized tactile stimulator to be developed at UCSB, a dead reckoning pedestrian navigation system, and cellular phones with GPS capabilities. For navigating in outdoor environments, a system could aid pedestrians who are blind at complex intersections and roundabouts, and devices could assess and prevent veer.

Disability and Rehabilitation Research Projects
California

Community Research for Assistive Technology

California Foundation for Independent Living Centers (CFILC)
1029 J Street, Suite 120
Sacramento, CA 95814
myisha@cfilc.org
<http://www.atnet.org/CR4AT/home.html>

Principal Investigator: Patricia Yeager

Public Contact: Myisha Reed, Project Coordinator 916/325-1690 (V); 916/325-1695 (TTY); Fax:
916/325-1699

Project Number: H133A010702

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Dawn Carlson, PhD, MPH

NIDRR Funding: FY 01 \$299,910; FY 02 \$299,893; FY 03 \$229,150; FY 04 \$229,534; FY 05
\$299,050

Abstract: This project increases the capacity of the independent living community to work with its members and stakeholders to collect research data on access and use of AT to improve the lives of people with disabilities. Using a participatory research approach, the California Foundation for Independent Living Centers (CFILC) is using an ecological model to develop cumulative research data on the use of and access to AT by people with disabilities. University researchers train participants in research methods and assist with data collection and analysis. Community advocates conduct focus groups, surveys, and action research in their respective regions. Advocates also train university students in community-based research related to AT and independent living.

Disability and Rehabilitation Research Projects

Georgia

Information Technology Technical Assistance and Training Center (ITTATC)

Georgia Institute of Technology
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Principal Investigator: Dennis Folds

Public Contact: 404/894-0953; Fax: 404/894-9320

Project Number: H133A000405

Start Date: November 01, 2000

Length: 60 months

NIDRR Officer: Joel Myklebust, PhD

NIDRR Funding: FY 00 \$1,500,000; FY 01 \$1,500,000; FY 02 \$1,500,000; FY 03 \$1,500,000; FY 04 \$1,500,000; FY 05 \$0 (No-cost extension through 10/31/2006)

Abstract: This project provides information, training, and technical assistance to support the implementation of Section 508 of the Rehabilitation Act and Section 255 of the Telecommunications Act to industry, state officials, trainers, and consumers. The Center promotes the benefits of universal design to technology manufacturers, product designers and engineers, technical writers, marketers, and purchasers of applicable technologies. It also works closely with federal regulatory agencies including the Federal Communications Commission, the Access Board, the Department of Justice, and the General Services Administration to advance understanding and knowledge utilization of approaches to the requirements of Sections 255 and 508 through training and technical assistance activities. The Information Technology Technical Assistance and Training Center is a collaborative project between the Center for Assistive Technology and Environmental Access at Georgia Institute of Technology, Inclusive Technologies, World Institute on Disability, University of Iowa Law, Health Policy, and Disability Center in Washington DC, Trace Center at the University of Wisconsin Madison, NIDRR's Disability and Business Technical Assistance Centers, Ideal-Group, Georgia Tech Research Institute, and ITTATC's National Advisory Council among others. It also has a National Advisory Council with representatives from all industries affected by the amended sections and experts in the field of accessibility.

Disability and Rehabilitation Research Projects

Iowa

Technology for Independence: A Community-Based Resource Center

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Iowa City, IA 52242
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<http://www.disability.law.uiowa.edu>

Principal Investigator: Peter D. Blanck, PhD, JD 319/335-9043

Public Contact: James Schmeling, JD 319/335-8458; Fax: 319/335-9098 (Blanck); 319/335-9764 (Schmeling)

Project Number: H133A021801

Start Date: November 01, 2002

Length: 60 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 02 \$299,965; FY 03 \$299,945; FY 04 \$299,951; FY 05 \$299,985

Abstract: The CBRC builds and enhances the capacity of community-based and consumer-directed disability organizations to design, implement, and disseminate research activities and projects that promote environmental access and use of technology for independence. The CBRC uses a combination of implementation strategies such as leadership development, training, and technical assistance activities, web-assisted audioconference training, distance education, and three annual onsite symposia in Iowa City, Houston, and Washington, D.C. CBRC activities are directed to selected research teams, research centers, community-based disability organizations, and University research centers. Using multi- and inter-disciplinary models, the CBRC builds and enhances the capacity of these and other entities to conduct research that is both scientifically rigorous and relevant to real-world social, policy, and legal interests. The research team framework pairs researchers from community-based organizations with researchers from university-based research centers to improve existing and future collaborative relationships. The research pairs comprise individuals with diverse backgrounds, in terms of their disability type and severity, ethnicity, and socioeconomic experiences. The participants form close working relationships designed to advance knowledge in the areas related to technology for independence and environmental access. The project merges the national experience and expertise of ILRU regarding independent living and principles of choice and self-determination, with the nationally recognized research expertise of LHPDC in the areas of technology access and use, employment policy, and civil rights.

Disability and Rehabilitation Research Projects

Kansas

Mental Retardation and Technology Disability and Rehabilitation Research Project

University of Kansas
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Principal Investigator: Michael Wehmeyer, PhD

Public Contact: 785/864-0723; Fax: 785/864-3458

Project Number: H133A010602

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 01 \$299,871; FY 02 \$299,778; FY 03 \$299,715; FY 04 \$299,871; FY 05 \$299,602

Abstract: This project supports the ability of people with intellectual disabilities (mental retardation) and other cognitive disabilities to use electronic and information technology as well as assistive technology and technologies that involve universal design. It examines current technology design features, gaps that exist in utilization of technologies, what state-of-the-art technology exists or is emerging that would provide benefits, and what modifications to existing or new technology would enhance this population's inclusion in the community and integration into the workplace. The project includes two national consensus conferences, in conjunction with national conferences held annually or by American Association on Mental Retardation (AAMR) and The Arc of the United States, to address issues of technology use. Additional activities include reviewing and synthesizing the extant literature, canvassing existing disability-related technology advocates and associations, and product development and refinement. The project has also established a Special Interest Group on Technology and Mental Retardation through the AAMR, which allows stakeholders in the field the opportunity to participate in all project activities. A national expert advisory panel consisting of representatives from national disability organizations, manufacturers, people with mental retardation, experts in the field, and parent/family representatives are involved in all consensus-building activities and advise the project through its duration. The project is a collaboration of the Beach Center on Disability at the University of Kansas, The Arc, the AAMR, AbleLink Technologies, the Coleman Institute on Cognitive Disabilities, the Self-Advocate Coalition of Kansas, and the Joseph P. Kennedy Jr. Foundation.

Disability and Rehabilitation Research Projects
Missouri

Assistive Technology in the Community

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School of Medicine; Occupational Therapy
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St. Louis, MO 63108
walkerc@msnotes.wustl.edu
http://enablemob.wustl.edu/Research/NIDRR/at_community.htm

Principal Investigator: David B. Gray, PhD 314/286-1658

Public Contact: Carla Walker 314/725-6676, ext.101; Fax: 314/721-9964

Project Number: H133A010701

Start Date: January 01, 2002

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$300,000; FY 02 \$300,000; FY 03 \$300,000; FY 04 \$300,000; FY 05 \$300,000

Abstract: This project promotes AT as a means of increasing participation in major life activities by people with disabilities. Project activities include: (1) assessing the use, disuse, injury, and effects that AT has on the participation of people with disabilities in major life activities, to determine what technologies are of the most benefit in community settings; (2) implementing a community-based AT program in collaboration with Paraquad, a nationally recognized Center for Independent Living, to improve the satisfaction of participants in their self-chosen life activities; (3) educating consumers, independent living staff, educators, health care professionals, AT industry leaders, and public policy-makers about the influence AT has on major life activities.

Disability and Rehabilitation Research Projects
North Carolina

Advancing Assistive Technology Outcomes

Duke University
Division of Speech Pathology and Audiology
DUMC-3888
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<http://www.AToutcomes.com>

Principal Investigator: Frank DeRuyter, PhD

Public Contact: Mitzi May 919/681-9983 (V); 919/684-6626 (TTY); Fax: 919/681-9984

Project Number: H133A010401

Start Date: November 01, 2001

Length: 60 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 01 \$449,787; FY 02 \$449,932; FY 03 \$449,967; FY 04 \$449,994; FY 05 \$449,986

Abstract: This program advances the field of AT outcomes measurement. Research activities include: (1) performing a critical analysis of existing approaches to measurement and further developing instruments that are promising; (2) identifying unmet needs and assessing barriers to AT outcomes measurement; and (3) undertaking a prospective longitudinal study of factors associated with assistive device adoption, use, and discontinuance. Development activities include: (1) developing and evaluating independent electronic data collection or computer-assisted systems for the capture, analysis, and interpretation of AT outcomes information; (2) developing and evaluating improved methods and systems for communication of outcomes information among significant stakeholders; (3) automatic log file performance data-capturing for AT outcomes assessment; and (4) development of new or improved AT outcomes tools.

Disability and Rehabilitation Research Projects
Ohio

Assistive Technology and Cognitive Disabilities

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School of Speech-Language Pathology and Audiology
The Polsky Building 188K
Akron, OH 44325-3001
<http://www.uakron.edu/colleges/faa/depts/sslpa/faculty/Depompei.php>

Principal Investigator: Roberta DePompei, PhD
Public Contact: 330/972-6114; Fax: 330/972-3001

Project Number: H133A030810

Start Date: November 01, 2003

Length: 36 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 03 \$375,132; FY 04 \$299,349; FY 05 \$299,947

Abstract: This project assesses the use of several types of information technologies by children and adults with cognitive disabilities, specifically individuals with TBI and mental retardation. Outcomes include: (1) a catalog of existing portable devices for memory and organization (2) a list of features that enhance or inhibit use of these general purpose and special-use technologies, (3) results of needs surveys regarding use of these technologies, (4) white papers describing project findings, (5) tip cards to assist families in purchasing devices, (6) stronger partnerships between the consumer and research and development communities, and (7) recommendations for memory and organization device modifications and features for individuals with brain injury and mental retardation. The Brain Injury Association, Inc. leads and administers this collaborative partnership, which includes the Traumatic Brain Injury Model Systems Projects at Moss Rehabilitation Research Institute and Spaulding Rehabilitation Hospital, the Institute on Disabilities/Center for Excellence on Developmental Disabilities at Temple University, and the University of Akron.

Disability and Rehabilitation Research Projects
Oregon

Think and Link: Email for Individuals with Cognitive Disabilities

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Principal Investigator: McKay Moore Sohlberg, PhD
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Project Number: H133A010610

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 01 \$300,000; FY 02 \$300,000; FY 03 \$300,000; FY 04 \$300,000; FY 05 \$300,000

Abstract: This project improves the access and use of electronic mail by individuals with cognitive disabilities resulting from brain injury. The Internet's email component has created an unparalleled communication network linking people for commercial and social purposes. It holds tremendous potential for lessening social isolation, one of the most pervasive and devastating consequences of brain injury. However, virtually nothing is known about what modifications are required to provide successful access to this technology to people with cognitive disabilities that result from brain injury. In addition, the diverse cognitive impairments confronting people with brain injury render an enormous challenge to the development of assistive devices that could improve accessibility to email. Activities of this project include: (1) identifying the wide range of issues critical for long-term, effective use of email by people with cognitive disabilities; (2) developing a diagnostic protocol, a cyber-evaluation of the potential of a person with cognitive disabilities to use electronic communication; (3) developing a software toolkit that allows caregivers, support persons, and professionals to fit an individual user with a customized email system; (4) creating a virtual clinic that supports widespread dissemination and use of these materials by cognitive rehabilitation professionals. An open-source software site on the web allows other worldwide researchers to use the new tools and contribute tools of their own.

Disability and Rehabilitation Research Projects
Pennsylvania

**Information Technology for Independence: Community-Based
Research**

University of Pittsburgh
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Principal Investigator: Bambang Parmanto, PhD
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Project Number: H133A021916

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

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 will be 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.

Disability and Rehabilitation Research Projects
Washington

ACCESS: Assisted Cognition in Community, Employment, and Support

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Principal Investigator: Kurt Johnson, PhD 206/543-3677

Public Contact: Pat Brown, EdD 206/616-3714; Fax: 206/543-4779

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

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.

Disability and Rehabilitation Research Projects
Wisconsin

ATOMS Project: Assistive Technology Outcomes Measurement System

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Principal Investigator: Roger O. Smith, PhD

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Project Number: H133A010403

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 01 \$450,000; FY 02 \$450,000; FY 03 \$450,000; FY 04 \$450,000; FY 05 \$450,000

Abstract: The ATOMS Project (Assistive Technology Outcomes Measurement System) targets the definition and pre-development phases of a next-generation AT outcomes measurement system. A comprehensive needs assessment, prototype instrument development, and consensus building activities frame an integrated set of research and development activities to address urgent needs to identify components of a future AT outcomes measurement system. In addition, these activities generate information about the relationships of AT outcomes factors that produce a better understanding of AT use and abandonment.

Field Initiated Projects (FIPs)
California

Interference in Hearing Aids from Digital Wireless Telephones: Improved Predictive Methods

Advanced Hearing Concepts
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Bodega Bay, CA 94923-1166
harrylevitt@earthlink.net

Principal Investigator: Harry Levitt, PhD 707/875-2289

Public Contact: 707/875-2289; Fax: 707/875-2294

Project Number: H133G050228

Start Date: November 01, 2005

Length: 36 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 05 \$149,200

Abstract: This project conducts experiments to develop a basic understanding of electromagnetic (EM) interference and to develop ways of predicting its effects on speech perception and the usability of cellular telephones by hearing aid wearers. Audio input signal to the hearing aid, the EM signal being picked by the hearing aid, and the distorted speech signal in the ear canal are all monitored simultaneously with the subjective measurements and stored digitally in a computer for subsequent analysis. Based on these measurements, researchers predict how the EM interference affects the intelligibility of amplified speech. The results of this study benefit not only consumers in selecting a hearing aid and/or cellular telephone, they also provide industry with the basic theoretical underpinnings needed to allow for the development of improved wireless telephones (and other digital wireless devices) that produce substantially less interference in hearing aids, thereby increasing accessibility of modern digital communication systems for people with hearing loss.

Field Initiated Projects (FIPs)

California

Sound Localization with Multichannel Compression Hearing Aids

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Principal Investigator: Helen J. Simon, PhD

Public Contact: 415/345-2071; Fax: 415/345-8455

Project Number: H133G030118

Start Date: September 01, 2003

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: The primary objective of this research is to evaluate and compare wide dynamic range multichannel compression (WDRMCC) and linear hearing aids on localization and speech perception. To date there have been no studies of auditory localization using WDRMCC. The research uses innovative strategies and an extension of previous work, by taking WDRMCC outside of the laboratory to evaluate it in the complexities of the normal auditory environment and looking at effects of hearing aid experience on the ability to localize sounds. In addition to examining the general efficacy of a new wearable WDRMCC hearing aid in localization tasks, the research objectives include detailed study of the specific changes that occur in sound localization with WDRMCC and linear amplification as a function of time and the differences between the two platforms. The localization testing is complete and the data is being analyzed for a publication.

Field Initiated Projects (FIPs)

California

“Cross Watch”: Development of an Intersection Information System for Blind Travelers Based on Computer Vision

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Principal Investigator: John A. Brabyn, PhD 415/345-2110

Public Contact: Deborah Gilden, PhD 415/345-2000; Fax: 415/345-8455

Project Number: H133G030080

Start Date: September 15, 2003

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: The goal of this project is to develop and evaluate a system, based on computer vision technology, to give a blind traveler more information about intersections than is obtainable through conventional orientation and mobility techniques. Urban intersections (the most dangerous parts of a blind person’s travel, and the places where most accidents happen) are becoming increasingly complex, making safe crossing ever more difficult. The project develops a system named “Cross Watch” to help the blind person find the crosswalk, learn about the shape and nature of the intersection, find the pedestrian signal button, determine when the “walk” light is on, and alert him/her to any veering out of the crosswalk while crossing. The primary input to the system is images from a small camera carried like a pendant around the user’s neck, analyzed by software to extract the desired information. The specific goals are to: (1) gather a database of real images taken by blind persons at a variety of different kinds of intersections; (2) develop algorithms to process the images and extract the desired information; (3) incorporate the camera and algorithms in a portable prototype; and (4) conduct user testing to establish design parameters and human interface optimization. The software is designed to be capable of integration as a module for the “SignFinder” system already in development for finding printed signs in the camera images and reading them aloud to the user. The combined system provides a quantum leap forward in independent travel for

Field Initiated Projects (FIPs)
California

Efficacy of a Custom-fitting Cognitive Orthotic with Automatic Planning and Cueing Assistance

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Principal Investigator: Jeffery Englander, MD; Tamara Bushnik, PhD 408/885-2000 (Englander); 408/793-6446 (Bushnik)

Public Contact: Jerry Wright 408/793-6433; Fax: 408/793-6434

Project Number: H133G040145

Start Date: December 01, 2004

Length: 36 months

NIDRR Officer: Joyce Y. Caldwell

NIDRR Funding: FY 04 \$149,994; FY 05 \$149,963

Abstract: Executive control dysfunction can be the biggest challenge on the recovery path toward social and vocational independence for individuals with cognitive impairment. This project demonstrates the effectiveness of a cognitive aid, the Planning and Execution Assistant and Trainer (PEAT). PEAT not only provides the cueing and organization functions that many current cognitive orthoses contain, but it possesses the algorithms to monitor the progress of task execution. PEAT automatically generates schedules, detects and corrects schedule errors, cues the user to start and stop tasks, monitors performance, and adjusts to changes as they arise. As such, PEAT is a cognitive orthotic that has great potential for improving outcomes across multiple functional domains for people with cognitive impairments. Individuals with executive dysfunction secondary to traumatic or acquired brain injury, as well as other disease processes, receive either the PEAT device or standard cognitive aids/strategies. Each subject undergoes three assessments: baseline (before study initiation), 3, and 6 months after study enrollment.

Field Initiated Projects (FIPs)

Colorado

Development of an Assistive Technology Outcomes Measurement System Utilizing the International Classification of Functioning (ICIDH-2/ICF)

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Principal Investigator: Cathy Bodine

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Project Number: H133G030187

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 03 \$149,939; FY 04 \$149,933; FY 05 \$149,996

Abstract: This project furthers the development of a secure, Health Insurance Privacy and Accountability Act of 1996 (HIPAA) compliant, multi-site, web-based assistive technology (AT) outcomes system designed to capture data that enables the measurement of the impact of AT devices and services for children and adults with disabilities. The project results in the design and development of a working prototype complete with instructional support for users. The project is designed for easy addition of data fields to support the ever-evolving schema for outcomes assessment in AT. The use of the International Classification of Functioning, Disability and Health (ICIDH-2/ICF) as the framework for development builds on initial pilot work already completed by faculty of Assistive Technology Partners, University of Colorado Health Sciences Center, and collaboration with two NIDRR funded national projects focused on AT outcomes development (ATOMS/CATOR). Information gained leads to maximizing 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 severe disabilities; and will lead to improved information and research on the effectiveness of AT devices and evidence-based practices.

Field Initiated Projects (FIPs)

Delaware

Automatic Generation of Optimal Tactile Graphics

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Project Number: H133G020103

Start Date: September 01, 2002

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 02 \$149,700; FY 03 \$149,770; FY 04 \$149,539; FY 05 \$0 (No-cost extension through 8/31/2006)

Abstract: This project develops and implements image manipulation algorithms optimal for generating binary tactile graphics. Specifically, the following methods are optimized for the automatic translation of images to binary representations appropriate for tactile display: (1) Edge Detection—boundaries in images often represent important context queues; extracting edges allows these queues to be tactilely represented. This can be accomplished in a multi-resolution approach allowing the user to control the detail level presented. (2) Region Segmentation—graphic content can often be separated into distinct regions, or objects. While edge detection operations frequently yield broken boundaries, resulting in confusing tactile representations; segmentation can produce closed boundaries optimized to retain object integrity that can be combined with texturing procedures. (3) Tactile Texturing—binary texturing can be introduced to yield tactile information on the image gray level or color; such texturing, or halftoning, methods can be adopted from the literature on visual halftones and optimized specifically for tactile representations. The efficacy of each method is tested utilizing human subjects and the results are utilized in the optimization of each algorithm. Software conversion routines and printing algorithms are also developed that allow the methods to be used with existing software packages, such as word processors and web browsers, and to enable direct printing on existing hardware, such as the TIGER printer and microcapsule paper.

Field Initiated Projects (FIPs)

Delaware

Enhancing AAC Communication through Improved Access to Fringe Vocabulary Words

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Principal Investigator: Kathleen F. McCoy, PhD

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Project Number: H133G040051

Start Date: November 01, 2004

Length: 36 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 04 \$149,993; FY 05 \$149,996

Abstract: This project examines “fringe vocabulary” access, the means by which an Augmentative and Alternative Communication (AAC) device user accesses the substantially larger set of words needed in communication. AAC devices typically employ some mechanisms to enhance access to the most frequently used words or “core vocabulary.” However, much communication also involves accessing words that are not in this core. One method of accessing fringe vocabulary is word prediction, which can offer a choice of completed words based on the user’s selection of one or more initial word letters. This project seeks to optimize word prediction for fringe vocabulary. An important factor in this effort is the implementation of context-aware word prediction. Such a system automatically adapts its word predictions in response to changes in the user’s actions and environment. For example, different fringe vocabulary items may be predicted depending on the user’s geographic location, conversational topic, and identity of his/her conversational partner. Researchers study and implement word prediction methods based on observations of patterns of behavior exhibited by users in similar situations.

Field Initiated Projects (FIPs)

District of Columbia

Smart Over-Ground Body-Weight Support Gait Training System

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Principal Investigator: Joseph M. Hidler, PhD

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Project Number: H133G050259

Start Date: November 01, 2005

Length: 36 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 05 \$149,817

Abstract: The goal of this project is to build and test a new body-weight support system that allows individuals of different body weight and varying levels of walking ability to safely practice over-ground gait training. In the acute stages of many neurological injuries such as stroke, spinal cord injury, or traumatic brain injury, individuals often exhibit highly unstable walking patterns and poor endurance, making it difficult to safely practice gait for both the patient and therapist. Because of this, rehabilitation centers move over-ground gait training to the treadmill where bodyweight support systems can help minimize falls while at the same time raising the intensity of the training. Since a primary goal of all individuals with walking impairments is to walk in their homes and in the community rather than on a treadmill, it is imperative that therapeutic interventions targeting walking involve over-ground gait training. This device allows therapists to train patients early in their recovery stages in a safe, controlled manner, and thus enhance gains in over-ground walking ability.

Field Initiated Projects (FIPs)

Florida

The Development of a Tool to Enhance Communications Between Blind and Sighted Mathematicians, Students, and Teachers: A Global Translation Appliance

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Project Number: H133G010046

Start Date: October 01, 2001

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 01 \$149,540; FY 02 \$134,111; FY 03 \$139,474; FY 04 \$0 (No-cost extension through 9/30/2005); FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This project builds a translator for several mark-up notations used in scientific, mathematic, engineering, and technological fields. The primary difficulty encountered by students with visual impairments in pursuing studies in science, mathematics, engineering or technology is how to read and write mathematics. To overcome the limited expressiveness of six-dot braille characters, a plethora of notations for marking-up mathematics have been devised, including Nemeth Math code, Marburg code, the French standard, the Stuttgart standard, and others. These notations are braille-based and designed specifically for people with visual impairments, and are not known to sighted individuals; as a result, written technical communication between individuals who are sighted and individuals who have visual impairments is quite difficult. Further, communication between individuals who have visual impairments is also difficult when different notations are used. The new tool allows free conversion among the Marburg code, Nemeth code, Latex and MathML by developing a common intermediate format (CIF) for representing mathematics, and uses logic programming and denotational semantics to translate between supported notations and the CIF. The CIF is also used to develop a mark-up notation independent auditory browser for the understanding of complex mathematical expressions by users with visual impairments. The auditory browser conveys the structure of a mathematical expression as well as its content via speech output. The user also has the ability to navigate the expression interactively and focus on its subparts in order to understand the expression better.

Field Initiated Projects (FIPs)

Georgia

Analyzing Universal Design Resource Needs for Practitioners in Industry and Government

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Project Number: H133G040151

Start Date: November 01, 2004

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 04 \$149,391; FY 05 \$149,754

Abstract: This project draws from past human factors research which has examined the quality of design guidelines, the design process in general, and needs/task analyses to support design-tool creation. Lessons from the human factors field are considered in relation to studies of universal design practice in industry, and needs analysis to support universal design resource creation. The target population for this project is people who utilize universal design resources in industry and government. The objective of the research is to understand and document actions/behaviors of practitioners involved in design or procurement activities in relation to their use of universal design resources. A systems analysis approach has been employed in the design of research activities. The relevant elements of the system are examined through observation and measurement. Four sequential research activities are: (1) an analysis of universal design guidance in the context of practitioner use employing heuristic evaluation, survey, and interview methods; (2) a field-based analysis of supply-chain stakeholder activities, which conducts a needs and task analysis using various contextual inquiry methods; (3) controlled laboratory-based usability studies of resource use during universal design projects; and (4) a summative resources and training effects study, which examines how professionals who are new to universal design concepts approach design, and succeed or fail depending on the level of tuition and the level of resource access that they have during design activities.

Field Initiated Projects (FIPs)

Georgia

Inclusive Indoor Play

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Principal Investigator: Abir Mullick

Public Contact: 404/385-7210

Project Number: H133G040324

Start Date: December 01, 2004

Length: 36 months

NIDRR Officer: Thomas Corfman

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.

Field Initiated Projects (FIPs)

Illinois

Tools to Help Web Developers Create More Universally Accessible Web Resources to People with Disabilities

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Principal Investigator: Jon Gunderson, PhD

Public Contact: 217/244-5870; Fax: 217/333-0248

Project Number: H133G030079

Start Date: August 15, 2003

Length: 36 months

NIDRR Officer: Ellen Blasiotti

NIDRR Funding: FY 03 \$149,959; FY 04 \$149,957; FY 05 \$149,993

Abstract: The most popular tools used by instructors are non-traditional web authoring tools like Microsoft Office Applications including Power Point, Excel and Word (a recent survey of instructors found 99% use Microsoft Office to create at least part of their web-based instructional materials). This project creates web authoring tools that integrate the creation of accessible markup into the default authoring process of publishing Microsoft Office documents to the web. The accessibility is integrated into the authoring process so the author does not need any special knowledge of HTML coding or accessibility techniques, nor to perform extra time consuming steps to add or edit accessible markup after a document is created. The integrated authoring tool does not require awkward post publishing accessibility evaluation and repair steps to determine what accessibility markup is needed for improved accessibility. The HTML generated by the Office plug-ins not only improves accessibility to people with disabilities, but the content is more accessible to everyone by supporting World Wide Web Consortium (W3C) web standards and the interoperability the W3C recommendations provide. The interoperability of W3C recommendations makes information available to any web browser and not just Internet Explorer (currently the default web publishing features of Office support web coding that can only be viewed in Internet Explorer).

Field Initiated Projects (FIPs)

Illinois

Cost Effectiveness of a Computerized Oral Reading Treatment for Aphasia

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Principal Investigator: Leora Cherney, PhD

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Project Number: H133G010098

Start Date: October 01, 2001

Length: 36 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 01 \$149,470; FY 02 \$149,892; FY 03 \$149,732; FY 04 \$0 (No-cost extension through 9/30/2005)

Abstract: This study evaluates the efficacy and cost-effectiveness of an innovative, computerized treatment program for individuals with aphasia, a communication disorder and chronic condition. Aphasia requires long-term treatment to ensure that individuals can participate in a full range of vocational, recreational, and social activities. However, recent health care changes have seriously curtailed the amount of treatment received by patients with aphasia. In this environment effective treatments should be developed that can be easily administered and delivered at minimum cost. Oral Reading for Language in Aphasia (ORLA) was originally developed to improve reading comprehension in individuals with aphasia. Preliminary studies indicate that ORLA is effective in improving reading comprehension in patients with all types of aphasia. In addition to improvements in reading comprehension, cross-modal generalization occurs in some patients, with improvements in auditory comprehension and oral expression evident. The present study compares changes in communication performance for a group of aphasic individuals receiving ORLA from a speech-language pathologist and a group receiving a computerized version of the ORLA treatment.

Field Initiated Projects (FIPs)

Illinois

Selective Dynamic Strength Training to Enhance Upper Limb Coordination Following Stroke

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Principal Investigator: Julius Dewald, PT, PhD
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Project Number: H133G030143

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 03 \$149,998; FY 04 \$149,991; FY 05 \$149,992

Abstract: This study investigates the use of a novel selective dynamic strengthening protocol, which incorporates a two-joint robotic device to overcome gravity induced abnormal movement synergies following hemiparetic stroke. The specific objectives are the evaluation and demonstration of the usefulness and effectiveness of this selective dynamic robot-supported training regime for enhancement of quality of life of stroke survivors. The effects of the dynamic training regime on functional arm movements are being investigated in 2 groups of 20 subjects with chronic hemiparetic stroke. The control group follows an 8-week conventional upper extremity strengthening protocol consisting of shoulder abduction/flexion and elbow extension exercises. This conventional protocol represents an adapted exercise program is available for people with chronic stroke (4.5 million) who no longer receive formal physical therapy due to a plateau in functional restoration. The experimental group follows a novel robot-supported training regime, which also strengthens subjects with chronic stroke but emphasizes performance of rapid reaching movements while increasing active support of their arm. This enables the subject to progressively deviate from their abnormal torque synergies. The evaluation and training paradigm provides quantitative outcome measures, which can be used to reliably track a patient's progress using technology that is easy to implement with no risk of injury. The long-term goals of this study are the technological development and implementation of a simple, user-friendly, robot-supported therapeutic intervention accessible to consumers in both in- and out-patient clinics.

Field Initiated Projects (FIPs)

Illinois

Computer Treatment for Aphasia: Evaluating Efficacy and Treatment

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Principal Investigator: Leora R. Cherney, PhD

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Project Number: H133G040269

Start Date: October 01, 2004

Length: 36 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 04 \$149,978; FY 05 \$149,808

Abstract: This project implements an innovative computerized treatment program for individuals with chronic aphasia, evaluates its effectiveness, and assesses the impact of treatment intensity on outcome. The treatment, Oral Reading for Language in Aphasia (ORLA), uses state-of-the-art computer technology that allows the individual with aphasia to read aloud, and ultimately speak, sentences at the same time as the words are produced in visible speech by an animated agent. The treatment is based on a theoretical framework that incorporates two lines of work: the neuropsychological models of reading and observation-execution-matching. Individuals with chronic aphasia are randomized to one of three treatment groups: high intensity computer treatment (10 hours per week); low intensity computer treatment (4 hours per week); and a control condition in which subjects participate in non-language computer activities for 4 hours per week. For all groups, treatment continues for six weeks. Language and communication skills are evaluated pre-treatment, immediately post-treatment, and at 6 and 12 weeks after the end of treatment. The primary outcome measure is the Aphasia Quotient of the Western Aphasia Battery. Secondary outcome measures consider 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. Aphasia is a chronic condition that requires long-term treatment of the communication disorder to ensure that individuals can participate in a full range of vocational, recreational and social activities.

Field Initiated Projects (FIPs)

Illinois

Visual Guidance to Improve Stepping Behavior Post-Stroke

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Principal Investigator: David A. Brown, PhD
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Project Number: H133G050132

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 05 \$149,996

Abstract: Impaired walking ability is a major obstacle to quality of life for stroke survivors, and recovery of independent walking is among the most important goals for individuals post-stroke. Physical therapists use physical guidance of the limb during body-weight supported treadmill training to work toward these goals, but clinical experience suggests that these techniques have limited effectiveness because when the physical guidance is removed, the stepping behavior, although somewhat improved, reverts to a preferred stepping pattern. This project introduces a novel simulated object stepping paradigm to improve walking poststroke by providing the added benefits of visual guidance during body-weight supported treadmill training. Consumers view simulated objects through a pair of goggles and are instructed to step over challenging objects while subjected to body-weight supported treadmill training. The dimensions of the object are adjusted so that successful stepping is associated with an improved and more functional step length and toe clearance leading to improved gait speed and lowered risk for falls.

Field Initiated Projects (FIPs)

Maryland

Optimized Hands-Free Speech Recognition

UMBC

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Principal Investigator: Andrew Sears, PhD

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Project Number: H133G050354

Start Date: December 01, 2005

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 05 \$149,882

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

Beyond the Text: Access to Images, Audio, and Multimedia in eBooks

WGBH Educational Foundation
National Center for Accessible Media
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<http://ncam.wgbh.org/ebook>

Principal Investigator: Geoff Freed 617/300-4223

Public Contact: Mary Watkins 617/300-3400; Fax: 617/300-1035

Project Number: H133G020091

Start Date: October 01, 2002

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 02 \$150,000; FY 03 \$150,000; FY 04 \$150,000; FY 05 \$0 (No-cost extension through 4/30/2006)

Abstract: This project researches, develops, and disseminates recommended practices and demonstration models that enable access to and understanding of images, audio, and multimedia presented within electronic book (eBook) formats for users who are blind or deaf. The eBook format offers online and portable access to all manner of traditional print products, including fiction, nonfiction, textbooks, professional journals, and other content, via personal computer, laptop, library systems, dedicated devices, and personal digital assistants (PDAs). Educators, trainers, and publishers are beginning to explore the learning potential of interactive web-based textbooks that include multimedia (audio and video) and study tools such as highlighting, note-taking, bookmarking, and direct Internet connections to references and other online learning resources. All of these features in the eBook format hold great promise to enhance and improve access to information for users with disabilities. Accessible eBooks could offer learners of all ages who are blind or deaf equal and ready access to trade, text, or scholarly books, training materials, online research libraries, and all manner of electronically published resources—a major leap forward in leveling the playing field for people with disabilities at home, at work, and at school. In order to accomplish this, eBook standards and systems must be designed to facilitate accessible navigation as well as caption and audio description displays, and eBook materials must be properly formatted for screen readers and/or refreshable braille displays. eBook content must include ancillary audio and text information to enable navigation, and to make images, audio, and multimedia accessible.

Field Initiated Projects (FIPs)

Massachusetts

Access to Digital Cinema Systems

WGBH Educational Foundation
National Center for Accessible Media
125 Western Avenue
Boston, MA 02134

Principal Investigator: Bradley C. Botkin 617/300-3902

Public Contact: Mary Watkins 617/300-3700; Fax: 617/300-1020

Project Number: H133G030104

Start Date: September 01, 2003

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: This project builds on WGBH National Center for Accessible Media (NCAM's) experience and successes in developing and proliferating MoPix technologies to make digital cinema accessible to people with sensory disabilities. MoPix systems enable the 34 million Americans with hearing or vision loss to enjoy first-run films with their friends and families. As in all NCAM standards initiatives, open specifications are proposed that technology developers can use to enable myriad display options, including, but not limited to, MoPix systems. Project goals are to: (1) Work with standards organizations to ensure inclusion of captions and audio narration in industry specifications for packaging, identification, transport, retrieval and display of digital cinema content; (2) develop solutions and prototypes to support delivery and display of caption and description files, both in current first-generation and future d-cinema systems; and (3) promote review of project solutions and proposed standards through dissemination and high-profile demonstrations, and support implementation by digital cinema systems vendors.

Field Initiated Projects (FIPs)

Massachusetts

Speech Solutions for Next Generation Media Centers

WGBH Educational Foundation
National Center for Accessible Media
125 Western Avenue
Boston, MA 02134
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<http://ncam.wgbh.org>

Principal Investigator: Gerry Field 617/300-3496

Public Contact: Mary Watkins 617/300-3700; Fax: 617/300-1035

Project Number: H133G040143

Start Date: October 01, 2004

Length: 36 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 04 \$150,000; FY 05 \$150,000

Abstract: This project develops a fully operational home media center with voice output capabilities enabled via keyboard and remote control, based on open source technologies. Project activities include: Creation of an accessible Linux-based home media center; publication of source code and specifications for open source media center; speech interface solutions enabled via keyboard and remote control; demonstration model of end user control and navigation of open source media platform via a PDA with Panasonic's small footprint speech interface; publication of end-user interface research; and a final report that details the impact of project solutions and publications. A demonstration model of a small footprint speech interface for this open source media center that previews how emerging speech technologies could be used in new handheld products in development by industry is in development from Panasonic Speech Technology Laboratories. American Foundation for the Blind contributes expertise to the open source solution and conducts comprehensive end-user evaluations that document how blind and low vision users interact with and utilize the speech interface offered by both project solutions.

Field Initiated Projects (FIPs)

Massachusetts

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

WGBH Educational Foundation
National Center for Accessible Media
125 Western Avenue
Boston, MA 02134-1008

Principal Investigator: Thomas Apone 617/300-3371

Project Number: H133G050278

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 05 \$150,000

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

Making In-Flight Communications and Entertainment Accessible

WGBH Educational Foundation

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Principal Investigator: Larry R. Goldberg

Public Contact: 617/300-3486; Fax: 617/300-1035

Project Number: H133G050254

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 05 \$150,000

Abstract: This project researches barriers and develops solutions that can make inflight communication and entertainment systems (IFE) accessible to people with sensory disabilities. Major project activities are to: (1) Research technical solutions, procedures, and practices required to infuse access considerations into inflight hardware, digital content management systems, interactive and display systems, connectivity, and content; (2) develop a demonstration model using a state-of-the-art IFE system that prototypes inflight system support of user-selectable captions, audio description, and talking menus; (3) participate in World Airline Entertainment Association technical committees and working groups and promote the adoption/inclusion of standard accessibility metadata models into new and existing standards developed by those groups; (4) publish a white paper outlining the functional requirements of an accessible IFE system; and (5) promote review of demonstration model and proposed specifications through dissemination and high-profile demonstrations within industry, government, and the disability community.

Field Initiated Projects (FIPs)

Minnesota

Cued-Response to Stimulate Saccade-Step Planning and Mobility in Progressive Supranuclear Palsy

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Project Number: H133G030159

Start Date: September 01, 2003

Length: 36 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 03 \$150,000; FY 04 \$149,999; FY 05 \$150,000

Abstract: Vertical gaze palsy and recurrent falls are cardinal features of progressive supranuclear palsy (PSP). These symptoms interfere with safe ambulation and functional mobility. The deficit in gaze control has a known pathoanatomical origin, but may also involve cognitive dysfunction manifest by a loss of executive cognitive abilities and visual attention. The purposes of this project are to: (1) determine whether a cued-response intervention is effective in promoting gaze saccade function during a step climbing task, (2) determine if improved gaze control leads to a reduction of falls and improved gait mobility, and (3) examine the neurocognitive mechanisms underlying any such improvements. Preliminary research suggests that vertical gaze palsy can be improved by cueing patients with PSP to initiate a new stepping pattern while the subject is under motion toward the object. The cue is presented in a stimulus-response compatibility paradigm, which requires the use of executive cognitive function (planning and problem-solving) to select the appropriate limb for stepping. Two groups of subjects with PSP will be randomly assigned to receive limb-cue plus eye movement training, or walking practice with no training in a cross-over design. A follow-up will evaluate retention and transfer of learning. Outcomes will be assessed using functional tests of mobility and a kinematic analysis synchronized with infrared oculography.

Field Initiated Projects (FIPs)
New Jersey

Development of an Intelligent Patient Lift and Transfer Device

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Principal Investigator: W. Thomas Edwards, PhD
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Project Number: H133G040183

Start Date: October 01, 2004

Length: 36 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 04 \$150,000; FY 05 \$150,000

Abstract: The objective of the project is to develop the Intelligent Patient Lift (IPL) and Transfer Device based upon an advanced state-of-the-art technology that addresses present shortcomings: complexity and safety, cost and availability, level of effort for caregivers, and the number of caregivers needed to complete a transfer. This innovative system incorporates a recently patented concept proven in other lifting applications and developed by project collaborator Yobotics Incorporated. Based on needs identified at KMRREC-KIR, researchers develop and demonstrate refinements of the Patient Lifting frame and sling. The goal is to introduce an intelligent interface that provides both natural and comfortable interactions between the patient/user and the caregiver. The novel features incorporated in the IPL introduce a more intuitive control of the system and improve the quality of user-caregiver interactions by reducing the level of effort and complexity. The new IPL device is demonstrated and evaluated in an active rehabilitation setting. This fundamental lifting technology can be extended to other applications (such as vehicle entry and homecare) to benefit the majority of those with mobility disabilities.

Field Initiated Projects (FIPs)

New York

Web-based Student Processes at Community Colleges – Tools for Ensuring Accessibility

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Principal Investigator: Susanne Bruyère, PhD

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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

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 targets Cornell's information technology (IT) accessibility research and development efforts specifically to the national community college network. A multiple-prong approach is used to examine the state of web accessibility in the community college network and identify IT accessibility barriers for students with disabilities and ways to address them. The project includes a review of selected online application processes in 30 community colleges. The focus of the Year Two research is a telephone survey across all community colleges nationally regarding use of web-based/online student recruitment, application, and registration processes and the colleges' awareness of web accessibility issues and policies regarding accessibility. The project is a collaborative effort between EDI and Cornell University's Institute for Community College Development (ICCD).

Field Initiated Projects (FIPs)

New York

**Advanced Tissue Vascular and Biomechanical Studies for Improved
Prosthetic Socket Design**

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Principal Investigator: Vern L. Houston, PhD

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Project Number: H133G030069

Start Date: January 01, 2004

Length: 36 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 03 \$149,993; FY 04 \$149,932; FY 05 \$149,936

Abstract: The objectives of this project are: (1) to establish the prevalence of prosthesis induced macro-circulatory occlusion; and (2) to determine if the degree of occlusion produced (if any) is of sufficient magnitude and duration to cause ischemia during walking and other physical activities, that can lead to chronic tissue atrophy. Preliminary studies have shown that patellar tendon bearing (PTB) prosthetic sockets can occlude transtibial amputees' residual limb circulation. Specifically, the project researches whether: (1) didactically taught and commonly clinically applied PTB sockets occlude transtibial amputees' popliteal arterial circulation, and (2) the circulatory occlusion so produced causes ischemia in residual limb tissues during periods of moderate to

Field Initiated Projects (FIPs)

New York

The Universal eLearner-An Innovative Approach for Universal Online

The American Foundation for the Blind

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Project Number: H133G050113

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 05 \$149,518

Abstract: The purpose of this project is to develop a prototype of the Universal eLearner, an online educational media platform that addresses the specialized needs of all segments of the student/learner population, while representing a sound business model for educational publishers. The category of specialized learners encompasses students with learning disabilities, English language learners, students who are blind or have visual impairments, deaf or hard of hearing students, and students with cognitive disabilities. The Universal eLearner applies a curriculum-driven approach to making online educational content accessible to the largest possible number of students, including students with learning, cognitive, hearing, and visual disabilities, as well as English language learners. The American Foundation for the Blind (AFB), in conjunction with Bridge Multimedia, a New York City-based accessible media company, adapts two preexisting integrated learning modules produced for general student populations in order to develop two accessible prototypes: (1) upper-elementary social studies; and (2) upper-elementary science. To ensure that the finished prototypes support all students with specialized learning challenges, the project uses: (1) technical assessments based on AFB's methodology for evaluating universal accessibility and usability of electronic and information technology products; (2) field testing providing quantitative and qualitative data on accessibility and usability from the perspectives of students, teachers, and parents; and (3) a representative Advisory Board with a significant role in all phases of the project.

Field Initiated Projects (FIPs)

North Carolina

ABC-Link: A Web-Based Literacy Assessment Tool for Students with Significant Disabilities

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Principal Investigator: Karen Erickson, PhD

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Project Number: H133G020133

Start Date: October 01, 2002

Length: 36 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 02 \$149,733; FY 03 \$149,688; FY 04 \$149,545; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This development project is designed to create a web-based assessment tool, ABC-Link, that provides accessible reading assessment tasks via an innovative interface that simultaneously supports students with severe speech and physical impairments and the adults who assess them. Through its use of state-of-the-art technology, ABC-Link is an interactive site that: (1) guides the assessment as it progresses based on a model of behavioral and test-administration efficiency, (2) feeds the assessment results back to an expert team for interpretation, (3) guides the adult in conducting further assessment as necessary, and (4) provides a suggested plan of intervention.

Field Initiated Projects (FIPs)
Oregon

Development of Intelligent Personal Activity Management and Prompting Applications for Individuals with Cognitive Disabilities

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Principal Investigator: Thomas Keating, PhD

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Project Number: H133G050313

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 05 \$149,936

Abstract: This project builds on the successful development of the Picture Planner icon-driven personal activity management application, supported in part by previous NIDRR funding. One of the conclusions of the field testing that led to the development and testing of that application is that there is a need for intelligent activity planning and prompting applications that combine cognitively accessible software design with innovative artificial intelligence approaches to provide smart applications for life management and decision-making. The goal of the present project is to use a consumer-driven, participatory design process to build on that foundation and develop a prototype smart planning and prompting software package for implementation on desktop and handheld platforms. The target population is individuals with significant cognitive disabilities such as mental retardation and autism. The primary outcome of this project is a field-tested and experimentally evaluated intelligent life skills management system that enables people with cognitive disabilities to improve their competence at daily activity management and enhance their community integration.

Field Initiated Projects (FIPs)

Oregon

Oregon Project Rehabilitation of Communication Skills in Dementia Through

Oregon Health and Science University

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Project Number: H133G040176

Start Date: October 01, 2004

Length: 36 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 04 \$150,000; FY 05 \$150,000

Abstract: The project increases access to AT by revealing which communication related devices are appropriate for persons with dementia. The goals of the research are to demonstrate that alternative and augmentative communication (AAC) use is a promising avenue for improving the lives of adults with dementia and of the families and caregivers who need to communicate with them. The study addresses the input mode of level of symbol that optimizes AAC device use for persons with moderate dementia. It compares the effectiveness of abstract symbols (printed words), two-dimensional symbols (colored photos), and three-dimensional symbols (small objects) in AAC devices. The study also addresses the effect of output mode on conversational skills of persons with moderate dementia. It compares the use of electronic voice-output devices with non-electronic devices.

Field Initiated Projects (FIPs)
Pennsylvania

The Efficacy of Computer and Sense Wear Technologies for Promoting Health in Adults with Fibromyalgia: A Randomized Clinical Trial

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Principal Investigator: Joan Rogers, PhD; Margo Holm, PhD

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Project Number: H133G020159

Start Date: October 01, 2002

Length: 36 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 02 \$149,996; FY 03 \$149,966; FY 04 \$149,996; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This study uses a cognitive-behavioral intervention to facilitate adoption of a wellness lifestyle in people with fibromyalgia. Specifically, researchers test the efficacy of an Internet-based health promotion computer program used in conjunction with a wearable sensor (SenseWear™) for developing a wellness lifestyle and improving the quality of life of adults with fibromyalgia. Consumers are assisted in: (1) establishing goals in the areas of physical activity, nutrition, participation in meaningful, productive activities, sleep, stress-reducing activities, and emotional state; (2) monitoring progress toward established goals; and (3) assessing the relationship between these areas in one's daily life. In addition, based on consumer input, the program offers suggestions for developing a wellness lifestyle. SenseWear™ provides objective data about activity level and stress level for consumers to use in combination with the self-assessment data provided by the Internet program.

Field Initiated Projects (FIPs)

Tennessee

Factors Affecting Directional Hearing Aid Performance in Children

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Principal Investigator: Todd A. Ricketts, PhD

Public Contact: 615/936-5258; Fax: 615/936-5013

Project Number: H133G020097

Start Date: September 01, 2002

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 02 \$149,576; FY 03 \$149,844; FY 04 \$149,915; FY 05 \$0 (No-cost extension through 8/31/2006)

Abstract: This project investigates quantification of the angular position of children's heads in classroom environments and measurements of speech understanding and classroom performance in environments that simulate the most common listening situations children experience. Directional hearing aids represent one of the few technologies that have the potential to positively impact children's speech understanding in classroom environments without requiring hardware external to the child. These instruments work by reducing amplification for sounds arriving from behind the child, relative to that provided for sounds arriving from the front. Therefore the intensity level delivered to a child's ear for sound sources of interest will be greater than that of other sounds, if the assumption is made that the child will face the sound source of interest. Unfortunately, the angle at which children position their heads in classroom environments is unknown. In addition, the magnitude of improvement in speech intelligibility and classroom performance afforded by directional hearing aids in comparison to their traditional, omnidirectional counterparts in real classroom environments is unknown. Results to date indicate that children as young as 4-6 are able to accurately orient their heads towards sound sources. Better accuracy is generally associated with more difficult listening situations, but can be detrimental in others. The specific relationship between directional benefit and environment appears to be predictable and is highly dependent on the location of the sound and noise sources.

Field Initiated Projects (FIPs)

Utah

Bottom-Up Modeling Of Mass Pedestrian Flows: Implications for the Effective Egress of Individuals with Disabilities

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Principal Investigator: Keith Christensen, MLA

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Project Number: H133G030013

Start Date: November 01, 2003

Length: 36 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: The purpose of this research project is to improve the exit of individuals with disabilities from buildings and other settings in emergencies. The project researches the effect of the current and proposed Americans with Disabilities Act Accessibility Guidelines (ADAAG) for the built-environment on the egress of individuals with disabilities during the mass pedestrian flows (MPFs) triggered by health-safety events, and the effect of security-oriented design methods on the egress of individuals with disabilities during health-safety event triggered MPFs. The objective of the project is to measure the emergent behaviors of the diverse sample populations of six representative built-environments (an airport, high school, conference center, multi-story office building, federal development, and secured federal development) during simulated health-safety events. An intervention (modification of the design character of the built-environment) is applied to eliminate conditions occurring during MPFs, which adversely affect the egress of individuals with disabilities.

Field Initiated Projects (FIPs)
West Virginia

**Project Safe EV-AC: Safe Evacuation and Accommodation of People
with Disabilities**

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Job Accommodation Network (JAN)
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Principal Investigator: Richard Walls 304/293-7186

Public Contact: Beth Loy, Project Director 304/293-7186; Fax: 304/393-5407

Project Number: H133G040318

Start Date: September 01, 2004

Length: 36 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 04 \$149,970; FY 05 \$149,949

Abstract: The Project Safe EV-AC (Safe EVacuation and ACcommodation of People with Disabilities) Team, which includes the Job Accommodation Network and the National Organization on Disability's Emergency Preparedness Initiative, develops high quality, comprehensive, easy-to-use safe evacuation materials that include people with disabilities. The Project Safe EV-AC Team researches prior safe evacuation studies and training products; coordinates a network of expert and end-user Advisor Groups; and produces comprehensive, yet cost-effective, safe evacuation education and training tools using the most appropriate technology for the material. Project Safe EV-AC targets certain audiences, including people with disabilities and emergency responders. The project uses a continuous improvement model with enhanced feedback loops to ensure that the products created are rigorously evaluated by those who use them. The end product includes a final report for NIDRR articulating the existing gaps in knowledge and product development in the field of safe evacuation and accommodation for people with disabilities.

Field Initiated Projects (FIPs)

Wisconsin

Functional Effects of Bifocal Use: Implications for Falling Interventions

University of Wisconsin/Milwaukee
Rehabilitation Research Design and Disability Center
College of Health Sciences
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Project Number: H133G050340

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 05 \$149,999

Abstract: This project conducts an integrated set of research activities to address a seriously under considered factor in falls research, the use of bifocal lenses. This project focuses on new users of bifocal glasses, typically individuals in their 4th or 5th decade, and targets a better understanding of falls intervention strategies related to eyeglass wear. 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. Reasons for falls can be quite complex and are generally considered to be multifactorial. Specific to middle aged workers, it is known that a significant number of workplace accidents occur on stairs and uneven surfaces. Comparison of data across studies generates new knowledge about the process of adaptation to multifocal lenses with application to falls in the elderly. Recommendations are articulated not only for multifocal lens wearers but also for the producers of lenses and biomedical engineers.

Small Business Innovative Research (SBIR), Phase I
California

Automated DAISY Book Production System

Automatic Sync Technologies
4460 Quicksilver Court
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kevin@automaticsync.com
<http://www.automaticsync.com/caption>

Principal Investigator: Kevin Erler, PhD
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Project Number: H133S050018

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 05 \$75,000

Abstract: Digital Talking Books represent a substantial improvement over old cassette-based audio books for all people with print disabilities (including those with visual impairments and learning disabilities). The DAISY (Digital Accessible Information System) standard makes talking books both accessible and easily navigable. Though aided by some production software, DAISY book production is still a labor-intensive process. In particular, the process of synchronizing the audio and text is left as a manual process in current production tools – making the production process a tedious and time-consuming one. The result is long production times, and low-resolution synchronization. This project applies an automated audio synchronization technology to the automation of DAISY book production, thereby significantly lowering production costs and turnaround times. This process also enables very high-resolution synchronization, allowing DAISY users to realize the full potential of Digital Talking Books. The project develops a proof-of-concept prototype that offers automated DAISY production to audio book producers, and enables them to inexpensively produce fully synchronized text and audio books.

Small Business Innovative Research (SBIR), Phase I
California

**Internet Access by Using Any Phone and User's Voice: Accessibility to
Blind, Visually Impaired, and Dyslexic People**

InternetSpeech
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<http://www.internetspeech.com>

Principal Investigator: Emdad Khan, PhD 408/532-9630

Public Contact: 408/532-8460; Fax: 408/274-8151

Project Number: H133S050097

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 05 \$74,300

Abstract: This project provides people with visual impairments or dyslexia with a "rendering" technique that allows them to easily access the Internet using any telephone and without using a computer. The research is based on an existing Voice Internet solution, which many blind and visually impaired people have used successfully. An Intelligent Agent is used to provide contents from the Internet using proper rendering of the visual Internet in real time to concise and meaningful audio or text. Rendering is achieved by using page highlights, finding right as well as only relevant contents on a linked page, assembling right contents from a linked page, and providing easy navigation. Consumer input is used to modify and improve the system as it is developed.

WayFinder: A Portable Multimedia Software System for Supporting Independent Community Transportation for Individuals with Intellectual Disabilities

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Principal Investigator: Daniel K. Davies
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Project Number: H133S050015
Start Date: October 01, 2005
Length: 6 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 05 \$75,000

Abstract: Public transit systems and walking present an opportunity for more independent and integrated transportation, as well as a more normalized lifestyle. However, there are many inherent barriers to using transit systems for people with intellectual disabilities, such as complexity of schedules, comprehension of time, literacy deficits, unfamiliar routes, and the negative prospects of getting lost. This project develops and evaluates WayFinder, a portable system that integrates palmtop computers, global positioning systems, and instant messaging technology in a simplified multimedia interface to provide intelligent audio and visual cues to facilitate independent navigation of public transit systems. The system is fully self-contained and requires no changes to the infrastructure of the public transit system (i.e. no requirement to make each bus GPS-enabled, etc.). This project develops requirements for the WayFinder system, designs and builds a software prototype, and conducts a pilot study to evaluate the utility of the system for improving independence and self-direction in public transit navigation.

Small Business Innovative Research (SBIR), Phase I
Colorado

**WorkRight Skill Builder: A Customizable State-of-the-Art Simulation
Software System to Support Vocational Social Skills Training for
Students and Adults with Intellectual Disabilities**

AbleLink Technologies, Inc.
528 North Tejon Street, Suite 100
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Principal Investigator: Steven E. Stock
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Project Number: H133S050074

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$75,000

Abstract: Deficits in social skills is one of the greatest barriers to successful community-based employment and residential living for individuals with intellectual disabilities. Current methodologies for social skills training are generally expensive, often requiring one-to-one instruction and a personalized curriculum to address the specific needs of different individuals. However, recent advances in computer animation/simulation technology have created an opportunity to provide self directed computer-based social skills training that can be personalized through the use of avatar-rendering technology to simulate both a trainee's and his or her actual community environment in addressing individual social skills training needs. In a preliminary research study a prototype was developed and utilized to assess the feasibility of using state-of-the-art computer animated simulations and human avatars to provide social skills training to individuals with intellectual disabilities. Results of the study provided statistically significant evidence of the ability of this population to benefit from the computer animation/avatar approach. To build on this research, this project presents the WorkRight SkillBuilder, a state of the art computer-based simulator application designed to provide customizable, self-directed social skills training for individuals with intellectual disabilities on community-based vocational social skills. Phase I activities include requirements development, prototype creation, and evaluation of the feasibility of the WorkRight concept. In Phase I, the project develops a prototype of an interactive social skills training system that is to be evaluated for its effectiveness in providing measurable gains in social skills via a pretest/posttest model.

Small Business Innovative Research (SBIR), Phase I
Colorado

SoundAlert: A Centralized System Capable of Alerting People Who Are Deaf or Hearing Impaired of Critical Sounds in Their Environment

CreateAbility Concepts, Inc.
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Fort Collins, CO 80525
stephenmsutter@aol.com
<http://www.createabilityinc.com>

Principal Investigator: Stephen M. Sutter
Public Contact: 970/391-8843; Fax: 970/635-0049

Project Number: H133S050114
Start Date: October 01, 2005
Length: 6 months
NIDRR Officer: Bonnie Gracer
NIDRR Funding: FY 05 \$75,000

Abstract: This project researches and develops a combination of state-of-the-art, portable wireless technology, network services, and sensor technology with a unique approach to enable individuals who are non-hearing to: (1) initiate and receive emergency communications, (2) receive alerts in the workplace or home environments on a single pocket-sized device through innovative sound discrimination techniques able to identify specific sounds with accuracy, and (3) combine this functionality with supplementation or replacement of other alerting technologies for convenience on the same single platform. The system enables outbound and inbound communication with emergency services in response to such events as evacuation or rescue information when needed, thus alleviating a major concern of this population for their personal safety. This project demonstrates the technical merit and feasibility of this system to: (1) detect specific events in the environment, (2) relay alerts of this information to a handheld user device, and (3) open real-time communications with emergency personnel. This greatly enhances safety, convenience, and independence.

Small Business Innovative Research (SBIR), Phase I
Colorado

SSIMPLE: A Speech and Switch Input Mobile Phone that Links Everyone

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Fort Collins, CO 80525
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Principal Investigator: Stephen M. Sutter

Public Contact: 970/391-8843; Fax: 970/635-0049

Project Number: H133S050073

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 05 \$75,000

Abstract: This project demonstrates the technical merit, feasibility, and cost efficiency of combining commercially available SmartPhone technology with an innovative design and state-of-the-art neural net algorithms to produce a SSIMPLE device - a Speech and Switch Input Mobile Phone (that) Links Everyone. This device enables single switch and voice-only users to independently send and receive text messages, and answer or make phone calls. Specific objectives for Phase I are to: (1) Determine the end user requirements via surveys and focus group meetings; (2) construct a prototype that incorporates a Graphical User Interface (GUI), fast Fourier transform (FFT) algorithms, and neural net algorithms to provide an easy to use interface, and to provide fast learning of numbers, names, words, and symbol associations and therefore fast prediction to maximize the efficiency of the voice command or single switch user; and (3) perform a usability analysis with actual single switch users to test the SSIMPLE device's ability to adjust to an individual's capabilities, and its ability to help them communicate.

Talking Tags – Fast identification of Objects and Locations for Individuals with Visual Impairments

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ss_createability@yahoo.com
<http://www.createabilityinc.com>

Principal Investigator: Stephen M. Sutter
Public Contact: 970/391-8843; Fax: 970/635-0049

Project Number: H133S050115
Start Date: October 01, 2005
Length: 6 months
NIDRR Officer: Edna Johnson
NIDRR Funding: FY 05 \$75,000

Abstract: This project demonstrates the technical merit, feasibility, and cost effectiveness of combining commercially available components with an innovative approach to deliver a portable “talking tag” system for people with visual impairments. People with visual impairments remain challenged in orienting themselves as well as finding, identifying, sorting, and retrieving objects in vocational, educational, and independent living settings. Traditional methods include Braille labels or other tactile markings, which may be difficult to locate, and convey a limited amount of information. Talking bar code readers have been introduced, but present new challenges and will soon be obsolete as corporations and distribution channels have committed to change to an electronic ID “tag” known as Radio Frequency Identification (RFID) to reduce costs. The technology has drastically improved to facilitate this transition and RFID tags do not require line-of-sight orientation. RFID will soon become a ubiquitous technology which can allow the visually impaired to conveniently identify and orient themselves and identify a potentially limitless range of objects. To facilitate the transition, this system would support both bar codes and RFID tags. Specific Phase I objectives include: (1) determine end user requirements, (2) develop the prototype system, and (3) perform a usability analysis with actual users.

Small Business Innovative Research (SBIR), Phase I
Connecticut

Social Simentor: An Interactive Simulation e-Learning Tool Designed to Develop Interpersonal and Social Skills for Individuals with Cognitive Disabilities to Improve Hiring and Job Retention

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<http://www.atghome.com>

Principal Investigator: Lucy S. Baney
Public Contact: 203/966-8572; Fax: 203/966-0414

Project Number: H133S050078
Start Date: October 01, 2005
Length: 6 months
NIDRR Officer: Shelley Reeves
NIDRR Funding: FY 05 \$75,000

Abstract: This project develops Social Simentor™, an e-learning product offering interactive scenarios and feedback for social skills training in a penalty-free, non-judgmental environment. This project is an adaptation of Simentor® training software, originally developed to teach business interpersonal skills to adults. Researchers work with experts in social development to create Social Simentor™, an adaptation redesigned to meet universal needs. This prototype is an interactive application that employs social interactions to teach key social conventions, including appropriate responses, reacting to body language and facial expressions, along with the ability to ask for help in order to facilitate functioning in mainstream society. The commercial application of Social Simentor™ is significant as it can address a range of inappropriate social skills without direct adult facilitation.

Small Business Innovative Research (SBIR), Phase I
Illinois

Development of an Authoring Tool that Promotes Accessibility

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Principal Investigator: Michael A. Scott 217/698-3535, ext. 207

Public Contact: Laurie King 217/698-3535, ext. 209; Fax: 217/698-3593

Project Number: H133S050060

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 05 \$75,000

Abstract: This project explores the development of an “accessibility-first” authoring tool that actively supports non-technical authors in the creation of accessible electronic documents, and thereby promotes access to information in educational, employment, and community settings. Phase I activities test two underlying hypotheses: (1) Existing authoring tools do not adequately support “typical” authors in producing accessible documents, and (2) an authoring tool designed to intentionally promote accessible design principles will significantly improve the likelihood that typical authors will produce accessible documents. The project uses a combination of user tests and expert evaluations. A weighted scoring metric, based on practical application of leading accessibility standards, is used to compare the functional accessibility of documents created by each tool in typical-use and best-case scenarios. A prototype-authoring tool designed with an accessibility-oriented authoring interface and integrated accessibility supports is tested and compared to existing tools.

Small Business Innovative Research (SBIR), Phase I
Massachusetts

Proximity Sensing Textile as a Wearable Aid to Orientation and Mobility for Individuals with Visual Impairment

Science, Math & Engineering, Inc.
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Billerica, MA 01821-3934
burns@aerodyne.com

Principal Investigator: Michael L. Burns, PhD

Public Contact: 978/663-9500, ext. 282; Fax: 978/663-4918

Project Number: H133S050133

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 05 \$75,000

Abstract: This project initiates development of Proximity Sensing Textile as a smart textile array of infrared sensors embedded in conventional clothing that detects and reports hazards, such as drop-offs, overhangs, and jutting objects, to the wearer. Proximity Sensing Textile is a wearable wayfinding electronic travel mobility aid that preserves the comfort, appearance, and dignity of everyday apparel. The clothing supplies hazard avoidance cues to the wearer that complement orientation, mobility, and navigation information accessible to the wearer from wayfinding systems, be they infrared, GPS, or radio technology based. Development of the infrared technology based textile begins within the conceptual testbed of Talking Signs®, a remote infrared audible signage system that transmits orientation information to individuals with visual impairments. The SBIR Phase I effort produces a textile that receives infrared transmission from a simulant Talking Signs environment and supplies the wearer with cues that assist orientation, mobility and navigation. The SBIR Phase II effort further advances Phase I developments by producing a textile that actively interrogates the immediate surroundings of the wearer for hazards and reports them through cues designed into the clothing. The empirical research base for the Phase I project combines smart textile research pioneered by Science, Math & Engineering, Inc. with NIDRR research on Talking Signs. The Phase I project benefits from collaboration with the Orientation and Mobility Department of the Massachusetts Commission for the Blind and the primary co-developer of Talking Signs.

Small Business Innovative Research (SBIR), Phase I
Massachusetts

A Voice-Enabled Discussion Forum for the Disabled

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Principal Investigator: Luvai F. Motiwalla, PhD

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Project Number: H133S050061

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 05 \$74,987

Abstract: Online discussion forums are often considered good surrogates for classroom interaction. While online discussion forums are relatively easy to use for people with good visual and motor skills, they are complicated for people with visual disabilities or motor skill disabilities that limit keyboard and mouse use. Speech or voice recognition technology such as text-to-speech technology and interactive voice response technology has the potential of overcoming these user interface deficiencies. This project's goal is to develop Web access technology, through a customized speech recognition application and related systems, which promotes access for people with disabilities to discussion forums in the educational environment. A voice-enabled discussion forum application for students with disabilities integrates commercially available speech engine software, the Nuance Voice Platform™, with another commercially available online discussion forum, vBulletin™.

Small Business Innovative Research (SBIR), Phase I
Minnesota

A System for Indoor Navigation to Assist the Visually Impaired

Koronis Biomedical Technologies Corporation
16077 Baywood Lane
Eden Prairie, MN 55346-2409

Principal Investigator: Patrick Lichter 612/730-1091

Project Number: H133S050044

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 05 \$75,000

Abstract: The objective of this phase I project is to establish the feasibility of creating a small, low-cost input device that provides position and orientation information suitable for an indoor personal navigation device. This system contains two types of components: a body worn navigation device and a set of communication/location nodes. The body worn navigation device wirelessly interfaces to the communication/location nodes obtaining current location and navigation information. The communication system consists of coordinate reference nodes and a base-station node. These nodes are placed around the building's perimeter. They enable the system to locate the position of the body worn navigation device and serve as data repeaters. This new technology has the capability to track locations inside buildings without any special building infrastructure.

Small Business Innovative Research (SBIR), Phase I
Minnesota

Thermal Imaging as an Aid for the Blind

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ghavey@ame-corp.com

Principal Investigator: Gary Havey

Public Contact: 763/463-4814, 104

Project Number: H133S050093

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 05 \$75,000

Abstract: The ability of a person to interact socially is an important factor for integration and independence in educational settings, the workplace, and recreational activities. A blind person or an individual with significant visual impairments must rely solely on verbal or other audio cues to identify the locations of people and group activities. Groups of several people in a classroom or meeting setting are difficult to track dynamically. At social events such as parties, spectator sports, and stage presentations the ability to sense individual activities is important to full participation. The simple task of finding a seat in a crowded school cafeteria or auditorium can be difficult for a blind person to do independently. This project develops a device to allow a blind person or individual with significant vision impairment to sense the location and movements of people in the immediate area. This device utilizes a new, low cost, and miniature thermal imaging sensor technology to detect the relative warmth of people and present the information to the user via a haptic, touch sensitive, interface. This greatly simplifies the problem of quickly identifying people in a scene. The image scene is sensed as a two-dimensional picture composed of pixels. Each pixel represents the temperature of the corresponding optical target. A simple thermal threshold can be set to identify pixels in the range of human body temperature.

Small Business Innovative Research (SBIR), Phase I
Minnesota

Powered Device Mounting and Positioning Technology for People with Disabilities

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<http://www.blueskydesigns.us>

Principal Investigator: Dianne Goodwin

Public Contact: 651/603-0828; Fax: 651/917-0137

Project Number: H133S050122

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 05 \$74,996

Abstract: This project results in a powered device mounting and positioning system which enables individuals with severe physical limitations to reposition devices independently from a bed, wheelchair, or workstation via switch, joystick, or voice input. The design expands on a low effort positioning system. Where the low effort system has internal mechanisms, which lock and release the joints, modules replace them to convert it to a powered system, with motor and gear assemblies moving a device from one position to another. A programmable controller allows customization of the system, coordinating arm movements to reposition the device to custom-chosen positions. Powered tilt and height adjustment modules are in development. The system design is extremely modular, with an a la carte selection of components resulting in a commercially available “custom” mounting system. A person can choose from powered, low effort, or friction-based positioning mechanisms for the arm and tilt components. Single or dual arm assemblies may be built, and tilt and height adjustment modules are optional. This technology provides independent access to electronic devices, work surfaces, trays, books, food, drinks, and more for individuals with very significant limitations.

Small Business Innovative Research (SBIR), Phase I
New York

Expanding The DAISY-NISO Standard for Digital Talking Books to Include Interactive Talking Tactile Illustrations

Touch Graphics
330 West 38th Street, Suite 1204
New York, NY 10018
sl@touchgraphics.com
<http://www.touchgraphics.com>

Principal Investigator: Steven Landau
Public Contact: 212/375-6341; Fax: 646/452-4211

Project Number: H133S050072
Start Date: October 01, 2005
Length: 6 months
NIDRR Officer: Edna Johnson
NIDRR Funding: FY 05 \$74,919

Abstract: This project studies the feasibility of incorporating interactive talking tactile illustrations in digital talking books that have been carried out in conformance with the DAISY/NISO specification, for use by blind and low vision readers. The project adapts an existing Braille book that includes tactile graphic illustrations to the proposed new format, in which specially prepared plastic sheets that include raised-line and textured illustrations are placed onto a touch-sensitive computer device known as the Talking Tactile Tablet. Readers navigate the text and, at appropriate moments, explore relevant illustrations by touching them, then press on various parts to hear appropriate audio descriptions of the parts of the image that they pressed. Blind and low vision participants are asked to read a traditional Braille book, and then an interactive audio-tactile version of the same book; researchers then compare a number of measures, including comprehension, retention, and reader satisfaction, to determine whether the proposed approach merits further investigation.

Small Business Innovative Research (SBIR), Phase I
New York

Web-enabled Creation and Distribution of Audio Tactile Maps

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Principal Investigator: Steven Landau
Public Contact: 212/375-6341; Fax: 646/452-4211

Project Number: H133S050117

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 05 \$74,941

Abstract: This project develops a new system called the TMAP Reader. TMAP, developed by the Smith Kettlewell Eye Research Institute, is a website where a person who is blind or has visual impairments can enter any address or intersection in the US; the remote server computer generates a file containing information needed to produce a tactile map of the place in question and sends it back to the user who can then output it to a Braille embosser. The TMAP system, which is free to the user, is of potentially huge significance to a person with a print disability who desires to learn about a new neighborhood in conjunction with orientation and mobility training, or simply in advance of independent travel in a new place. Touch Graphics, Inc. has developed a Talking Tactile Tablet to be used in conjunction with maps created by the TMAP website to allow users to learn place names by pressing on tactile features on the map surface to cause associated information to be spoken aloud. This simple addition to the TMAP concept makes it possible for people of all skill levels to use these maps, including those who cannot see well enough to use print maps, but who lack Braille literacy skills that are traditionally required to benefit meaningfully from tactile maps. Furthermore, with the addition of a refreshable Braille display, deaf-blind individuals could also access these materials, providing them with crucial information about the world around them.

Small Business Innovative Research (SBIR), Phase I
New York

Diabetes Communications for the Disabled

Med Graph, Inc.
53 Glenside Way
Rochester, NY 14612

Principal Investigator: Ed Schlueter 585/453-9437

Project Number: H133S050011

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 05 \$74,600

Abstract: This project demonstrates the feasibility of using a web-enabled, interactive telecommunications system to collect, interpret, and communicate diabetic monitoring information for people with disabilities. The system is also designed to assist in reducing secondary conditions for people with diabetes through improved monitoring compliance. The Life Improvement Portal System incorporates: (1) collection and correlation of relevant health behaviors, (2) “transparent” automated data collection, (3) incorporation of subjective data, (4) use of ordinary telephone system (rather than PCs or PDAs), (5) visual summation of relevant data, and (6) an interactive communications system. This project works in conjunction with the University of Buffalo Rehabilitation Engineering Research Center (RERC), the Diabetes-Endocrinology Center of Western New York (DECWNY), and the University of Rochester Center for Future Health (URMC/CFH).

Small Business Innovative Research (SBIR), Phase I
North Carolina

Mainstreaming Web Accessibility: Making it Cost-Effective, User-friendly, and Attractive to Non-Technical Audiences

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Raleigh, NC 27617
info@websitemojo.com

Principal Investigator: Neesha Mirchandani

Public Contact: 919/696-4531; Fax: 914/470-9563

Project Number: H133S050170

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 05 \$75,000

Abstract: This project develops a product that improves web accessibility and makes it cost-effective and attractive to non-technical audiences. Universal by Design tests and evaluates the usefulness and effectiveness of the resulting prototype, eliciting key issues including, but not restricted to, key user interface, technical features, and functionality.

Small Business Innovative Research (SBIR), Phase I
Texas

**Study on Feasibility of a Design for the Development of a Web-based
Audit, Certification, and Remediation System for Accessibility of
Websites**

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Austin, TX 78759
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<http://www.perceptivesciences.com>

Principal Investigator: Kelly Terry
Public Contact: 866/987-2253; Fax: 512/474-0005

Project Number: H133S050146
Start Date: October 01, 2005
Length: 6 months
NIDRR Officer: Carol Cohen
NIDRR Funding: FY 05 \$75,000

Abstract: This project researches and designs a comprehensive Web-based audit, certification, and remediation system for accessibility of Web sites. In this Phase I project, research is focused on developing a regional pilot program to determine feasibility. The expected result is a legally defensible audit procedure, delivery capability, and related “trust mark” that would objectively determine compliance with the US Federal Government’s “Section 508” accessibility requirements, as well as other critical accessibility standards addressing a range of disabilities, something that is not currently available from any other known source. As with a financial audit, the accessibility audit will increase public confidence that Web sites that pass the audit procedure and display a related “trust mark” are in fact accessible by people with disabilities.

Small Business Innovative Research (SBIR), Phase I
Texas

Increasing Mobility Through Advanced Power Sources for Assisted Mobility Devices

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Principal Investigator: Jeremy Steinshnider, PhD
Public Contact: 979/693-0017; Fax: 979/694-8536

Project Number: H133S050028
Start Date: October 01, 2005
Length: 6 months
NIDRR Officer: Thomas Corfman
NIDRR Funding: FY 05 \$75,000

Abstract: This project develops a hybrid power system based on a modular fuel cell design. With their higher energy densities, fuel cells have many advantages over batteries as a power system such as: longer range, higher power, lighter weight, faster recharge, no special charging/discharging schedules, and lower life cycle cost. This design is especially suited for use in wheelchairs and scooters because of its size, ease of maintenance, and safety. This research also has potential for automotive, aerospace, telecommunications, and military applications.

Small Business Innovative Research (SBIR), Phase I
Virginia

Learner-Controlled Beginning Sign Language Instruction for Children

Ready! Set! Sign! ! LLC
4319 South 36th Street
Arlington, VA 22206-1809
contact_us@readysign.com
<http://www.readysign.com>

Principal Investigator: Daniel D. Burch, PhD

Public Contact: Martin Noretsky, PhD 703/820-5730; Fax: 703/820-0022

Project Number: H133S050035

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 05 \$75,000

Abstract: This purpose of this project is to design a learner-controlled learning environment in which hearing children can acquire sign language skills to communicate with their deaf and hard-of-hearing classmates for whom sign language is their primary means of communication. Ready! Set! Sign!! (RSS) is an SBIR-funded sign language instructional product, effective with adults and youth in their late teens, its original target population. However, to be effective with young children based on principles of constructivist learning theory, RSS needs to become much more learner-centered and learner-controlled. Educational practices that follow from this constructivist focus are designed to facilitate children's learning by nurturing their own active cognitive abilities. To accomplish this end, a supportive environment, one in which learners can create their own ideas, must be provided through the provision within RSS of a resource-rich, activity-based curriculum for learning.

Small Business Innovative Research (SBIR), Phase II
Arizona

Development of Collapsible Folding Manual Wheelchair - Phase II

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Mesa, AZ 85202
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<http://www.3rivers.com>

Principal Investigator: Chris Willems

Public Contact: David Boninger 480/833-1829; Fax: 480/833-1837

Project Number: H133S030016

Start Date: October 01, 2003

Length: 24 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 03 \$247,048; FY 04 \$252,848; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: In the first phase, this project designed, built, and conducted bench-top testing of a compact, forward-folding, ultralight manual wheelchair with an innovative design that incorporates “swing-down” access wheels for navigation in confined areas. This facilitates access to narrow environs such as those encountered in compact dwellings, offices, restrooms, and transportation settings. When using the access wheels, the wheelchair also fits down the aisle of airplanes and collapses to be stowed in the overhead compartment. The prototype has an adjustable axle, adjustable backrest and seat angle, and a folding design that acts like a rigid frame. Testing of the prototype confirmed that it met or exceeded ANSI/RESNA standards, and it performed equivalently or better than other comparable ultralight manual wheelchairs on those standards. In the second phase, the project: (1) continues to make design improvements to further maximize functionality and ease of use, (2) verifies that the new design meets ANSI/RESNA standards, (3) has wheelchair users evaluate the prototype after use in an Activities of Daily Living Course, and (4) has users take the chair home for an extended trial-use period that allows for an in-depth evaluation of the prototype wheelchair and allows users to compare the prototype with their personal wheelchair on a wide variety of dimensions.

Small Business Innovative Research (SBIR), Phase II
Arizona

Development of a Lightweight Adjustable, Modular Pediatric Wheelchair

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chris@3rivers.com

Principal Investigator: Chris Willems 480/833-2541

Public Contact: David Boninger 480/833-1829; Fax: 480/833-1837

Project Number: H133S050134

Start Date: October 01, 2005

Length: 24 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 05 \$287,208

Abstract: Pediatric wheelchair users experience rapid physical growth and rapidly changing cognitive and functional skills that create unique needs that are underserved by currently available pediatric wheelchairs. In Phase I, the project designed and constructed a prototype tilt-in-space wheelchair called the PALM (pediatric, adjustable, lightweight, and modular) that is specifically designed to meet pediatric needs. Phase II project goals include: (1) To further refine the design of the PALM, (2) verify functionality of the prototype through end-user testing and evaluation on an Activities of Daily Living Course, and (3) conduct two-week take-home trials that allow for in-depth evaluation of the PALM in the natural environment of the end-user and allow parents and children to compare the PALM with the child's own wheelchair on a wide variety of dimensions. The final result is to create a tilt-in-space pediatric wheelchair that can meet the unique needs of a growing child, can provide all the desired features of an optimal daily-use pediatric wheelchair, and can also be manufactured at low cost so that it can be made widely available to the pediatric populations in the US and international markets.i:

Small Business Innovative Research (SBIR), Phase II
Arkansas

Absolute Head Tracking for Accessing Assistive Devices

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tjakobs@invotek.org
<http://www.invotek.org>

Principal Investigator: Thomas Jakobs

Public Contact: 479/632-4166; Fax: 479/632-6457

Project Number: H133S030165

Start Date: October 01, 2003

Length: 24 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 03 \$267,458; FY 04 \$232,542; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This research develops a new absolute head-tracking strategy for people who require an assistive device to manipulate a computer cursor. This absolute system links the position of a computer cursor to the direction in which the user's head is pointing, and stays aligned with the user's head regardless of repositioning movements. This system enables a user to guide a cursor aiming his or her head at a desired target location, simplifying the task of learning and utilizing such a system. The design takes advantage of a low-cost infrared camera, and requires only three passive sensors to be attached to the user.

Small Business Innovative Research (SBIR), Phase II
California

Automated Closed Captioning

Automatic Sync Technologies
4460 Quicksilver Court
Hayward, CA 94542
kevin@automaticsync.com
<http://www.automaticsync.com/caption>

Principal Investigator: Kevin Erler, PhD
Public Contact: 510/582-3437; Fax: 510/582-3437

Project Number: H133S040129

Start Date: October 01, 2004

Length: 24 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 04 \$249,971; FY 05 \$249,789

Abstract: The goal of this project is to produce an automated captioning system that provides significant advantages in cost, turnaround time, and convenience. The project applies automatic speech processing techniques to the automation of captioning. The limitations of speech recognition as commonly found in commercial applications, which must rely on pre-defined grammars that must try to anticipate anything that can be said, or on training to individual speakers, are circumvented using program transcripts to focus on alignment and segmentation in closed captioning display. This tightly constrains the problem domain, and avoids high error rates associated with fully automated recognition. The Phase I prototype showed the feasibility of automating captioning using this approach. In Phase II, the project completes research and development and incorporates enhancements based on trial feedback, including more sophisticated acoustic models robust to real-world data, an improved user interface, performance upgrades based on new user data, and search and indexing capabilities.

Small Business Innovative Research (SBIR), Phase II
Colorado

**Job Quest, an Internet-based, Self-directed Career Exploration and
Assessment System For Students and Adults with Significant
Intellectual**

AbleLink Technologies, Inc.
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<http://www.ablelinktech.com>

Principal Investigator: Daniel K. Davies

Public Contact: 719/592-0347; Fax: 719/592-0348

Project Number: H133S040137

Start Date: October 01, 2004

Length: 24 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 04 \$250,000; FY 05 \$250,000

Abstract: This project develops and evaluates Job Quest, an Internet-based, self-directed multimedia career exploration and assessment system for improved job placement of students and adults with mental retardation. The Job Quest system: (1) facilitates self-directed exploration of jobs and job tasks via a media-enriched computer environment using digital pictures, audio, and video; (2) enables job developers to identify jobs that match the individual's job interests through automated searching of the Department of Labor's O*NET jobs database; and (3) provides the ability for job developers and employment specialists to customize the content of the system to represent specific jobs which

Multimedia Literacy Software for Deaf or Hard-of-Hearing, and Visual Learners

Vcom3D, Inc.
3452 Lake Lynda Drive, Suite 260
Orlando, FL 32817
eds@vcom3d.com
<http://www.vcom3d.com>

Principal Investigator: Edward Sims 407/737-7370

Public Contact: Fax: 407/737-6821

Project Number: H133S050137

Start Date: October 01, 2005

Length: 24 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 05 \$249,436

Abstract: Persons who are Deaf or hard of hearing (D/HH) have difficulty learning to read and write proficiently. Over the last decade, several software screen readers and literacy tools have been developed for persons with blindness and learning disabilities. However, to date, none of these tools has incorporated features and functions that specifically target the needs of the (D/HH) population. This project is developing a fully functional Multimedia Literacy Software (MLSW) program that addresses the needs of D/HH, as well as other students, and identifies the best uses of the MLSW in the instruction of reading skills. The creation of a multimedia module presents a highly detailed representation of an animated human that can: Speak selected words and text segments, while demonstrating correct mouth movement to form speech sounds; automatically translate English text into Signed English, which may be viewed with or without accompanying speech; and provide ASL or Signed English definitions of selected English words. The prototype MLSW and the supporting instructional materials serve as the basis for a commercial software product that may be stand-alone or licensed and bundled with currently available and evolving assistive reading and writing software.

Small Business Innovative Research (SBIR), Phase II
Maryland

**StoryTiles: Programmable Manipulatives to Improve Language,
Sequencing, Theory of Mind, and Play Skills in Children with Autism**

Intelligent Automation, Inc.
15400 Calhoun Drive
Rockville, MD 20855
smayhew@i-a-i.com
<http://www.i-a-i.com>

Principal Investigator: Shannon Beltz Mayhew
Public Contact: 301/294-5230; Fax: 301/294-5201

Project Number: H133S040132

Start Date: October 01, 2004

Length: 24 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 04 \$250,000; FY 05 \$250,000

Abstract: This project develops and field tests StoryTiles, a device with programmable manipulatives that foster language, sequencing, theory of mind, and play skills among children with autism. Children can use this device to experiment with storytelling, and in doing so, work with sequencing, creative play, and language structures as they manipulate programmable, tangible objects. In this effort, IAI conducts a study using a prototype in a preschool classroom to determine ways StoryTiles can be used for special needs inclusion activities within a mainstream classroom. Software and device designs are improved, and researchers build 15 Phase II StoryTiles devices with accompanying story publishing software. In addition, IAI works with Laureate Learning, Inc. to integrate their language learning software with StoryTiles. IAI also conducts focus group with therapists, teachers, and parents of children with autism to produce material for a StoryTiles instructional guide. Finally, IAI conducts field tests with children with autism to determine the educational effectiveness of the Phase II device.

Small Business Innovative Research (SBIR), Phase II
Maryland

Delivery of Cost-effective, Real-time, Remote Transcription Services

Institute for Disabilities Research and Training, Inc.
11323 Amherst Avenue
Wheaton, MD 20902
carl@idrt.com
<http://www.idrt.com>

Principal Investigator: Carl J. Jensema, PhD 301/942-4326

Public Contact: 301/942-4326; Fax: 301/942-4439

Project Number: H133S050129

Start Date: October 01, 2005

Length: 24 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 05 \$249,999

Abstract: This project focuses on establishing a low-cost, school-operated, remote real-time transcription service for students with disabilities using speech recognition technology, off-the-shelf equipment, and commonly available software. Phase I demonstrated the feasibility of this concept. In Phase II, the concept is expanded and refined through a transcription service for students with disabilities. The developed training materials are used to develop a commercial product that allows other school systems to set up transcription services for students with disabilities.

Small Business Innovative Research (SBIR), Phase II
Massachusetts

Natural Language Speech Access of Computers by the Disabled

Amazability, Inc.
14 Lorraine Circle
Waban, MA 02468
amazability@rcn.com
<http://www.amazability.com>

Principal Investigator: Kenneth R. Ingham, PhD

Public Contact: 617/795-0134

Project Number: H133S030005

Start Date: October 01, 2003

Length: 24 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 03 \$219,595; FY 04 \$249,564; FY 05 \$0 (No-cost extension through 3/31/2006)

Abstract: This project implements a natural language processor to facilitate complex interactions and to make the overall system readily usable by the computer non-literate or non-technical. The Phase I work confirmed that a speech-based set of complex applications, using automatic speech recognition for command and control, could be effectively used by people with visual impairments. Mechanisms were implemented and tested that allowed users to avoid becoming lost owing to any form of interruption. The work showed that, while simple commands could be successfully recognized, longer complex commands were more difficult because users tended to lose their place while assembling their precise syntax. Therefore, the design and implementation of a natural language processor to support the issuing of complex instructions was indicated. In this phase, the automatic speech recognition subsystem is improved in accordance with the results of the Phase I work and its vocabularies increased to approximately 120,000 words composed of dynamically variable 50,000 word language models. The resulting large vocabulary recognition system, supporting natural language interaction is evaluated through focus group and human subject testing. The Adept 1, equipped with a natural language processor, can serve as a universal reading system for multipart documents (digital, analog, hypertext, etc.). As an integrated voice-based system, it can also support web access, email, and word processing, thereby becoming a universal access tool for reading and writing. By providing very large vocabulary automatic speech recognition and natural language processing of commands, the technical nature of the computer system is minimized.

Development of an Authoring Tool to Allow Teachers to Create Audio-Tactile Materials for Blind and Visually Impaired Students

Touch Graphics
330 West 38 Street, Suite 1204
New York, NY 10018
sl@touchgraphics.com
<http://www.touchgraphics.com>

Principal Investigator: Steven Landau
Public Contact: 212/375-6341; Fax: 646/452-4211

Project Number: H133S030036

Start Date: October 01, 2003

Length: 24 months

NIDRR Officer: Delores Watkins

NIDRR Funding: FY 03 \$232,243; FY 04 \$242,006; FY 05 \$0 (No-cost extension through 12/31/2005)

Abstract: This project focuses on the design, implementation, and evaluation of an authoring tool that allows teachers to create customized audio-tactile educational materials for students who are blind, or have other visual or print disabilities. Teachers create raised-line and textured graphic imagery on pre-made templates sheets, place these sheets on a touch-sensitive device connected to a computer, and program the graphic with descriptive audio "tags." Later, a student interacts with the system by pressing regions and shapes on the tactile surface to instigate appropriate audio responses. The goals of this project are: (1) creation of a market-ready suite of software applications for creating, reading, and transferring teacher-produced audio-tactile courseware; (2) a software sharing website to encourage wide-scale adoption of the authoring tool product and to proliferate the teacher-generated materials; (3) findings on the potential for adapting a variety of methods for producing tactile graphic images to the authoring tool system; (4) a complete braille tutorial application as a demonstration of the system's full capabilities, ready for distribution via Internet; (5) results of a large scale evaluation of teacher-produced audio-tactile materials in the United States and in selected foreign countries; and (6) investigation of the potential for the authoring tool system to be adapted for use in the transcription of entire illustrated textbooks and full-scale curricula.

Small Business Innovative Research (SBIR), Phase II
New York

**Visual – Spatial Math Problem Solving Strategy Intervention on a
Handheld Wireless Device for Math Disabilities in Inclusive Classrooms**

Learnimation, LLC
53 West 90th Street #4
New York, NY 10024
<http://www.learnimation.com>

Principal Investigator: Sarah Manning 212/496-7536

Project Number: H133S050167

Start Date: October 01, 2005

Length: 24 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 05 \$251,261

Abstract: This project builds and evaluates a universally designed, handheld/wireless educational software intervention that trains students with learning disabilities (LD) and their teachers to use a metacognitive strategy for translating mathematical word problems into visual-spatial schematic models. This intervention is based on the prototype created in Phase I. Phase I research suggests that a universally designed, research-based, handheld-based, visual-spatial metacognitive strategy technique offers great promise as a cost-effective mathematics intervention for students with LD. The resulting commercial software product will improve the capacity for mainstream teachers to assist students with LD in reaching their full potential in mathematics.

Small Business Innovative Research (SBIR), Phase II
North Dakota

Disability Access

Spirit Lake Consulting, Inc
P.O. Box 663; 314 Circle Drive
Fort Totten, ND 58335
annmaria@spiritlakeconsulting.com
<http://www.spiritlakeconsulting.com>

Principal Investigator: AnnMaria Rousey DeMars 310/717-9089

Public Contact: 310/717-9089

Project Number: H133S050165

Start Date: October 01, 2005

Length: 24 months

NIDRR Officer: Carol Cohen

NIDRR Funding: FY 05 \$237,315

Abstract: Phase I of this project combined software and on-site training program for persons with disabilities and their families who lack the usual prerequisites for success in computer-based learning. The Phase II project is expanding the prototype of computer-based instruction created in Phase I into an empirically validated commercial product. The project's technical objectives are: (1) The development of a unique virtual school house model to meet the identified needs of individuals with disabilities and their families living in remote, disadvantaged communities, and (2) the empirical assessment of the impact of training using this model for different demographic groups and under different training conditions. Testing is conducted on reservations serving Sioux, Chippewa, and the Three Affiliated Tribes.

Small Business Innovative Research (SBIR), Phase II
Pennsylvania

Universal Access to Passenger Rail

Marshall Elevator Company
2015 Mary Street
Pittsburgh, PA 15203
Lvanroosmalen@marshallelevator.com

Principal Investigator: Linda van Roosmalen, PhD

Public Contact: Rob Jamison 412/431-1340

Project Number: H133S050136

Start Date: October 01, 2005

Length: 24 months

NIDRR Officer: Thomas Corfman

NIDRR Funding: FY 05 \$249,825

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 Innovative Research (SBIR), Phase II

Texas

Development of a Nemeth Math to Latex Backtranslator System

Logical Solutions Software
8200 Chambray Court
Plano, TX 75025
deepa_gopal@hotmail.com
<http://www.logicalsoft.net>

Principal Investigator: Deepa Gopal

Public Contact: 972/390-7329; Fax: 972/390-7329

Project Number: H133S050160

Start Date: October 01, 2005

Length: 24 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 05 \$249,500

Abstract: Phase II project objective is to extend and enhance the prototype developed in Phase I to obtain a reliable, robust, and complete software environment for backtranslating mathematical documents (containing mathematical expressions coded in Nemeth Math code as well as regular text coded in ASCII Grade 2 Braille) to Latex. This project is conducting research on: (1) automatic detection and recovery from errors in the Math document encountered during backtranslation; (2) automatic identification of parts of the documents that contain text, mathematics, and spatial arrangements respectively; and (3) allowance for hard copy input via Optical Braille Recognition. The system greatly facilitates students, scientists, and engineers with visual impairments to communicate with their sighted instructors and colleagues.

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

University of California, San Francisco
Department of Social and Behavioral Sciences
3333 California Street, Suite 455
San Francisco, CA 94118-0612
pas@ucsf.edu
<http://www.pascenter.org>

Principal Investigator: Charlene Harrington, PhD, RN 415/476-4030

Public Contact: 866/727-9577; 415/502-7190 (V); 415/502-5216 (TTY); Fax: 415/476-6552

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

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-ø: 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 provide guidance to the project.

Rehabilitation Research and Training Centers (RRTCs)
Florida

**Rehabilitation Research and Training Center for Children's Mental
Health**

University of South Florida
Florida Mental Health Institute
13301 Bruce B. Downs Boulevard MHC2335
Tampa, FL 33612-3807
kutash@fmhi.usf.edu
<http://rtckids.fmhi.usf.edu>

Principal Investigator: Robert Friedman, PhD 813/974-4640

Public Contact: Krista Kutash, PhD 813/974-4661 (V); Fax: 813/974-6257

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

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 Centers (RRTCs)
Illinois

**Rehabilitation Research and Training Center on Aging with
Developmental Disabilities**

University of Illinois at Chicago
Department of Disability and Human Development MC 626
College of Applied Health Sciences
1640 Roosevelt Road
Chicago, IL 60608-6904
rrtcamr@uic.edu
<http://www.uic.edu/orgs/rrtcamr>

Principal Investigator: Tamar Heller, PhD 312/413-1537

Public Contact: Alan Factor, Associate Director 800/996-8845 (V); 312/413-1510 (V); 312/413-0453 (TTY); Fax: 312/996-6942

Project Number: H133B031134

Start Date: October 01, 2003

Length: 60 months

NIDRR Officer: Margaret Campbell, PhD

NIDRR Funding: FY 03 \$750,000; FY 04 \$749,998; FY 05 \$750,000

Abstract: The mission of the RRTCADD is to have a sustained beneficial impact on the health and community inclusion of adults with intellectual and developmental disabilities (I/DD) as they age through a coordinated set of research, training, and dissemination activities. Major goals are: (1) improving health and function of adults with I/DD, (2) enhancing caregiving supports and transition planning among older caregivers and other family members, and (3) promoting aging and disability friendly environments that enable adults with I/DD to participate in community life. Each goal is addressed through coordinated and complementary sets of activities within the core areas. Projects promoting health and functioning include: examination of age-related changes, epidemiological surveys, research on health care utilization, and development of community-based health promotion interventions. To enhance caregiving supports and transition planning, RRTCADD research includes epidemiological surveys on family demographic and health characteristics, including families of minority backgrounds and families of persons with dual diagnoses of I/DD and psychiatric impairments; sibling roles and interventions in transition planning; and consumer direction in family support. Projects examining aging and disability-friendly environments include research to identify features of communities and residences that hinder and assist community integration as people with I/DD age, state policies regarding nursing home use, and dementia care in family homes and other community residences. Training and dissemination activities involve collaborations with national provider, professional, and consumer organizations to enhance skills and to promote progressive interventions and policies.

Rehabilitation Research and Training Centers (RRTCs)
Kansas

Rehabilitation Research and Training Center on Full Participation in Independent Living

The University of Kansas
Research and Training Center on Independent Living
1000 Sunnyside Avenue; Room 4089 Dole Center
Lawrence, KS 66045-7555
rtcfpil@ku.edu
<http://rtcfpil.org>

Principal Investigator: Glen W. White, PhD 785/864-4095

Public Contact: 785/864-4095 (V); 785/864-0706 (TTY); Fax: 785/864-5063

Project Number: H133B000500

Start Date: January 01, 2001

Length: 60 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 01 \$499,876; FY 02 \$661,864; FY 03 \$626,364; FY 04 \$499,876; FY 05 \$0
(No-cost extension through 12/31/2006)

Other Funding: FY 02 \$299,999 (NIDRR Dissemination & Utilization)

Abstract: Through research, training, and dissemination, this project makes available person-environment strategies that enable full participation in society by persons with disabilities from diverse cultures, varying socioeconomic strata, and emerging disability populations. This mission is implemented through multiple research and training activities that are influenced by independent living (IL) philosophy and values; for example, participatory action research is emphasized, in which consumers take an active role throughout the research process. The RRTC develops, tests, and uses measurement tools to investigate the interactional relationship between personal and environmental factors and their effects on full participation in IL by the designated populations. Based on the project's Analytical Research Framework, the four core areas of intervention development and testing include: (1) increasing the knowledge base about the emerging universe of disability, (2) community participation and wellness, (3) cultural IL accommodations, and (4) personal and systems advocacy.

Rehabilitation Research and Training Centers (RRTCs)
Massachusetts

**Rehabilitation Research and Training Center Recovery and Recovery
Oriented Psychiatric Rehabilitation for Persons with Long Term
Mental Illness**

Boston University
Center for Psychiatric Rehabilitation
940 Commonwealth Avenue West
Boston, MA 02215-1203
mfarkas@bu.edu; erogers@bu.edu
<http://www.bu.edu/cpr/research/rtc2004/>

Principal Investigator: Marianne Farkas, ScD; E. Sally Rogers, ScD 617/353-3549

Public Contact: E. Sally Rogers, ScD 617/353-3549; Fax: 617/353-7700

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

Abstract: This project focuses on the concepts and dimension 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, as well as 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 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)
Minnesota

Research and Training Center on Community Living (RTC/CL)

University of Minnesota
The Institute on Community Integration
204 Pattee Hall, 150 Pillsbury Drive, SE
Minneapolis, MN 55455
lakin001@umn.edu
<http://rtc.umn.edu>

Principal Investigator: Charlie Lakin, PhD 612/624-5005

Public Contact: Sheryl Larson, PhD 612/625-6024; Fax: 612/625-6619

Project Number: H133B031116

Start Date: October 01, 2003

Length: 60 months

NIDRR Officer: Dawn Carlson, PhD, MPH

NIDRR Funding: FY 03 \$750,000; FY 04 \$750,000; FY 05 \$750,000

Other Funding: FY 04 \$1,340,000 FY 04 \$300,000 (Administration on Developmental Disabilities), \$70,000 (Centers for Medicare and Medicaid Services), \$295,000 (NIDRR Field Initiated Projects), \$300,000 (Illinois Planning Council on Developmental Disabilities), \$25,000 (Centers for Disease Control and Prevention, Center on Birth Defects and Developmental Disabilities), \$300,000 (College of Direct Support web-based training program), \$30,000 (Partners in Community Supports), \$60,000 (University of Minnesota)

Abstract: The Center conducts research, training, technical assistance, and dissemination to enhance inclusion and self-determination of citizens with intellectual and developmental disabilities (ID/DD). The research program has six outcome areas: policy studies, database supports for full participation, self-determination and consumer-control, workforce development, and quality assessment and improvement systems. The research program within the priority areas includes: (1) research syntheses of the state of knowledge and practice; (2) secondary analyses of high quality, topically relevant national and state data sets; (3) case studies of best practices; (4) evaluation of demonstration efforts to improve policy and practice; (5) survey and interview studies of critical issues; and (6) group process studies with key constituencies. An integrated intramural training program addresses the development of skilled disability researchers and community service professionals. Outreach training programs provide training and technical assistance to agencies and individuals providing support to people with ID/DD, including members of their families. The College of Direct Support provides on-line interactive multi media training to thousands of direct support professionals across the US. Outreach programs include conferences and workshops for a wide variety of national, regional, and state audiences, a state-of-the-art conference, annual "Reinventing Quality" conference, and intensive technical assistance with community organizations, including advocacy and self-advocacy organizations. The Center disseminates practical information to targeted audiences through its internal publication program that includes: IMPACT, Policy Research Brief, DD Data Brief, and Frontline Initiative. It maintains high standards for scholarly productivity and publication through books, journal articles and technical reports. About 18,000 people visit Center websites each month for access to view publications or other information on best practices in person-centered services ("QualityMall.org"), national statistics on services and expenditures, the direct support workforce, and other contemporary topics.

Rehabilitation Research and Training Centers (RRTCs)
New York

**Rehabilitation Research and Training Center on Traumatic Brain
Injury Interventions**

Mount Sinai School of Medicine
Research and Training Center
One Gustave L. Levy Place, Box 1240
New York, NY 10029
wayne.gordon@mssm.edu
<http://www.mssm.edu/tbinet>

Principal Investigator: Wayne A. Gordon, PhD

Public Contact: 212/659-9372 (V); 212/241-8978 (TTY); Fax: 212/348-5901

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

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 PARTu:’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 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**

Portland State University
Regional Research Institute; School of Social Work
P.O. Box 751
Portland, OR 97207-0751
gordonL@pdx.edu
<http://www.rtc.pdx.edu>

Principal Investigator: Barbara Friesen, PhD 503/725-4166

Public Contact: Lyn Gordon, Associate Director for Training and Technical Assistance 503/725-4114; Fax: 503/725-4180

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

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) "Transforming Futures: Research on Expanding the Career Aspirations of Youth with Mental and Emotional Disorders," features a web-based intervention connecting youth with adult mentors, employed in a variety of fields, who have experienced mental illness; (3) "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 Promoting Community
Integration of Individuals with Psychiatric Disabilities**

University of Pennsylvania
Collaborative on Community Integration
3535 Market Street, 3rd Floor - CMHPSR
Philadelphia, PA 19104
pennrrtc@mail.med.upenn.edu
<http://www.upennrrtc.org>

Principal Investigator: Mark Salzer, PhD

Public Contact: Katy Kaplan 215/746-6713; Fax: 215/349-8715

Project Number: H133B031109

Start Date: October 01, 2003

Length: 60 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 03 \$749,212; FY 04 \$749,816; FY 05 \$749,803

Abstract: The goal of this Center is to insure that people 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. The Center's five year mission focuses on three core areas: (1) Factors Associated with Community Integration develops a coherent conceptual framework for community integration and identifies key factors, intervention models, and appropriate instrumentation and research methodologies; (2) Policies Associated with Community Integration identifies, develops, and assesses the effectiveness of a range of public policies and system strategies promoting community integration and engage key stakeholders in learning about and utilizing the Center's findings; and (3) Intervention Supports that Assist Community Integration identifies, develops, and assesses the effectiveness of support service interventions promoting community integration, and provides training, technical assistance, and dissemination based on those initiatives to change behaviors and practices of key stakeholders. This Center capitalizes upon the longstanding history of collaboration among three Philadelphia-based central partners: The University of Pennsylvania, the peer-operated Mental Health Association of Southeastern Pennsylvania, and The Matrix Center at Horizon House, Inc.

Rehabilitation Research and Training Centers (RRTCs)
Texas

**Rehabilitation and Training Center on Community Integration of
Persons with TBI**

The Institute for Rehabilitation and Research (TIRR)
Brain Injury Research Center
2455 South Braeswood
Houston, TX 77030
asander@bcm.tmc.edu; struchen@bcm.tmc.edu
<http://www.tbicomunity.org>

Principal Investigator: Angelle M. Sander, PhD; Margaret Struchen, PhD
Public Contact: 713/383-5644 (Sander); 713/383-5645 (Struchen)

Project Number: H133B031117

Start Date: November 01, 2003

Length: 60 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 03 \$799,960; FY 04 \$799,968; FY 05 \$799,936

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; assessment of employers' attitudes toward persons with TBI and a pilot educational intervention to reduce attitudinal barriers in the workplace; 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; and a state-of-the-science conference and book on community integration.

Disability and Rehabilitation Research Projects

Iowa

Asset Accumulation And Tax Policy Project

University of Iowa College of Law
Law, Health Policy, and Disability Center
100 Gilmore Hall
Iowa City, IA 52242
peter-blanck@uiowa.edu

<http://disability.law.uiowa.edu/lhpdc/projects/assetdevtaxpol.html>

Principal Investigator: Peter D. Blanck, PhD, JD 319/335-9043

Public Contact: Michael Morris, JD; James Schmeling, JD 319/335-9043; 202/521-2930 (Morris); 319/335-8458 (Schmeling); Fax: 319/335-9764

Project Number: H133A031732

Start Date: November 01, 2003

Length: 60 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 03 \$299,991; FY 04 \$299,991; FY 05 \$299,991

Abstract: This project develops and disseminates a new and comprehensive body of knowledge to multiple target audiences nationwide to improve the economic independence, social empowerment, and community integration of persons with disabilities. Researchers examine systematically the relationship between tax policy and asset accumulation for persons with disabilities, and resultant improvements in economic and community integration. The project investigates the impact of multiple intervention strategies—including financial education, matched savings accounts, expanded financial services, and increased use of state and Federal tax incentives for asset and community economic development—in six states and ten pilot demonstration sites nationwide on youth in transition and adults with disabilities. This project is a collaborative effort of The Law, Health Policy, and Disability Center at the University of Iowa College of Law, Southern New Hampshire University School of Community Economic Development, the National Federation of Community Development Credit Unions, the World Institute on Disability, and the National Cooperative Bank Development Corporation.

Disability and Rehabilitation Research Projects

Kansas

The Impact of Interventions on Self-Determination and Adult Outcomes

University of Kansas
Kansas University Center on Developmental Disabilities/Beach Center on Disability
1200 Sunnyside Avenue, Room 3136
Lawrence, KS 66045-7534
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<http://www.beachcenter.org>

Principal Investigator: Michael Wehmeyer, PhD (University of Kansas); Laurie Powers, PhD (Oregon Health Sciences University) 785/864-7605

Public Contact: 785/864-0723; Fax: 785/864-3458

Project Number: H133A031727

Start Date: October 01, 2003

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 03 \$299,313; FY 04 \$299,967; FY 05 \$299,616

Abstract: This project conducts three semi-longitudinal, national studies examining the impact of interventions to promote the self-determination of students with high incidence and low incidence disabilities, and students who are at-risk for less desirable adult outcomes on student self-determination, adult outcomes, and quality of life. In all three studies, participants receive instruction for several years (with annual measurements) and adult outcomes are measured during the next two years, post-high school. The first study focuses on students with learning disabilities, mild intellectual disabilities, and emotional/behavioral disorders. The second study focuses on students with moderate to severe intellectual disabilities, multiple disabilities, and severe autism. The third study focuses on students with disabilities from foster systems or juvenile justice systems. For the school-based studies of students with learning disabilities and mental retardation, participating school campuses are randomly assigned to treatment conditions. An alternate treatment-control group design ensures that each site obtains training in self-determination related supports, but one level of training does not involve direct instruction with students. Research follow-up in the first and second years post-high school for all study participants will yield information about the impact of services and instruction using self-determination and student involvement during high school and in transition services on the study sample. This investigation will provide a firm evidence base for student-directed learning and self-determination in school and community resource settings.

Disability and Rehabilitation Research Projects
Oregon

Identification and Reporting of Violence By People with Disabilities

Oregon Health and Science University
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3181 SW Sam Jackson Park Road
Portland, OR 97201
powersl@pdx.edu; oschwald@pdx.edu
<http://selfdeterminationohsu.org>

Principal Investigator: Mary Ann Curry 503/494-8655

Public Contact: Mary Oschwald, PhD 503/725-9602; Fax: 503/725-4180

Project Number: H133A031724

Start Date: December 01, 2003

Length: 60 months

NIDRR Officer: Joyce Y. Caldwell

NIDRR Funding: FY 03 \$300,000; FY 04 \$300,000; FY 05 \$300,000

Abstract: The purpose of this project is to reduce the prevalence of violence against people with disabilities. People with disabilities are at substantially higher risk for violence, abuse, and criminal victimization than the general population. The identification and reporting of violence typically involves individuals' self-identifying as victims and accessing safety and reporting information and resources, as well as the availability of sensitive and accessible reporting methods. The goal of this project is to improve the identification, reporting, and response to violence against persons with disabilities living in the community by: (1) validating the efficacy of a culturally sensitive approach to promote violence screening, safety behaviors, disclosure and reporting by women with disabilities; (2) increasing knowledge of the extent to which current crime reporting methods incorporate disability status and accommodation information, and the barriers faced by police jurisdictions across the nation in documenting and facilitating crime reporting by persons with disabilities; and (3) identifying practices and policies that promotes and support violence disclosure and reporting by individuals with disabilities.

Field Initiated Projects (FIPs)

Arizona

The Texas Trilingual Initiative: Providing Effective Communication for Persons who are Deaf or Hard of Hearing and Hispanic

University of Arizona
National Center for Interpretation
MLB #67, Room 345
Tucson, AZ 85721
pgatto@email.arizona.edu
<http://nci.arizona.edu>

Principal Investigator: Roseann Gonzalez, PhD; Paul Gatto, CPhil

Public Contact: Paul Gatto, CPhil 520/621-3615; Fax: 520/624-8130

Project Number: H133G040115

Start Date: November 01, 2004

Length: 36 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 04 \$149,957; FY 05 \$149,957

Abstract: The Texas Trilingual Initiative is an innovative and efficient Trilingual Interpreter Certification Program that addresses an under-recognized “trilingual” language barrier (American Sign Language (ASL), English, and Spanish) that affects deaf and hard of hearing Hispanics. This barrier presents access problems for deaf and hard of hearing Hispanics, who may use only ASL but must communicate with both English and Spanish speakers, often at the same time. This trilingual language barrier often affects Hispanic deaf and hard of hearing children who learn ASL in school, but whose parents speak Spanish and whose service providers speak English. Providing access to critical educational, health, legal, and social services requires interpreters who can competently bridge these three differing cultures and languages. This certification program—to be conducted in partnership with the Texas Department of Assistive and Rehabilitative Services - Division for Deaf and Hard of Hearing Services — includes the development, piloting, and validation of beginning and advanced level trilingual interpreting certification tests to assess interpreting capability from Spanish/English to ASL and ASL to Spanish/English.

Field Initiated Projects (FIPs)
California

Curriculum on Abuse Prevention Education (CAPE)

World Institute on Disability
510 16th Street, Suite 100
Oakland, CA 94612-1502
marsax@wid.org
<http://www.wid.org>

Principal Investigator: Marsha Saxton, PhD
Public Contact: 510/251-4349; Fax: 510/763-4109

Project Number: H133G050321

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 05 \$149,670

Abstract: The goal of this project is to reduce the incidence of abuse of people with disabilities receiving personal assistance in the community, through educating service providers and people with disabilities about abuse awareness and abuse prevention strategies. The CAPE curriculum is comprised of one volume with two sections: (1) a curriculum on abuse prevention for providers, and (2) a workbook for consumers. The curriculum explores fundamental issues of abuse, best-practices training approaches, and personal narratives of successful abuse interventions. The workbook offers highly motivational learning resources relevant to daily life, such as learning games, cartoons, and empowering quotes from people with disabilities. This mixed-media volume also includes one- or two-page modules for providers to easily adapt the learning activities for use at disability community events, rehabilitation sessions, and independent living training.

Field Initiated Projects (FIPs)

California

Total Community Immersion Model for Postsecondary-Age Students with Significant Disabilities: An Outcome-Based Approach to Transition

San Francisco State University
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ncerto@sfsu.edu

Principal Investigator: Nicholas Certo, PhD

Public Contact: 415/338-2503; Fax: 415/338-0566

Project Number: H133G020184

Start Date: October 01, 2002

Length: 36 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 02 \$150,000; FY 03 \$150,000; FY 04 \$150,000; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This project develops, implements, and evaluates a Total Community Immersion Model for transitioning students who are 19 and 20 years old from several metropolitan school districts in San Francisco Bay Area. The Oakland Unified School District, and other Bay Area School Districts in collaboration with San Francisco State University, have spent the last three years establishing the Transition Service Integration Model, which has produced a seamless transition to adulthood by integrating services with adult service providers functioning as receiving agencies and the rehabilitation and developmental disability systems at the point of transition. However, that model focuses exclusively on the needs of pending graduates, that is, 21-year-old students during their last year of school, and could benefit from receiving students with well-developed preferences for community living and employment. A new model, developed through this research, eliminates the use of a fixed school site and develops initial work and non-work activities that facilitate inclusion into each individual's neighborhood, as well as other communities in Oakland and the metropolitan Bay Area.

Field Initiated Projects (FIPs)

Florida

RAICES/Promotoras

University of South Florida
Louis de la Parte Florida Mental Health Institute
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callejas@fmhi.usf.edu
<http://cfs.fmhi.usf.edu/cfsnews/2003news/RAICES.htm>

Principal Investigator: Mario Hernandez, PhD 813/974-4651

Public Contact: Linda M. Callejas 813/974-4651; Fax: 813/974-7563

Project Number: H133G030014

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Joyce Y. Caldwell

NIDRR Funding: FY 03 \$149,992; FY 04 \$149,948; FY 05 \$149,992

Abstract: RAICES/Promotoras develops and tests a method of service provision that integrates a model known as Promotoras with a locally funded school-linked case management approach known as the Family and School Support Team (FASST). FASST provides school and in-home services for children and their families funded through the Children's Board of Hillsborough County. The RAICES project targets at-risk limited English speaking and Spanish monolingual Latino children or those with serious emotional disturbance enrolled in grades K-5 and their families in rural south Hillsborough County, Florida. The project also targets service providers and school personnel that serve Latino families. "Raices," or "roots," symbolizes building healthy school and family ties upon the foundations present within the family and community. Promotoras, or community educators, are community members who use their knowledge of local resources and their neighborhood's health and social issues to promote healthy living and help community residents access needed health and social services. Case management programs such as FASST face challenges in identifying, mobilizing, and sustaining informal resources to support families. The Promotoras model offers a vehicle to make needed modification of local services through development of more culturally competent methods for linking and engaging Latino families with FASST and schools.

Field Initiated Projects (FIPs)

Illinois

Enabling Self-Determination for People Living with AIDS

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kielhfnr@uic.edu

Principal Investigator: Gary Kielhofner, PhD; Brent Braveman, PhD 312/996-4973 (Kielhofner);
312/355-2656 (Braveman)

Public Contact: Fax: 312/413-0256

Project Number: H133G020217

Start Date: January 01, 2003

Length: 36 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 02 \$149,032; FY 03 \$149,337; FY 04 \$149,764; FY 05 \$0 (No-cost extension through 12/31/2006)

Abstract: This project implements and studies a model program of peer-facilitated, empowerment-oriented services for people with AIDS within five supportive living facilities. The facility-based program provides individualized and group services that are tailored to each client's needs and provides clients with necessary environmental supports. The program also empowers clients to access additional resources and services that support their self-determination. This model program, Enabling Self-Determination, is initially offered to clients in three supportive living facilities. Researchers study: (1) the independent living, employment, and community participation outcomes of the model program, and (2) the three facilities' efforts to sustain the program. This condition is compared to a control group comprised of individuals from two other facilities who receive basic educational services. Participatory research methods are used to identify potential obstacles and solutions to program implementation and efficacy, and to evaluate how the services impact upon and are viewed by the clients. Researchers work closely with the two control group facilities to build their capacity to implement the model program. In this way, the five transitional living facilities in Chicago that serve persons with AIDS are empowered to sustain the Enabling Self-Determination program. Finally, the project creates extensive resources for program replication and vigorously disseminates the model program so that community-based supportive living facilities can replicate the program nationwide.

Field Initiated Projects (FIPs)

Illinois

Homeless Mentally Ill: Strategies for Maintaining Residential Stability

University of Illinois at Chicago
Department of Occupational Therapy
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Principal Investigator: Christine Helfrich, PhD 312/996-0942

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Project Number: H133G040320

Start Date: December 01, 2004

Length: 36 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 04 \$149,976; FY 05 \$149,994

Abstract: This project implements, evaluates, and disseminates a life skills intervention designed to increase skills necessary for maintaining housing for 230 homeless adults with psychiatric disabilities to prevent their return to the streets, reinstitutionalization, hospitalization, or jail. These skills include room and self-care management, food management, financial management, and safe community participation. This three-year project is conducted in two housing programs: supervised emergency housing and single room occupancy housing with case management. The intervention was developed based on Empowerment Theory, the Transtheoretical Model of Change, Social Learning Theory using a skills training approach, and the Model of Human Occupation. The objective of this intervention is to increase the time an individual remains housed and decrease the evictions that occur secondary to his/her inability to perform the skills and behaviors necessary to maintain housing.

Field Initiated Projects (FIPs)

Illinois

Pathways in Living: Increasing Mental Health Consumers' Community Integration Through Peer-Led Education

University of Illinois at Chicago
Center on Mental Health Services Research and Policy
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Chicago, IL 60603
pickett@psych.uic.edu

Principal Investigator: Susan Pickett-Schenk, PhD
Public Contact: 312/422-8180, ext. 17; Fax: 312/422-0740

Project Number: H133G050217

Start Date: November 01, 2005

Length: 36 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 05 \$150,000

Abstract: This study examines the effectiveness of the Pathways in Living (PIL) peer-led education course, an eight-week curriculum that uses the Pathways to Recovery self-help workbook in increasing mental health consumers' ability to identify and pursue the self-determined life goals that enable them to lead full lives within the community. In PIL, trained instructors who are mental health consumers teach other consumers how to identify their strengths, set and achieve goals, and expand their social networks. A total of 336 mental health consumers in Chicago participate in the project. A wait-list control group design is used in which 168 participants are randomly assigned to the PIL course (intervention group) and 168 participants are assigned to a nine-month course waiting list (control group). Study participants complete three in-person interviews that assess social support; emotional well-being; feelings of empowerment, hope, and self-stigma; and identification and pursuit of self-chosen goals. Intervention and control group participants are interviewed at the same three timepoints: one month prior to the start of the PIL course for the intervention group (study baseline for the control group), at the end of the PIL course (three months post-baseline for the control group); and six months after the course has ended (eight months post-baseline for the control group). Randomized regression models and content analyses are used to examine whether any significant differences on the above measures occur between the groups and are maintained over time. Study results provide important information on how peer-led programs increase community integration of mental health consumers.

Field Initiated Projects (FIPs)

Indiana

Integrating Assertive Community Treatment (ACT) and Illness Management and Recovery (IMR) for Clients with Severe Mental Illness (SMI)

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Indianapolis, IN 46202
mpsalyer@iupui.edu
<http://psych.iupui.edu/ACTCenter>

Principal Investigator: Michelle P. Salyers, PhD

Public Contact: 317/554-0000 ext. 4419; Fax: 317/554-0114

Project Number: H133G030106

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 03 \$149,458; FY 04 \$149,559; FY 05 \$149,900

Abstract: This project targets the subgroup of 20 percent of consumers with severe mental illness identified with the most severe disabilities, that is, the subgroup most often excluded from rehabilitation services and mental health treatment. The project involves: (1) the systematic integration and high-fidelity implementation of two evidence-based practices for consumers with severe mental illness: assertive community treatment and illness management and recovery; (2) enhancing integration by employing a consumer specialist on treatment teams in a well-defined role; and (3) providing the first empirical test of a comprehensive package of techniques designed to help consumers learn to manage their own illness and foster recovery. Outcome measures include achievement of recovery goals, such as competitive employment and independent living, as well as indicators of illness management, such as prevention of hospitalization.

Field Initiated Projects (FIPs)
Michigan

**Stress and Coping over the Life Course: A Perspective on Women with
Spinal Cord Injury**

University of Michigan
Physical Medicine and Rehabilitation
Rehabilitation Psychology
325 East Eisenhower Parkway Suite 100
Ann Arbor, MI 48108
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<http://www.med.umich.edu/pmr/>

Principal Investigator: Denise G. Tate, PhD
Public Contact: 734/936-7052; Fax: 734/936-7048

Project Number: H133G020060

Start Date: September 01, 2002

Length: 36 months

NIDRR Officer: Constance Pledger, EdD

NIDRR Funding: FY 02 \$149,995; FY 03 \$149,999; FY 04 \$149,997; FY 05 \$0 (No-cost extension through 11/30/2005)

Abstract: This investigation describes the challenges to independent living faced by women with SCI and the strategies they use to manage the stresses of everyday life. The ratio of men to women who sustain SCI is approximately four to one, with current national prevalence of women estimated to be 36,900. Much of the research on SCI has focused on men and may not reflect the experiences of women with SCI. Even more than their male counterparts, women with SCI endure multiple minority status, poverty, lack of education, job discrimination, and restricted choices, and are often burdened by extra care-taking responsibilities, all of which may elevate their risk for stress-related disorders. This study: (1) documents, from a contextual life perspective, the ways women with SCI perceive and respond to stressful life events; (2) explores, in depth, effective and ineffective ways of coping; and (3) assesses the impact these strategies have on quality of life.

Field Initiated Projects (FIPs)
Michigan

**Community Participation After Spinal Cord Injury: Idioms of Beliefs
and Behaviors**

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Principal Investigator: Catherine Lysack, PhD
Public Contact: 313/577-2297; Fax: 313/875-0127

Project Number: H133G020151

Start Date: October 01, 2002

Length: 36 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 02 \$149,959; FY 03 \$149,974; FY 04 \$149,539; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This study identifies and describes the self-defined forms of community and the modes of community participation found meaningful to persons living with SCI. The five specific aims are to: (1) discover and describe the self-defined forms of community that people with SCI envision and pursue in daily life; (2) identify and describe the cultural and individual idioms of beliefs and behaviors by which people with SCI create a sense of identification and participate in personally valued communities; (3) identify the barriers to participation in desired communities, and strategies and techniques (if any) that persons with SCI use to overcome these barriers; (4) compare and contrast persons in two groups (new onset SCI and more longstanding duration) in terms of the forms of community, idioms of identification, and strategies used to overcome barriers and achieve meaningful community participation; and (5) evaluate preliminary qualitative hypotheses about the nature and modes of community participation actually envisioned by persons with SCI themselves.

Field Initiated Projects (FIPs)

Michigan

Driving after Stroke

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Principal Investigator: Lisa J. Rapport, PhD

Public Contact: 313/577-7879; Fax: 313/577-7636

Project Number: H133G050134

Start Date: November 01, 2005

Length: 36 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 05 \$149,392

Abstract: The purpose of the study is to evaluate driving after stroke. Cessation of driving is among the most functionally disabling consequences of stroke. Driving is integral to independence, community membership, and activities of daily living such as access to work, shopping, and health care. The primary target population is adults who drove a motor vehicle prior to the onset of a stroke. The study samples 150 pairs of survivors and their significant others, recruited at inpatient discharge and from the outpatient clinic of an urban rehabilitation hospital. Barriers to driving, driving status, and community integration are assessed at six months post stroke. A subsample of 90 survivors who seek to resume driving is also given a comprehensive driving evaluation. The objectives of this study are to identify the barriers to driving after stroke and the extent to which these barriers influence driving status (i.e., decision to drive), actual driving risk, and community integration. The project outcomes identify barriers to driving that are unwarranted or remediable and facilitate decision-making based on valid information, both of which are important to improving functional mobility and adaptation to changes associated with stroke. The long-term goal is the development of interventions that maximize independence and community integration, while protecting public and survivor safety.

Field Initiated Projects (FIPs)

Minnesota

National Training Institute for Frontline Supervisors (NTIFF)

University of Minnesota
Institute on Community Integration
214B Pattee Hall, 150 Pillsbury Drive, SE
Minneapolis, MN 55455
larso072@umn.edu
<http://rtc.umn.edu/ntiffs/main/index.asp>

Principal Investigator: Sheryl Larson, PhD 612/624-6024

Public Contact: Nancy McCulloh 612/626-7765; Fax: 612/625-6619

Project Number: H133G030058

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Joyce Y. Caldwell

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: This project refines, tests, and delivers a national train-the-trainer and technical assistance model to assist community organizations that provide supports and services to persons with developmental and other severe disabilities to recruit, retain, and train direct support and frontline supervisor staff members. The model includes: (1) assisting organizations to assess their recruitment and retention challenges; (2) providing web-based training on recruitment and retention strategies; (3) conducting 2 intensive train the trainer institutes for 10-15 organization representatives; (4) supporting organizational representatives to provide training to 70-100 frontline supervisors; (5) providing on-site as well as remote technical assistance support and training to organizational representatives; (6) supporting technical assistance efforts by organizational representatives for frontline supervisors; (7) supporting ongoing follow-up measurement to assess the effectiveness of interventions and to guide future intervention work; and (8) developing project products and reports to share the project outcomes with policy makers, provider organizations, and other interested persons.

Field Initiated Projects (FIPs)

New York

A Longitudinal Study of Psychosocial Outcomes and Subjective Quality of Life Many Years After Traumatic Brain Injury

Mount Sinai School of Medicine
Department of Physical Medicine and Rehabilitation
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marcel.dijkers@mssm.edu

Principal Investigator: Marcel Dijkers, PhD

Public Contact: 212/659-8587; Fax: 212/348-5901

Project Number: H133G030026

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 03 \$149,999; FY 04 \$149,999; FY 05 \$149,999

Abstract: This project is a longitudinal study of individuals with TBI who are on average 18 years post-injury. Between 1994 and 1997, the Research and Training Center on the Community Integration of Individuals with TBI at Mount Sinai School of Medicine conducted extensive quality of life and health interviews with over 800 individuals with TBI, spinal cord injury (SCI) and no disability (NO). The researchers for the current project will re-interview these same individuals eight to nine years after their initial interview, using most of the original measures. This project has three main objectives: (1) to document long-term psychosocial functioning post-TBI and its change over time; (2) to examine longitudinally subjective quality of life post-TBI as a primary indicator of adjustment to TBI; (3) to determine the predictors of change in subjective quality of life. The comparison groups provide a means of examining whether the changes observed in individuals with TBI reflect the unique experience of living with a TBI, the broader experience of living with a disability (comparison with the SCI group), or the general challenges we all face in conducting our daily lives (comparison with the NO group). Results of the study are disseminated through public conferences for both professionals and consumers, through publications in journals for consumers and professionals, and through the development of reports specifically targeted to individuals with TBI.

Field Initiated Projects (FIPs)

North Carolina

Participation in Family, School, and Community Activities as Pathways to Adult Integration Study

Orelena Hawks Puckett Institute
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scarswell@puckett.org

Principal Investigator: Carol M. Trivette, PhD 828/432-0065

Public Contact: Sharon Carswell 828/432-0065

Project Number: H133G050164

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 05 \$149,980

Abstract: This project examines the factors that promote or impede successful inclusion of youth with disabilities in postsecondary education, employment, and social activities. The specific goals for this study are: (1) To determine the extent to which the frequency of participation in family, school, and community activities promotes the integration and inclusion of young adults with disabilities into the work force as well as educational and social opportunities; (2) to determine the extent to which the scope of participation in school, community, and family activities promotes the integration of young adults with disabilities into the work force as well as educational and social opportunities; (3) to disseminate research findings to the appropriate institutions, professional organizations, and parent groups in such a way that implications of practice are highlighted. Both quantitative and qualitative methodology are used as part of this research design to assess the influences of participation in everyday family, school, and community life during preschool, elementary school, and secondary school, and the interactions between these sets of predictor variables that influence post-secondary adult outcomes.

Field Initiated Projects (FIPs)

Ohio

Teen Online Problem Solving for Pediatric Brain Injury

Children's Hospital Medical Center
Pediatric Rehabilitation
3333 Burnet Avenue; MLC 4009
Cincinnati, OH 45229-3039
shari.wade@cchmc.org

Principal Investigator: Shari L. Wade, PhD 513/636-7480

Public Contact: Fax: 513/636-7360

Project Number: H133G050239

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$149,629

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.

Field Initiated Projects (FIPs)
Oregon

Resilience in Students with TBI: A Longitudinal Investigation

Western Oregon University
Teaching Research Division
99 West 10th Avenue, Suite 370
Eugene, OR 97401
anng@oregon.uoregon.edu

Principal Investigator: Ann E. Glang, PhD
Public Contact: 541/346-0594; Fax: 541/346-0599

Project Number: H133G030179

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 03 \$149,950; FY 04 \$149,999; FY 05 \$149,966

Abstract: The project extends the work of Project PSO, a project investigating post-secondary outcomes for young adults with TBI, tracking this sample into their early 20s, a time when the subjects are making significant life adjustments in the areas of post-secondary education, employment, independent living, and interpersonal relationships. The Project's quantitative and qualitative data reveal that some of the 92 subjects appear to be resilient, achieving successful post-injury adjustments, while others are experiencing difficulty, becoming dependent on family members for instrumental and social support. The data suggest that access to specific types of educational interventions and support services account for these differences in adjustment. In addition, this project investigates factors that facilitate and impede delivery of services and support to young adults with TBI from key agencies, including VR, Social Security Administration, and state social service agencies serving individuals disabilities.

Field Initiated Projects (FIPs)

South Carolina

Stability of Vocational Interests Two Years after Spinal Cord Injury: Relationship with Employment, Participation, and Subjective Well-Being

Medical University of South Carolina
College of Health Professions
Department of Rehabilitation Sciences
Research Office
19 Hagood Ave, Suite 910; PO Box 250822
Charleston, SC 29425
cokerj@musc.edu

Principal Investigator: James S. Krause, PhD 843/792-1337

Public Contact: Jennifer Coker, MPH 843/792-2605; Fax: 843/792-1107

Project Number: H133G030151

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Joyce Y. Caldwell

NIDRR Funding: FY 03 \$149,944; FY 04 \$149,913; FY 05 \$149,352

Abstract: The primary objectives of this study are to identify how much interests change in the first two years after SCI onset, factors related to change, and the extent to which interest type and interest change are associated with employment, participation, and subjective well-being. Return to gainful employment has been widely endorsed as fundamental rehabilitation goal after the onset of a SCI, yet employment rates for people with SCI rarely exceed 30 percent. This high unemployment rate is generally attributed to the dramatic impact of SCI on ability to perform job functions requiring physical strength and dexterity. However, successful employment is related to both the extent to which the individual is able to perform the needed job functions and the degree to which the job environment and job tasks are intrinsically interesting to the individual. Unfortunately, research has shown that SCI often occurs selectively to people whose interests are in physically challenging activities that may no longer be possible given the physical limitations imposed by SCI. The impact of no longer being able to perform intrinsically rewarding activities not only poses a threat to successful return to work, but also to overall participation in society and subjective well-being. By helping rehabilitation professionals to better understand the relationships of both interest type and interest stability with employment, participation, and well-being, this study lays a foundation for intervention strategies that maximize opportunities for participation and help people with SCI to lead fulfilling and rewarding lives.

Field Initiated Projects (FIPs)

Texas

Outpatient Social Skills Training For Distressed Adolescent Burn Survivors

University of Texas Medical Branch
815 Market Street
Galveston, TX 77550
pblakene@utmb.edu

Principal Investigator: Patricia E. Blakeney, PhD; Walter Meyer, MD 409/770-6718
Fax: 409/770-6718

Project Number: H133G050079

Start Date: October 01, 2005

Length: 36 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$150,000

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 healthcare professionals in other specialties that are concerned with assisting adolescents who are stigmatized by marred appearance or functional impairment related to a medical condition.

Field Initiated Projects (FIPs)

Texas

Depression and Rural Women with Disabilities: Testing a CIL-Based Self-Management Program

Baylor College of Medicine
Department of Physical Medicine and Rehabilitation
Center for Research on Women with Disabilities
6550 Fannin, Suite 1421
Houston, TX 77030
rhughes@bcm.tmc.edu
<http://www.bcm.edu/crowd>

Principal Investigator: Rosemary B. Hughes, PhD

Public Contact: 713/798-5782; Fax: 713/798-4688

Project Number: H133G030170

Start Date: October 01, 2003

Length: 36 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: This project evaluates a depression self-management intervention for reducing and preventing depression in rural women with disabilities, implemented in ten rural centers for independent living (CIL). Each of the ten CILs identifies two women with disabilities (one CIL staff counselor with a disability and another woman with a physical disability) to serve as co-leaders for the intervention and select a licensed mental health professional to intervene with crises and provide resources and referral services as needed. Approximately 200 women are randomly assigned: 100 to the traditional CIL services plus an 8-session self-management of depression intervention group, and 100 to the traditional CIL services-only group. The intervention is designed to increase participants' understanding and self-management of depression as it relates to experiences of secondary and chronic health problems, stress, lack of support, chronic pain, and abuse. The goals of this project are to (1) develop and implement a depression self-management program for women with physical disabilities, including women with newly recognized disabilities such as chronic fatigue immune deficiency syndrome and fibromyalgia; and (2) disseminate the findings to rural women with disabilities, rural independent living counselors, researchers, and mental health service providers.

Field Initiated Projects (FIPs)

Texas

Caregiver and Environmental Influences on Outcome for Infants and Preschoolers with Traumatic Brain Injury

University of Texas Health Science Center at Houston
Department of Pediatrics
7000 Fannin, Suite 2401
Houston, TX 77030
Mary.R.Prasad@uth.tmc.edu

Principal Investigator: Mary R. Prasad

Public Contact: 713/500-3888

Project Number: H133G040279

Start Date: November 01, 2004

Length: 36 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 04 \$149,225; FY 05 \$149,970

Abstract: This project is guided by a transactional model of development which postulates that a child's eventual outcome is a result of transactions between the child's biological risk factors and a continuum of environmental conditions. Project 1 assesses predictors of outcome in infants and preschoolers with moderate or severe TBI who are 6 to 47 months of age in relation to socio-demographically matched comparison children. Child behavior, caregiver stress, and family functioning are expected to have a direct impact on outcome from TBI; however, the effect of brain injury on developmental outcomes is also expected to be partially mediated through the influence of these factors on the caregiver-child interaction. Project 2 pilots a randomized, controlled, home-based, caregiver-focused intervention for infants and preschoolers with TBI that enhances caregiver skills for stimulating cognitive development.

Small Business Innovative Research (SBIR), Phase I
Oregon

Expert Systems for Independent Living: Feasibility of a Residential Activity Analysis and Information Delivery System for Individuals with Cognitive Disabilities and Caregivers

Assistech Systems
99 West 10th Avenue, Suite 397
Eugene, OR 97401

Principal Investigator: Thomas Keating, PhD 541/343-3384

Project Number: H133S050095

Start Date: October 01, 2005

Length: 6 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 05 \$74,996

Abstract: This project has two goals. The first is to develop and evaluate the feasibility of an expert systems application that would function as a context aware, activity analysis, and notification application. Second is to identify an agenda for further expert systems development in a Phase 2 proposal. The project develops a rule-based expert system for activity pattern analysis and information delivery consisting of Data Inputs, Activity Analysis Module (consisting of Rules Base and Rules Engine), and Information Outputs. Data inputs include: (1) user-created activity schedules; (2) sensor data; (3) a facts database of historical activity patterns; and (4) real-time interactivity. The rules engine acquires input data, applies it to the rules base, and takes actions based on whether presenting facts match rule conditions. Outputs include prompts, reminders, and critical event notifications to consumer and caregiver.

Small Business Innovative Research (SBIR), Phase II
Maryland

**Development and Testing of LD/LEP Friendly Computer Textbooks in
Diverse Subjects, Classrooms, and Formats**

Visibooks, LLC
47 East 5th Street
Frederick, MD 21701
chris@visibooks.com
<http://www.visibooks.com>

Principal Investigator: Christopher Charuhas
Public Contact: 301/560-4611; Fax: 208/279-5336

Project Number: H133S030008

Start Date: October 01, 2003

Length: 24 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 03 \$326,950; FY 04 \$155,160; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This project determines if textbooks based on a Phase I prototype help students with learning disabilities and low-English-proficiency (LEP) learn computer subjects better, faster, and easier. The study also determines if these textbooks are suitable for mainstream students, and if the books are effective when used in electronic format. Twenty Phase I-type textbooks on common computer subjects are produced and distributed to high school, college, and adult education computer classes containing LD, LEP, and mainstream students. One group of classes uses bound copies, another uses electronic copies, and a control group uses textbooks currently on the market. At the beginning of the semester, students in each class take a pre-test to measure existing knowledge. At the end of the semester, they take a post-test to measure what they've learned. Test data from two semesters is used to compare the progress of students in the bound, electronic, and current-book test groups.

Disability Demographics

NIDRR's demographic performance goals are intended to increase the ability to describe the characteristics and circumstances of people with disabilities and their family members by: Improving the ability to collect disability data through the joint development of a standard nomenclature and methodological standards, including sampling, in collaboration with other Federal and non-Federal entities; enhancing the understanding of the number and characteristics of people with disabilities through targeted studies of existing data; and improving the science of disability demographics by developing and/or improving the measures of the interaction between technology and the physical environment, the social environment, and social policy as they affect people with disabilities.

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Rehabilitation Research and Training Centers (RRTCs)
Illinois

**Rehabilitation Research and Training Center on Measuring
Rehabilitation Outcomes and Effectiveness**

Feinberg School of Medicine
Northwestern University
Center for Rehabilitation Outcomes Research
Rehabilitation Institute of Chicago
345 East Superior Street
Chicago, IL 60611
a-heinemann@northwestern.edu
http://www.ric.org/research/outcomes/rrtc_projects.php

Principal Investigator: Allen W. Heinemann, PhD 312/238-2802

Public Contact: Trudy Mallinson, PhD 312/238-1623; Fax: 312/238-2383

Project Number: H133B040032

Start Date: December 01, 2004

Length: 60 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 04 \$700,000; FY 05 \$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 the 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; (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 and 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 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)®:
Kansas

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

University of Kansas
Center for Research, Inc.
Beach Center on Disability
Haworth Hall, Room 3136
1200 Sunnyside Avenue
Lawrence, KS 66045-7534
turnbull@ku.edu
<http://www.beachcenter.org>

Principal Investigator: H.R. Turnbull, LLM; Ann Turnbull, EdD

Public Contact: H. R. Turnbull, LLM 785/864-7600; Fax: 785/864-7605

Project Number: H133B031133

Start Date: November 01, 2003

Length: 60 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 03 \$749,951; FY 04 \$749,960; FY 05 \$749,997

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). Three policy challenges are prisms through which the effects of policy on families can be understood: early intervention, alternative schools, and consumer control of funding. 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 Centers (RRTCs)
New York

**Rehabilitation Research and Training Center on Demographics and
Statistics**

Cornell University
Ives Hall, Room 331
Ithaca, NY 14853
ajh29@cornell.edu
<http://www.disabilitystatistics.org>

Principal Investigator: Andrew J. Houtenville, PhD

Public Contact: 607/255-5702 (V); 607/255-2891 (TTY); Fax: 607/255-3274

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

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, 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.

Disability and Rehabilitation Research Projects
Massachusetts

Emergent Disability, Systems Change, and Employment of People with Disabilities

University of Massachusetts
Institute for Community Inclusion
100 Morrissey Boulevard
Boston, MA 02115
susan.foley@umb.edu
<http://www.communityinclusion.org>

Principal Investigator: Susan Foley, PhD; Doris Hamner, PhD 617/287-4317 (Foley); 617/287-4364 (Hamner)

Public Contact: Susan Foley, PhD 617/287-4317; Fax: 617/287-4352

Project Number: H133A021503

Start Date: December 01, 2002

Length: 60 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 02 \$300,000; FY 03 \$300,000; FY 04 \$299,640; FY 05 \$299,640

Abstract: This project examines state service systems to document the impact of federal policies and practices on systems change and how such changes affect people with disabilities. Research activities include: (1) analysis of national, state, and local data collection systems and actual employment outcomes for people with disabilities; (2) documentation of data sets being used by state agencies to measure effectiveness and how these could be used to examine outcomes for people with disabilities; and (3) examination of how people with disabilities fare within the existing system and challenges they may face through direct consumer research. The goals of the project are: (1) to develop a clear description and presentation of how federal policies impact systems change efforts; (2) to identify how these policies and practices affect the lives of people with disabilities; (3) to identify procedures for a more integrated approach to gathering data that better explains the consumer outcomes of these services; and (4) to document how people with disabilities progress within the service system.

Field Initiated Projects (FIPs)

California

A Study of Developmental Disability Service Utilization and Expenditures in California

University of California, San Francisco
Department of Social and Behavioral Sciences
3333 California Street, Suite 455
San Francisco, CA 94118-0612

Principal Investigator: Charlene Harrington, PhD, RN 415/476-4030

Project Number: H133G050358

Start Date: October 01, 2005

Length: 24 months

NIDRR Officer: Edna Johnson

NIDRR Funding: FY 05 \$83,482

Abstract: This project conducts a two-year secondary data analysis of over 200,000 individuals with developmental disability (DD) living at home and in the community who are actively served by the California regional center program. The study examines formal service utilization and expenditures for individuals with DD services. The study focuses on issues of equity in access to long term care services including personal care services for individuals with DD. This analysis builds upon prior national studies of personal assistance services (PAS) and studies of the predictors of long term care utilization and expenditures. Researchers describe the number and types of individuals with DD living at home or in the community in California in terms of their predisposing socio-demographic characteristics (e.g. age, gender, race/ethnicity, language), enabling factors (e.g. living arrangement, income, Medicaid eligibility, and location), and need factors (e.g. physical abilities, cognitive functioning, and other conditions). The project examines the amount and type of services and the costs of services (including residential care, group homes, day care, PAS and other services). Multivariate analyses are used to test hypotheses that factors other than needs are major predictors of service use and costs of formal services for individuals with DD.

Field Initiated Projects (FIPs)

Colorado

National Study Of Disability Finance

University of Colorado Health Sciences Center
4001 Discovery Drive, Suite 210
Boulder, CO 80303
braddock@cu.edu

Principal Investigator: David L. Braddock, PhD

Public Contact: 303/492-0639

Project Number: H133G030149

Start Date: December 01, 2003

Length: 36 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: The project is a unique and comprehensive longitudinal study of the financial and programmatic structure of public spending for disability in each state of the US and at the national level. The study develops and maintains a state-by-state and national database on public spending for mental, physical, and sensory disability during 1997-2004, and investigates the determinants of that spending. The project includes a wide-ranging dissemination and technical assistance program on innovative financing of disability programs in the US, based on the results of this research. The project also includes a consortium of dissemination and technical assistance partnerships with five national organizations: the National Conference of State Legislatures, the 100-agency-member Washington DC-based Consortium for Citizens with Disabilities, the National Council on Independent Living, the National Alliance for the Mentally Ill, and the grassroots ADAPT organization (Americans Disabled for Attendant Programs Today).

Field Initiated Projects (FIPs)

Illinois

Differences in Mental Health Service Satisfaction Among Clients Interviewed by Consumer and Non-Consumer Researchers Using Computer-Assisted Personal Interview (CAPI) Technology

University of Illinois at Chicago
RRTC on Psychiatric Disability
104 South Michigan Avenue, Suite 900
Chicago, IL 60603
pickett@psych.uic.edu
<http://www.psych.uic.edu/mhsrp/capi.htm>

Principal Investigator: Susan Pickett-Schenk, PhD

Public Contact: 312/422-8180, ext. 17; Fax: 312/422-0740

Project Number: H133G020027

Start Date: September 01, 2002

Length: 36 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 02 \$150,000; FY 03 \$150,000; FY 04 \$150,000; FY 05 \$0 (No-cost extension through 02/28/2006)

Abstract: To better understand mental health consumers' evaluations of the services they receive, this study compares differences in service satisfaction ratings made by clients interviewed by researchers who are and are not mental health consumers. In a randomized design, 400 clients complete satisfaction surveys administered by mental health consumer researchers and 400 clients complete satisfaction surveys administered by non-consumer researchers. Computer-assisted personal interview (CAPI) technology is used to administer the satisfaction surveys. Study results provide important information on clients' satisfaction with community mental health programs, the effect of researchers' consumer status on program satisfaction ratings, and the use of CAPI technology in mental health program evaluation.

Field Initiated Projects (FIPs)

Massachusetts

Rehabilitation Readiness Tool for Latinos with Psychiatric Disabilities

Boston University
Latino Initiatives at the Center for Psychiatric Rehabilitation
940 Commonwealth Avenue West
Boston, MA 02215
mertoro@bu.edu
<http://www.bu.edu/cpr>

Principal Investigator: Maria Restrepo-Toro, MS; Marianne Farkas, ScD

Public Contact: Maria Restrepo-Toro, MS 617/353-3549; Fax: 617/353-7700

Project Number: H133G020181

Start Date: September 01, 2002

Length: 36 months

NIDRR Officer: Bonnie Gracer

NIDRR Funding: FY 02 \$149,776; FY 03 \$149,897; FY 04 \$149,944; FY 05 \$0 (No cost extension through 5/31/2006)

Abstract: This project develops a Rehabilitation Readiness Tool for Latino Consumers with Serious Psychiatric Disabilities. Based on information gathered about the experience of Latino consumers with psychiatric disabilities. This tool can be used by professionals and /or the person's family or natural support system to assess and develop the individual's readiness for rehabilitation in an effective and culturally appropriate way. To implement the project the Center for Psychiatric Rehabilitation at Boston University is collaborating with Maria Sardinias Center (MSC) and South Bay Guidance Center (SBGC), both programs of Community Research Foundation in San Diego, CA, and Center House, Inc., and Casa Primavera, both programs of Bay Cove Human Services in Boston, MA. The present proposal addresses several barriers related to Latino service underutilization, including a lack of understanding of how to begin services in a way that matches the Latino clients' needs (i.e., readiness to engage) and the absence of accompanying readiness educational materials in Spanish. The tool generated by this project allows rehabilitation professionals, family members, and /or other natural supports to help Latinos engage more successfully in the rehabilitation process. This innovation helps to provide a bridge between existing rehabilitation services and the potential Latino consumer.

Field Initiated Projects (FIPs)

New York

**Using the U.S. Equal Employment Opportunity Commission (EEOC)
Employment Discrimination Charge Data System for Research and
Dissemination Purposes**

Cornell University
Employment and Disability Institute
School of Industrial and Labor Relations
201 ILR Extension Building
Ithaca, NY 14853
smb23@cornell.edu

Principal Investigator: Susanne Bruyère, PhD

Public Contact: 607/255-9536 (V); 607/255-2891 (TTY); ; Fax: 607/255-2763

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

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 (e.g., back impairment, depression), (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, it 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. It 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, and the EEOC ratings (A, B, C); it looks for the potential impact of Supreme Court decisions within changes in these compositional changes. To achieve a better understanding of patterns in ADA-related charges, researchers seek input from and work with the EEOC and selected disability advocacy organizations, such as the law firm of Powers, Pyles, Sutter, and Verville; the American Association of Persons with Disabilities; and representatives of the National Association of Protection and Advocacy Systems network.

Field Initiated Projects (FIPs)

South Carolina

A Six-Year Longitudinal Study of Community Integration, Subjective Well-Being, and Health After Spinal Cord Injury: Relationship with Gender, Race/Ethnicity, and Environmental Factors

Medical University of South Carolina
College of Health Professions
77 President Street
Charleston, SC 29425
cokerj@musc.edu

Principal Investigator: James S. Krause, PhD 843/792-1337

Public Contact: Jennifer Coker, MPH 843/792-2605; Fax: 843/792-0710

Project Number: H133G020218

Start Date: October 01, 2002

Length: 36 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 02 \$149,734; FY 03 \$149,941; FY 04 \$149,840; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This longitudinal study identifies changes in quality of life and health outcomes over a six-year period as a function of gender, race/ethnicity, and environmental factors. Follow-up data are collected from 466 participants from three collaborating sites that include the Shepherd Center, Rancho Los Amigos National Rehabilitation Center, and Craig Hospital. The same core outcome measures that were used during the preliminary data collection in 1997-98 are being re-administered by phone. Measures include the Craig Handicap Assessment Reporting Technique, the Older Adult Health and Mood Questionnaire, the Reciprocal Support Scale, the Behavioral Risk Factor Surveillance Survey and the Life Situation Questionnaire. In addition, newly developed measures are being used to identify the relationship between environmental factors and adverse outcomes. These measures include the Craig Hospital Inventory of Environmental Factors; Acculturation, Integration, Marginalization, and Segregation; and the assimilation factor of the Community Integration Measure. A 2x4x2 longitudinal factorial design is being used to analyze the data. A mediational model is being used to identify the extent to which differences in environmental factors explain any associations of gender and race-ethnicity with participation, subjective well-being, health behaviors, and health outcomes.

Knowledge Translation, Utilization, and Technical Assistance

The knowledge translation (KT) process actively engages disability researchers, researchers from other disciplines, service providers, policymakers, and persons with disabilities and their families in the interchange, synthesis and application of rehabilitation research knowledge. For NIDRR, the definition of KT refers to 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.

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Disability and Rehabilitation Research Projects
Alabama

National Spinal Cord Injury Statistical Center

University of Alabama/Birmingham
SRC 515
1717 Sixth Avenue, South
Birmingham, AL 35249-7330
nscisc@uab.edu
<http://www.spinalcord.uab.edu/show.asp?durki=24480>

Principal Investigator: Yuying Chen, MD, PhD 205/934-3320

Public Contact: Vicki Farris 205/934-5049; Fax: 205/934-2709

Project Number: H133A011201

Start Date: July 01, 2001

Length: 60 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 01 \$349,988; FY 02 \$350,000; FY 03 \$350,000; FY 04 \$350,000; FY 05 \$350,000

Abstract: The Statistical Center has the following objectives: (1) establish the appropriate IT system; (2) train and provide technical assistance to the Model SCI centers; (3) communicate with NIDRR and the centers to ensure quality of the items in the database; (4) demonstrate the capacity to conduct and facilitate research from the database; (5) link to other related databases; (6) incorporate culturally appropriate methods of data collection and dissemination, including culturally sensitive measurement approaches; (7) demonstrate the capacity to provide technical assistance to the Model SCI centers and other related projects regarding database development and maintenance.

Disability and Rehabilitation Research Projects
California

National Resource Center for Parents with Disabilities

Through the Looking Glass
2198 Sixth Street, Suite 100
Berkeley, CA 94710-2204
tlg@lookingglass.org
<http://www.lookingglass.org>

Principal Investigator: Paul Preston, PhD

Public Contact: 510/848-1112 (V); 800/644-2666 (V); 800/804-1616 (TTY); Fax: 510/848-4445

Project Number: H133A040001

Start Date: January 01, 2004

Length: 36 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 04 \$500,000; FY 05 \$500,000

Abstract: The National Resource Center for Parents with Disabilities focuses on the 10.9 percent of U.S. families with children in which one or both parents have a disability—nearly 9 million parents. The Center provides: (1) accessible and disability-appropriate information regarding parenting with a disability to parents, potential parents, disability advocates, and legal, medical, and social service providers; (2) training to parents with disabilities, potential parents, and service providers; (3) technical assistance that increases informed practice and informed decisions; (4) program consultation that increases local and regional services that are accessible and disability-appropriate. To accomplish these goals, project researchers: (1) consolidate and disseminate information and resources, (2) synthesize and disseminate materials from other agencies and organizations, (3) develop and disseminate new materials tailored to address the specific needs of parenting with disabilities and service providers, (4) expand the national availability of training and technical assistance to parents with disabilities and service providers, and (5) develop curricula to train future service providers. Parenting areas designated as highest priority are: custody, pregnancy and birthing, adoption, adaptive parenting equipment, and general parenting information. The project is staffed by nationally recognized experts regarding parents with disabilities, the majority of whom are parents with disabilities or family members of parents with disabilities.

Disability and Rehabilitation Research Projects
Massachusetts

Innovative Knowledge Dissemination and Utilization for Disability and Professional Organizations and Stakeholders

Boston University
Center for Psychiatric Rehabilitation
940 Commonwealth Avenue West
Boston, MA 02215-1203
psyrehab@bu.edu

Principal Investigator: Marianne Farkas, ScD
Public Contact: 617/353-3549; Fax: 617/353-7700

Project Number: H133A050006

Start Date: October 01, 2005

Length: 60 months

NIDRR Officer: Ellen Blasiotti

NIDRR Funding: FY 05 \$498,878

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 KDU 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 KDU 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

Massachusetts

Web Accessibility Initiative, Phase II

Massachusetts Institute of Technology
W3C Web Accessibility Initiative
MIT/LCS Room NE43-355
200 Technology Square
Cambridge, MA 02139
jbrewer@w3.org
<http://www.w3.org/WAI>

Principal Investigator: Tim Berners-Lee 617/253-5702

Public Contact: Judy Brewer 617/258-9741

Project Number: H133A000500

Start Date: October 01, 2000

Length: 60 months

NIDRR Officer: Robert J. Jaeger, PhD

NIDRR Funding: FY 00 \$499,999; FY 01 \$499,998; FY 02 \$500,000; FY 03 \$499,999; FY 04 \$500,000; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: The Web Accessibility Initiative (WAI) Phase II develops technical solutions and educational resources to increase accessibility of the Web for people with disabilities, and works with organizations around the world to promote awareness and implementation of Web accessibility solutions. For millions of individuals with visual, hearing, physical, cognitive and neurological disabilities, accessibility of the Web means access to the information society: to educational opportunity, employment, commerce, government services, and more. WAI Phase II activities include (1) ensuring accessibility support in a broad range of Web technologies through ongoing review of all World Wide Web Consortium (W3C) specifications for new Web technologies, and through liaison with other organizations developing Web technologies; (2) developing advanced guidelines and techniques for accessible Web content, for browsers and media players, and for authoring tools, and providing in-house technical assistance to software developers on implementation of accessibility guidelines in their products; (3) developing expanded techniques and resources for more effective evaluation of Web site accessibility; (4) developing a broad array of educational and outreach resources and activities promoting awareness and implementation of Web accessibility, including online and hard-copy resources, introductory materials for general audiences and technical materials for more advanced audiences, best-practice training resources and events, reference lists of tools, policies, and events, and liaison to other standards organizations interested in Web accessibility; and (5) analysis of potential accessibility issues in research and development related to advanced Web technologies.

Disability and Rehabilitation Research Projects
New Jersey

Traumatic Brain Injury National Data Center

Kessler Medical Rehabilitation Research and Education Corporation (KMRREC)
1199 Pleasant Valley Way
West Orange, NJ 07052
kwood@kmrrec.org
<http://www.tbindc.org>

Principal Investigator: Mitchell Rosenthal, PhD 973/243-6971

Public Contact: Kenneth Wood, PhD 973/243-6871; Fax: 973/243-6990

Project Number: H133A011403

Start Date: July 01, 2001

Length: 60 months

NIDRR Officer: Phillip Beatty

NIDRR Funding: FY 01 \$348,187; FY 02 \$348,133; FY 03 \$348,064; FY 04 \$348,075; FY 05 \$348,088

Other Funding: FY 03 \$10,000 (NIDRR Supplement)

Abstract: Goals of this TBI National Data Center include: (1) data collection improvements through development of an interactive web-based syllabus for the use of Traumatic Brain Injury Model Systems (TBIMS) staff, researchers and others that improves the quality and cost-effectiveness of data collection efforts; (2) a new web site featuring a searchable TBI Model Systems Research and Publication Registry; (3) enhanced statistical and technical consultation services to streamline the database, employ innovative statistical techniques to compensate for incomplete or missing data, make comparisons with other datasets, improve measurement tools and prediction models, and enhance analysis of longitudinal data; (4) improved data collection methods based on the “focus group” feedback received from the data collectors at the other centers, which include awareness and incorporation of techniques designed to improve cultural sensitivity of data collection instruments and data collection methodologies used in the model systems; (5) consumer dissemination of the latest TBIMS research results through a partnership with the Brain Injury Association of America (BIAA); (6) continued leadership in TBIMS dissemination activities through *Facts and Figures*, TBIMS and BIAA web sites, NCDDR dissemination programs, journal publications, and TBIMS conferences; (7) continued development of policies that allow for public access to data, while protecting the confidentiality of subjects in the database and incorporating the perspectives of both NIDRR and the TBIMS researchers and data management teams; (8) collaboration with the NIDRR SCI and Burn Data Centers to develop advanced methods of database function, data acquisition, data quality assurance, and general Data Center operations; (9) exploring feasibility of new projects with Center for Disease Control and other programs whose database have similar TBI populations; and (10) conducting site visits to each TBIMS to assure the highest levels of data quality and database integrity.

Disability and Rehabilitation Research Projects

New York

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

State University of New York (SUNY) at Buffalo
Center for Assistive Technology
515 Kimball Tower
Buffalo, NY 14214
ub-cirrie@buffalo.edu
<http://cirrie.buffalo.edu>

Principal Investigator: John Stone, PhD 716/829-3141, ext. 125

Public Contact: Marcia E. Daumen 716/829-3900, ext. 146; Fax:

Project Number: H133A050008

Start Date: November 01, 2005

Length: 60 months

NIDRR Officer: Eva M. Gavillan, EdD

NIDRR Funding: FY 05 \$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; channeling specific information from the Database to organizations and associations; 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. 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 will support collaborative activities between the U.S. 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 U.S. audiences.

Disability and Rehabilitation Research Projects
Texas

National Center for the Dissemination of Disability Research (NCDDR)

Southwest Educational Development Laboratory
211 East Seventh Street, Suite 400
Austin, TX 78701-3281
lharris@sedl.org
<http://www.ncddr.org>

Principal Investigator: John Westbrook, PhD

Public Contact: Lin Harris, Information Specialist 800/266-1832 (V/TTY); Fax: 512/476-2286

Project Number: H133A990008

Start Date: September 30, 1999

Length: 60 months

NIDRR Officer: Ellen Blasiotti

NIDRR Funding: FY 99 \$750,000; FY 00 \$750,000; FY 01 \$750,000; FY 02 \$750,000; FY 03 \$750,000; FY 04 \$750,000; FY 05 \$0 (No-cost extension through 12/31/2005)

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

Texas

Research Utilization Support and Help (RUSH) Project

Southwest Educational Development Laboratory

211 East Seventh Street, Suite 448

Austin, TX 78701-3253

mlinder@sedl.org

<http://www.researchutilization.org>

Principal Investigator: John Westbrook, PhD

Public Contact: Mark Linder, Communications Assistant 800/761-7874 (V/TTY); Fax: 512/476-2286

Project Number: H133A031402

Start Date: June 01, 2003

Length: 60 months

NIDRR Officer: Ellen Blasiotti

NIDRR Funding: FY 03 \$350,000; FY 04 \$350,000; FY 05 \$350,000

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

Model Spinal Cord Injury Systems Dissemination Center

The Institute for Rehabilitation and Research (TIRR)
1333 Moursund Street
Houston, TX 77030-3405
khart@bcm.tmc.edu
<http://www.msdisseminationcenter.org>

Principal Investigator: Karen A. Hart, PhD
Public Contact: 713/797-5946; Fax: 713/797-5982

Project Number: H133A011501

Start Date: September 01, 2001

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 01 \$150,000; FY 02 \$150,000; FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: The Model Spinal Cord Injury Systems (MSCIS) Dissemination Center is a collaborative effort that includes the NIDRR-funded Model Spinal Cord Injury Centers and SCI collaborative research projects. The Center provides information about MSCIS research and publications to inquirers and model system staff members via the Internet, the telephone, and surface mail. Overall objectives of the project are: (1) documenting the scientific productivity of the Model SCI Centers and Collaborative Research Projects and providing a history of the Model Centers' publications; (2) verifying that the publications are peer-reviewed by downloading citations from Medline, Current Contents, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Psychology Literature (PsychLit); (3) ensuring the accuracy of the citations through verification by Center and author semi-annually; (4) maintaining, on a semi-annual basis, the listing of web-accessible citations hosted on web site of the Regional Spinal Cord Injury Center of the Delaware Valley at Thomas Jefferson University Hospital in Philadelphia; (5) documenting and verifying the accuracy and currency of published book chapters and textbooks; (6) storing information electronically in Reference Manager in a format that can be uploaded to Reference Web Poster on the Center's web site; (7) gathering structured data from each of the Model SCI Centers and Collaborative Research Projects that describes the educational products produced and the presentations given; (8) classifying the educational products and presentations produced by the Model SCI Centers and Collaborative Research Projects to provide a variety of accurate retrieval options for interested constituents; (9) developing a data storage system that facilitates uploads into the program's web site in accessible format for interested constituents such as individuals with SCI, organizations, NIDRR, NCDRR, NARIC, the Model SCI Centers, libraries, rehabilitation facilities, professionals, and students; (10) disseminating efficiently and effectively to the greatest number of constituents the publications, educational products, and presentations produced by the Model SCI Centers and the Collaborative Research Projects as an aggregate representation of this NIDRR program's contribution to the field of SCI; (11) providing a mechanism for NCDRR and NARIC to verify that they have complete and accurate information about all the Model SCI Centers and their accomplishments so that NCDRR and NARIC can achieve their dissemination objectives; and (12) reaching the greatest number of individuals possible with information and education about SCI by efficient use of NIDRR-funded resources and personnel.

Utilization Projects
Maryland

National Rehabilitation Information Center (NARIC)

HeiTech Services, Inc.
4200 Forbes Boulevard, Suite 202
Lanham, MD 20706
naricinfo@heitechservices.com
<http://www.naric.com>

Principal Investigator: Mark X. Odum

Public Contact: Information Specialists 800/346-2742 (V); 301/459-5984 (TTY); 301/459-5900 (V);
Fax: 301/459-4263

Project Number: ED-05-CO-0007

Start Date: March 01, 2005

Length: 36 months

NIDRR Officer: Ellen Blasiotti

NIDRR Funding: FY 04 \$680,000; FY05 \$792,000

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 information referral and the Internet, 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 on the Internet. 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

ORC Macro
8630 Fenton Street, Suite 930
Silver Spring, MD 20910
abledata@orcmacro.com
<http://www.abledata.com>

Principal Investigator: Katherine Belknap 301/608-8998, ext. 105

Public Contact: Katherine Belknap 800/227-0216 (V); 301/608-8998 (V); 301/608-8912 (TTY);
Fax: 301/608-8958

Project Number: ED-02-CO-0038

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Ellen Blasiotti

NIDRR Funding: FY 02 \$516,829; FY 03 \$589,408; FY 04 \$635,313; FY 05 \$635,313

Abstract: This project maintains and expands the ABLEDATA 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 32,000 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
Region I - CT, ME, MA, NH, RI, and VT

**New England ADA Center and Universal Design in Educational IT
(Disability and Business Technical Assistance Center - Region I)**

Adaptive Environments Center, Inc.
374 Congress Street, Suite 301
Boston, MA 02210-1807
oharrison@adaptiveenvironments.org; vfletcher@adaptiveenvironments.org
<http://www.adaptiveenvironments.org>

Principal Investigator: Valerie Fletcher 617/695-1225, ext. 26

Public Contact: Oce Harrison, EdD, Project Director 800/949-4232 (V/TTY in CT, ME, MA, NH, RI, and VT); 617/695-1225, ext. 27 (V/TTY); Fax: 617/482-8099

Project Number: H133D010211

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$850,000; FY 02 \$850,000; FY 03 \$850,000; FY 04 \$850,000; FY 05 \$850,000

Abstract: The New England DBTAC provides technical assistance, training, and information dissemination for Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The new grantee retains relationships with previously contracted state affiliates, the statewide coalitions, the annual incentive grants, and the newsletter. Groups with rights or responsibilities under the ADA that are targeted for expanded outreach include self-advocacy organizations and the ARC; libraries; human resources trade groups; the hospitality industry, including visitor and convention bureaus; schools; and health care professionals. Annual regional training initiatives include day-long workshops for state, municipal, and county ADA coordinators; half-day trainings for centers for independent living; training for architects on ADA updates; outreach and training in minority and immigrant communities both to people with disabilities and business owners; and voter accessibility training. Implementation of the education-based IT component of the project includes: (1) establishing regional linkages to educational entities for cooperation/collaboration; (2) establishing the capacity in each state to coordinate and build skill, using resources of state organizations and the state infrastructure to reach large audiences through familiar, local methods; (3) training using a variety of distance learning techniques tailored to target audiences; (4) convening a collaborative conference on universal design on the web with the Rhode Island School of Design; (5) running a public awareness campaign that puts the issue of universal design on the educational IT agenda; and (6) identifying best practices in the region to be written up as case studies each year.

ADA Technical Assistance Projects
Region II - NJ, NY, PR, and VI

**Northeast Disability and Business Technical Assistance Center -
Region II**

Cornell University
Employment and Disability Institute
School of Industrial and Labor Relations
107 ILR Extension Building
Ithaca, NY 14853-3901
northeastada@cornell.edu
<http://www.northeastada.org>

Principal Investigator: Susanne Bruyère, PhD 607/255-7727

Public Contact: Andrea Haenlin-Mott, Project Director 800/949-4232 (V/TTY, in NJ, NY, PR, and VI); 607/255-8348 (V); 607/255-6686 (TTY); Fax: 607/255-2763

Project Number: H133D010205

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$1,100,000; FY 02 \$1,100,000; FY 03 \$1,100,000; FY 04 \$1,100,000; FY 05 \$1,100,000

Abstract: The Northeast ADA & Accessible Information Technology Center provides technical assistance, training, and information dissemination for New Jersey, New York, Puerto Rico, and the Virgin Islands on the ADA and accessible information technology. A new focus for the project is information, training, and technical assistance to educational entities in Region II, on the procurement and use of accessible information technology for students and employees with disabilities. Services are comprehensive, involving effective use of existing networks and collaborations with regional partners and organizations that currently deliver services to educational organizations, parent organizations, disability advocacy organizations, employers, labor unions, and state and local government. The Program on Employment and Disability at Cornell University's School of Industrial and Labor Relations takes the lead in a regional collaborative effort that includes the following partners: Office of the Advocate for Persons with Disabilities for New York state; AccessPoint Solutions in New Jersey; the Department of Architecture and Center for Assistive Technology at the State University of New York (SUNY) at Buffalo; the Assistive Technology Project at the University of Puerto Rico; the University Affiliated Program at the University of the Virgin Islands; and various local agencies and organizations.

ADA Technical Assistance Projects
Region III - DC, DE, MD, PA, VA, and WV

**Mid-Atlantic Disability Business Technical Assistance Center -
Region III**

TransCen, Inc.
451 Hungerford Drive, Suite 607
Rockville, MD 20850-4151
adainfo@transcen.org
<http://www.adainfo.org>

Principal Investigator: Marian S. Vessels, Project Director

Public Contact: 800/949-4232 (V/TTY, in DC, DE, MD, PA, VA, and WV); 301/217-0124 (V/TTY); Fax: 301/217-0754

Project Number: H133D010212

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$1,099,998; FY 02 \$1,099,998; FY 03 \$1,099,998; FY 04 \$1,099,998; FY 05 \$1,099,998

Abstract: The Mid-Atlantic DBTAC provides technical assistance, training, and information dissemination for Delaware, the District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia. Activities are organized under two major goals: (1) provide technical assistance, training, and information dissemination about the ADA; and (2) provide technical assistance, training, and information dissemination about accessible education-based IT. Individual activities to meet these goals and project objectives are designed to build capacity among State and local agencies, including centers for independent living, so that the Center's impact and effectiveness is maximized. Approximately 20,000 individuals and organizations are directly impacted through project activities each year.

ADA Technical Assistance Projects
Region IV - AL, FL, GA, KY, MS, NC, SC, and TN

Southeast Disability Business Technical Assistance Center - Region IV

Georgia Tech Research Corporation
Center for Assistive Technology and Environmental Access (CATEA)
490 Tenth Street
Atlanta, GA 30318
sedbtacproject@coa.gatech.edu
<http://www.sedbtac.org>

Principal Investigator: Shelley Kaplan, Project Director 404/385-0636

Public Contact: 800/949-4232 (V/TTY, in AL, FL, GA, KY, MS, NC, SC, and TN); 404/385-0636 (V/TTY); Fax: 404/385-0641

Project Number: H133D010207

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$1,450,000; FY 02 \$1,450,000; FY 03 \$1,450,000; FY 04 \$1,450,000; FY 05 \$1,450,000

Abstract: The Southeast DBTAC provides technical assistance, training, and information dissemination for Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. The project: (1) provides expert technical assistance to promote voluntary and effective implementation of the ADA among entities with rights and responsibilities; (2) facilitates widespread use, particularly in educational entities, of accessible and usable electronic and IT; (3) fosters and facilitates regional capacity-building by cultivating collaborations between the regional Educational Leadership Team and the existing ADA Leadership Network; (4) expands training programs by incorporating enhanced distance learning methods, including teleconferences, web-based training, and electronic discussions, that are designed in a fully accessible and useful manner; and (5) identifies and disseminates “Best Practices” in employment and IT in order to encourage and support replication. To build on its ten-year history of regional capacity building, the DBTAC: (1) strengthens its ADA Leadership Network of eight state and 80 local affiliates; (2) shares expertise about IT through the Georgia Tech Center for Assistive Technology and Environmental Access (CATEA)’s Information Technology Technical Assistance and Training Center (ITTATC) project; and (3) facilitates accessible education-based IT across the educational spectrum via the newly-established Educational Leadership Team.

ADA Technical Assistance Projects
Region V - IL, IN, MI, MN, OH, and WI

Great Lakes Disability Business Technical Assistance Center - Region V

University of Illinois at Chicago
Department of Disability and Human Development
1640 West Roosevelt Road, Room 405
Chicago, IL 60608-6904
gldbtac@uic.edu
<http://www.adagreatlakes.org>

Principal Investigator: Robin A. Jones, Project Director 312/996-1059

Public Contact: 800/949-4232 (V/TTY, in IL, IN, MI, MN, OH, and WI); 312/413-1407 (V/TTY);
Fax: 312/413-1856

Project Number: H133D010203

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$1,450,000; FY 02 \$1,478,750; FY 03 \$1,450,000; FY 04 \$1,450,000; FY 05 \$1,450,000

Abstract: The Great Lakes DBTAC provides technical assistance, training, and information dissemination for Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. The project's audiences include business, government, and education organizations and individuals with disabilities and their families. The Center assists these audiences in understanding their rights and responsibilities under the ADA. For example, technical assistance and training are provided to educational entities regarding their responsibility to ensure that the IT they purchase and use is accessible to and usable by individuals with disabilities. The aim is that within the education system administrators, educators, staff, students, and parents have full and equal access to programs, services, and information used or disseminated through a variety of information technologies. The Center programs and services are coordinated through a network of collaborators at the local, state, and regional level representing business, government, education entities and people with disabilities. Services and programs include direct technical assistance, training, and materials dissemination utilizing a variety of methods and strategies.

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)
2323 South Shepherd Boulevard, Suite 1000
Houston, TX 77019-7024
dlrp@ilru.org
<http://www.dlrp.org>

Principal Investigator: Lex Frieden 713/502-0232

Public Contact: Wendy Wilkinson, Project Director 800/949-4232 (V/TTY, in AR, LA, NM, OK, and TX); 713/520-0232 (V); 713/520-5136 (TTY); Fax: 713/520-5785

Project Number: H133D010210

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$1,099,997; FY 02 \$1,099,997; FY 03 \$1,099,997; FY 04 \$1,099,997; FY 05 \$1,099,997

Abstract: The Southwest DBTAC provides a comprehensive array of training, technical assistance, and dissemination services on the Americans with Disabilities Act, accessible information technology (IT), and other disability-related laws in the five states of Federal Region VI. The Southwest DBTAC uses a collaborative structure of partners in all states, which enhances its ability to offer all services on a state and local basis. Key partners include the New Mexico Technology Assistance Project, the Southwest Educational Development Laboratory and several centers for independent living (CILs).

ADA Technical Assistance Projects
Region VII - IA, KS, MO, and NE

Great Plains ADA and Information Technology Center - Region VII

University of Missouri/Columbia
100 Corporate Lake Drive
Columbia, MO 65203
ada@missouri.edu
<http://www.adaproject.org>

Principal Investigator: Jim de Jong, Project Director 573/882-3600 (V)

Public Contact: 800/949-4232 (V/TTY, in IA, KS, MO, and NE); 573/882-3600 (V/TTY); Fax: 573/884-4925

Project Number: H133D010201

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$850,000; FY 02 \$850,000; FY 03 \$850,000; FY 04 \$850,000; FY 05 \$850,000

Abstract: The Great Plains DBTAC provides technical assistance, training, and information dissemination for Iowa, Kansas, Missouri, and Nebraska. In order to facilitate successful implementation of the ADA and accessible education-based IT in Region VII, the project and its collaborating partners: (1) provide training and technical assistance, and disseminate materials to individuals and entities with responsibilities and rights under the ADA regarding the ADA's requirements as well as developments in case law, policy, and implementation; (2) increase the capacity of organizations at the state and local level, including centers for independent living (CILs), to provide training on the ADA; (3) provide training and technical assistance, and disseminate material on the legal obligations of educational entities to provide accessible IT to students and employees; (4) provide information to CILs, parent training information centers, and regional resource centers on accessible education-based IT; (5) increase the capacity of organizations at the state and local level, including CILs, to provide technical assistance; (6) provide technical assistance to educational entities to enable them to conduct self-evaluations on the accessibility of their IT; and (7) provide technical assistance, either directly or through referral, regarding how to make existing IT accessible and ensure that new IT acquisitions are accessible.

ADA Technical Assistance Projects
Region VIII - CO, MT, ND, SD, UT, and WY

**Rocky Mountain Disability Business Technical Assistance Center -
Region VIII**

Meeting the Challenge, Inc.
3630 Sinton Road, Suite 103
Colorado Springs, CO 80907-5072
rmdbtac@mtc-inc.com
<http://www.adainformation.org>

Principal Investigator: Robert H. Gattis, Jr., Project Director 719/444-0252

Public Contact: 800/949-4232 (V/TTY, in CO, MT, ND, SD, UT, and WY); 719/444-0268 (V/TTY); Fax: 719/444-0269

Project Number: H133D010204

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$849,716; FY 02 \$849,157; FY 03 \$849,576; FY 04 \$849,993; FY 05 \$849,942

Abstract: The Rocky Mountain DBTAC provides technical assistance, training, and information dissemination for Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. The project builds the capacity for reaching every individual, business, public entity, and educational institution with training, materials dissemination, and technical assistance on the ADA and educational-based IT accessibility. A comprehensive program expands a collaborative network consisting of key agencies and organizations throughout the region. This project also operates and maintains the ADA Impact Measurement System (AIMS), a web-based system that collects customer survey data. This system allows the ten regional DBTACs to evaluate the outcomes of the DBTAC

ADA Technical Assistance Projects
Region IX - AZ, CA, HI, NV, and the Pacific Basin

Pacific ADA & IT Center (Pacific DBTAC)-Region IX

Public Health Institute
555 12th Street
Suite 130
Oakland, CA 94607-4046
adatech@pdbtac.com
<http://www.pacdbtac.org>

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: H133D010209

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$1,450,000; FY 02 \$1,450,000; FY 03 \$1,450,000; FY 04 \$1,450,000; FY 05 \$1,450,000

Abstract: The Pacific DBTAC provides technical assistance, training, and information dissemination for Arizona, California, Hawaii, Nevada, and the Pacific Basin. The latest funding cycle includes a series of innovative initiatives and approaches to enhance compliance with ADA rules and regulations. There is also an integrated action plan to enhance the availability of accessible IT equipment in Federal Region IX, primarily through a focus on educational institutions as key sites for adopting the principles of Section 508, and for ensuring full access to IT for young people with disabilities. The Pacific DBTAC's interdisciplinary, multilevel management strategy ensures that all project objectives are tracked and attained and that Center services are fully integrated and delivered in an effective, cost-efficient, and accessible manner. The DBTAC provides quality training, federally approved materials, and technical assistance services to requesters who seek support, advice, and information and it conducts proactive strategic outreach and education services that promote adherence to ADA regulations and principles at all levels of society. Education-Based Information Technology, being a key focus, uses best practices to promote utilization throughout school systems.a:

ADA Technical Assistance Projects

Region X - AK, ID, OR, and WA

Northwest ADA/IT Center (Disability Business Technical Assistance Center - Region X)

Oregon Health and Science University
Oregon Institute on Disability and Development
P.O. Box 574
Portland, OR 97207-0574
nwada@ohsu.edu
<http://www.nwada.org>

Principal Investigator: Charles Drum, JD, PhD 503/494-8047

Public Contact: 800/949-4232 (AK, ID, OR, and WA only); 503/494-6747; Fax: 503/494-6868

Project Number: H133D010002

Start Date: October 01, 2001

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 01 \$850,000; FY 02 \$850,000; FY 03 \$850,000; FY 04 \$850,000; FY 05 \$850,000

Abstract: The Northwest DBTAC/Information Technology Center provides technical assistance, training, and information dissemination for Alaska, Idaho, Oregon, and Washington. Audiences include people with disabilities, state and local governments, and businesses in Region X. In addition to the Americans with Disabilities Act (ADA) and other state and federal disability laws and regulations, the Center also provides technical assistance, training, and dissemination to educational entities regarding “best practices” information on accessible IT. The sources of such information include the new National Center on Accessible Education-Based Information Technology.

ADA Technical Assistance Projects
Virginia

National ADA Program Assistance Coordinator

CESSI
6858 Old Dominion Drive, Suite 250
McLean, VA 22101
adata@adata.org
<http://www.adata.org>

Principal Investigator: Shelia Newman

Public Contact: Jennifer Eckel, Project Director 703/448-6155 (V); 703/448-3079 (TTY); Fax: 703/442-9015

Project Number: ED-02-CO-0008

Start Date: May 03, 2002

Length: 60 months

NIDRR Officer: Richard Johnson, EdD

NIDRR Funding: FY 02 \$557,883; FY 03 \$577,566; FY 04 \$597,152; FY 05 \$617,737

Abstract: The role of the ADA Program Assistance Coordinator (PAC) is to enhance the performance of the organizations that are members of NIDRR's nationwide ADA Technical Assistance grant program. These include ten regional Disability and Business Technical Assistance Centers (DBTACs), and the National Center for Accessible Information Technology at University of Washington (AccessIT). The Program Assistance Coordinator conducts: (1) coordination services, (2) collaborative assistance, (3) public relations, and (4) reporting activities. In addition, the PAC organizes and manages the semi-annual Project Directors' meetings. It facilitates legal review of grantee generated materials and conducts periodic searches for legal proceedings on the ADA and disability related laws in federal and circuit courts. The PAC identifies and distributes appropriate materials from federal agencies, related NIDRR research projects, and private and public sector organizations. As a gateway to the national ADA technical assistance grant program, the PAC maintains a national Web site, develops and disseminates promotional materials, and provides the DBTACs with daily news updates to assure they have timely information on disability related legislation.

Capacity Building for Rehabilitation Research and Training

Capacity building is foundational for NIDRR's agenda. NIDRR capacity building includes three major components: (1) Improving and building a larger and better quality supply of individuals to conduct research, (2) building a research infrastructure at institutions to carry out research and related activities, and (3) increasing the ability of consumers to interpret and use research and to play an active role in the research process.

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Rehabilitation Research and Training Centers (RRTCs)
Illinois

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

University of Illinois at Chicago
Department of Psychiatry
104 South Michigan Avenue, Suite 900
Chicago, IL 60603-5902
<http://www.psych.uic.edu/uicnrct>

Principal Investigator: Judith A. Cook, PhD 312/422-8180, ext. 19

Public Contact: Jessica A. Jonikas 312/422-8180, ext. 18 (V); 312/422-0706 (TTY); Fax: 312/422-0740

Project Number: H133B050003

Start Date: October 01, 2005

Length: 60 months

NIDRR Officer: David W. Keer

NIDRR Funding: FY 05 \$500,000

Other Funding: FY 05 \$800,000 Centers for Mental Health Services (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 (CPS) 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 evaluates 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 providing training and developing projects and tools to assist individuals in recovery to gain the skills necessary for community integration through 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.

Disability and Rehabilitation Research Projects
Connecticut

**Building Research Capacity through Collaboration among American
Indian Tribes in Connecticut and Rhode Island**

Mashantucket Pequot Tribal Nation
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Mashantucket, CT 06339
vellien@mptn-nsn.gov; fwilkins-turner@mptn-nsn.gov

Principal Investigator: Valerie Ellien, PhD CRC
Public Contact: 860/396-2105; Fax: 860/396-2282

Project Number: H133A031706

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

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 achieves 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.

Disability and Rehabilitation Research Projects
Illinois

**Center for Strategic Capacity Building on Minorities with Disabilities
Research**

University of Illinois at Chicago
Department of Disability and Human Development
1640 West Roosevelt Road
Chicago, IL 60608
<http://www.uic.edu/orgs/empower>

Principal Investigator: Fabricio E. Balcazar, PhD 312/413-1646
Public Contact: 312/413-1806 (V); 312/413-0453 (TTY); Fax: 312/413-2918

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

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) serving minorities with disabilities and State Vocational Rehabilitation Agencies (VR) to involve consumers in identifying service needs and developing improvement strategies through program evaluation research. The CBMDR utilizes participatory research methodologies to promote organizational change and culturally appropriate services. The Center's mission is to accomplish this by developing long-term relationships with CBOs and VR agencies, conducting participatory research and demonstration projects, engaging in active dissemination efforts, and providing state-of-the-art training and technical assistance to professionals and researchers in the field. The center primarily targets agencies serving African Americans, Latinos, and Native Americans with disabilities, although participating organizations may serve additional minority groups.

Disability and Rehabilitation Research Projects

Louisiana

Rehabilitation Research Institute for Underrepresented Populations (RRIUP)

Southern University A&M College
Department of Rehabilitation and Disability Studies
229 Blanks Hall
Baton Rouge, LA 70813
kundusubr@aol.com

<http://www.subr.edu/science/rehabcounsel/RRIUP/ResearchandTraining.htm>

Principal Investigator: Alo Dutta, PhD

Public Contact: Madan Kundu, PhD 225/771-2819; Fax: 225/771-2293

Project Number: H133A031705

Start Date: December 01, 2003

Length: 60 months

NIDRR Officer: Shelley Reeves

NIDRR Funding: FY 03 \$350,000; FY 04 \$350,000; FY 05 \$350,000

Abstract: The goal of this project is that of improving the quality and utility of research related to individuals with disabilities from traditionally underserved racial/ethnic population to enhance knowledge and awareness of issues related to these populations, to help maximize the full inclusion and integration of individuals with disabilities into society, and to improve the effectiveness of services authorized under the Rehabilitation Act. The objectives of this project are: (1) to expand the existing and proven work alliance of three minority and two non-minority entities, e.g., Southern University, University of Hawaii at Manoa, Crownpoint Institute of Technology, University of Illinois at Urbana-Champaign, and Independent Living Research Utilization respectively, for strengthening the disability-related multicultural research framework and improving long-term rehabilitation outcomes of culturally diverse groups; (2) to investigate, evaluate, and modify five measures to assess the capacity and competence of the disability and vocational rehabilitation workforce to provide quality services to individuals with disabilities from traditionally underserved racial and ethnic populations; (3) to investigate and develop culturally appropriate research capacity and infrastructure building techniques to ensure the optimal participation of minority entities and Indian tribes in disability and rehabilitation research; and (4) to develop and evaluate outreach, recruitment, training, reinforcement, retention, and dissemination strategies to enhance participation of students and investigators from traditionally underserved populations as rehabilitation researchers, administrators, and educators.

Disability and Rehabilitation Research Projects

New York

Toward Equity: Innovative, Collaborative Research on Interpreter Training, DBT, and Psychological Testing

University of Rochester
Department of Psychiatry
Deaf Wellness Center
300 Crittenden Boulevard
Rochester, NY 14642

Robert_Pollard@urmc.rochester.edu

<http://www.urmc.rochester.edu/dwc/scholarship/Equity.htm>

Principal Investigator: Robert Pollard, PhD

Public Contact: 585/275-3544; Fax: 585/273-1117

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

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.

Disability and Rehabilitation Research Projects
Texas

Minority Scholar/Champion Research Training Project

Texas Southern University
3100 Cleburne Avenue
Houston, TX 77004
<http://www.tsu.edu/academics/continue/research/index.asp>

Principal Investigator: Irvine E. Epps, EdD 713/313-7224

Public Contact: Darrell K. Simmons, Project Coordinator 713/313-7753; Fax: 713/313-7579

Project Number: H133A031704

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

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.

Fellowships (Distinguished)

Arkansas

Disability Activism in Post-Communist Europe: Implications for American Disability NGOs

Daniel Holland, PhD, MPH
University of Arkansas, Little Rock; Department of Psychology
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Little Rock, AR 72204-1099
dcholland@ualr.edu

Principal Investigator: Daniel Holland, PhD, MPH

Public Contact: 501/413-7838; Fax: 501/569-3047

Project Number: H133F050023

Start Date: January 01, 2006

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$55,000

Abstract: This fellowship is conducting research on the disability rights and independent living movement in Central and Eastern Europe (CEE). The research focuses on the Visegrad Four: the Czech Republic, Slovakia, Poland, and Hungary. Activities involve extensive policy research on disability issues, civil society development, and health policy conducted at the University of Arkansas at Little Rock. Qualitative field research involves phenomenological interviews with 20 disability activists and leaders of nongovernmental organizations. The five primary goals are: (1) To better understand disability activism in four post-communist countries that are undergoing internal transformation and rapid change in geopolitical relationships; (2) to write peer-review articles and edit a book featuring contributions from disability activists in the Visegrad Four; (3) to write reports for international disability and human rights organizations; (4) to promote collaborative partnerships which result in an international exchange of ideas and cooperative pursuit of resources; and (5) to use the fellowship to encourage involvement in American and international disability organizations and forums.

Fellowships (Distinguished)

Illinois

Improved Locomotion of Human SCI Through Sartorius Afferents

Ming Wu, PhD
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Chicago, IL 60611-4496
w-ming@northwestern.edu

Principal Investigator: Ming Wu, PhD

Public Contact: 312/238-0700; Fax: 312/238-2208

Project Number: H133F050031

Start Date: December 01, 2005

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$55,000

Abstract: People with incomplete spinal cord injury (SCI) typically experience problems walking, particularly when trying to flex the leg, or swing it forward to take another step. These problems arise from a combination of effects including paralysis of the involved muscles as well as uncontrolled reflex activity in the legs, or spasms. The purpose of this study is to develop new techniques for assisting the swing of the leg during gait using artificial stimulation of the natural hip position sensors. The primary goal of this study is to improve the initiation of swing in people with SCI using artificial modulation of sensory afferents from the sartorius muscle. The study uses combined hip and knee oscillation, intramuscular stimulation of the sartorius muscle, and combined sartorius stimulation and robot-assisted walking to test the hypothesis that afferents from the sartorius muscle play a key role in producing locomotor reflexes. The increased swing phase activity produced by reflex inputs from the sartorius is useful for enhancing appropriate muscle activity during walking.

Fellowships (Distinguished)
Michigan

Activities, Access, and Aging

Lois M. Verbrugge, PhD, MPH
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verbrugg@umich.edu

Principal Investigator: Lois M. Verbrugge, PhD, MPH

Public Contact: 734/936-2103; Fax: 734/936-2116

Project Number: H133F050022

Start Date: November 01, 2005

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$55,000

Abstract: This fellowship studies older persons' difficulties in doing away-from-home activities due to environmental barriers. Three fellowship projects include: (1) A manuscript on how to bring "person-environment" thinking into large-scale survey research on disability; (2) a conference on environmental barriers for older persons with disability; and (3) a survey analysis of older persons' daily activities, focusing on how disability affects the scope and types of activities. The conference focuses on South-east Asia, those countries that are aging rapidly and are developing urban/rural spaces in ways that impede access for aging persons and those with disabilities of all ages. Data analysis uses a recent survey of older Malaysians. This survey serves as an example of how activities/time-use data for any country and any age can be used to study disability.

Fellowships (Distinguished)
Michigan

Adapting into late life with a Chronic Neuromuscular Disability

Sunny Roller
1113 Addington Lane
Ann Arbor, MI 48108
elsol@umich.edu

Principal Investigator: Sunny Roller

Public Contact: 734/971-1335

Project Number: H133F050039

Start Date: November 01, 2005

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$55,000

Abstract: The purpose of this study is to expand knowledge about the late life physical, social, and environmental adaptation experience of polio survivors: older individuals who contracted poliomyelitis between 1930 and 1955. To accomplish this purpose, the project identifies specific physical changes, attitudes, coping techniques, and adaptive behaviors facilitating improved quality of life over the life span and into late life. To identify these “survival tactics,” the investigation concentrates on the perceptions of a small and elite set of polio survivors—those who are designated the most highly regarded by their peer group as senior role models and who are more than 50 years past disability onset. To achieve the study objectives, the project employs qualitative social research methodology to describe the sample and document perceptions. Using the Polio Trajectory model as a conceptual framework, the project develops a Lessons-Learned Oriented Interview Instrument to elicit polio mentors’ life experience. The resulting interviews are analyzed using quantitative and qualitative methods. Rehabilitation professionals will be able to use these findings to provide a variety of late life management recommendations to patients who are growing old with similar chronic disabling conditions.

Fellowships (Merit)

Hawaii

Text-to-Speech Software as a Means to Improve the Unaided Reading Comprehension and Overall Reading Skills of High School Students Identified for Special Education or 504 Services

Kelly Drew Roberts, PhD
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Honolulu, HI 96822-2303
robertsk@hawaii.edu

Principal Investigator: Kelly Drew Roberts, PhD 808/255-2101

Public Contact: Kelly Drew Roberts, PhD 808/255-2101; Fax: 808/956-5713

Project Number: H133F050046

Start Date: October 01, 2005

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$45,000

Abstract: This fellowship seeks to determine if text-to-speech software is an effective tool for improving unaided reading comprehension, reading rate, and reading skills. Text-to-speech software provides access to written material that is otherwise inaccessible to individuals with poor reading skills. While text-to-speech software provides this access it is hypothesized that its use may also increase the unaided reading skills of “poor” readers. For this project, targeted research subjects are 11th grade students (estimated age range from 16 to 19) who are identified for special education or 504 services (all disability categories) and reading between the 1.0 and 5.0 grade levels. Outcomes data is collected and analyzed for each subject for the 1.5 years following the initial study. This data is used to determine if the use of text-to-speech software leads to overall improved educational performance in secondary school and improved transition to valued post-school outcomes such as access to postsecondary education and employment.

Fellowships (Merit)

Illinois

Evaluation of Barriers to Delivery of Rehabilitative Services to Infants and Toddlers in the Custody of the Illinois Department of Children and Family Services

Christina M. Bruhn, PhD
Children and Family Research Center
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Chicago, IL 60606
bruhn@uiuc.edu

Principal Investigator: Christina M. Bruhn, PhD

Public Contact: 312/641-2505, ext. 41

Project Number: H133F050018

Start Date: October 01, 2005

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$45,000

Abstract: This project evaluates systems for delivery of early intervention services to children aged 0 to 3 with developmental delays who are under the guardianship of the State of Illinois and living in foster care due to having been adjudicated as abused or neglected; and provides vital information concerning the efficacy of one programmatic approach. The project determines the percentage of these children in Cook County, Illinois (Chicago) assessed for probable developmental delays by a specialized assessment unit mandated to serve this entire population, the percentage found to have likely developmental delays, the percentage formally evaluated, the percentage found to have confirmed developmental delays, the percentage receiving services identified in the Individualized Family Service Plan, barriers associated with the assessment/referral delivery process, and characteristics associated with cases of children most and least likely to receive services. Project results are provided to Department of Child and Family Services, and Department of Health in report form and disseminated through journals, presentations and/or conferences. This information can be used both to guide policy and practice revision as they apply to programs in Illinois and to guide program development in other states and counties. Additionally, outcomes contribute to understanding of systematic approaches to improve assessment, referral, and delivery of services to these children.

Fellowships (Merit)

Kansas

The Effects of Diabetes on the Benefits of Exercise After Stroke

Patricia M. Kluding, PT, PhD
Physical Therapy and Rehabilitation Sciences
University of Kansas Medical Center
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Principal Investigator: Patricia M. Kluding, PT, PhD

Public Contact: 913/588-6918; Fax: 913/588-4568

Project Number: H133F050006

Start Date: January 01, 2006

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$45,000

Abstract: The purpose of the project is to determine whether the presence of Type II diabetes mellitus attenuates the benefits of aerobic and strengthening exercise for people with chronic stroke. The target population is 30 adults, 15 with both stroke and diabetes and 15 gender- and age-matched subjects with stroke alone. Project goals and objects include: (1) To determine whether people with stroke and diabetes have decreased baseline measures of function, cardio-respiratory fitness, muscle strength, and cognition compared to people with stroke alone; (2) to determine if people with stroke and diabetes show less improvements after a 12-week aerobic and strengthening exercise program than those with stroke alone in the areas of function, cardio-respiratory fitness, and lower extremity muscle strength; and (3) to determine if either people with stroke alone or people with stroke and diabetes show improved cognition after a 12-week aerobic and strengthening exercise program. Analysis of variants is used to examine the resulting differences in the dependent variables between subjects with stroke alone and subjects with stroke and diabetes, at baseline and after 12 weeks of exercise. The results of this study are analyzed to determine the feasibility of a large randomized clinical trial comparing the effects of a specific exercise intervention in these two groups.

Fellowships (Merit)

Massachusetts

Help-Seeking Pathways and Conceptions of Illness Among Chinese Americans with Depression:

Yu-Mui Cecilia Wan, EdD
Boston University Center for Psychiatric Rehabilitation
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Boston, MA 02215-2703
yumuiwan@bu.edu

Principal Investigator: Yu-Mui Cecilia Wan, EdD

Public Contact: 617/353-3549; Fax: 617/353-7700

Project Number: H133F050037

Start Date: December 01, 2005

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$45,000

Abstract: The utilization rate of mental health services in Asian Americans and Pacific Islanders (AA/Pis) is the lowest across minority groups, making research on culturally competent interventions for AA/Pis a priority. This study aims to expand the knowledge base of service utilization by examining the help-seeking pathways and conceptions of mental illness among Asian Americans, as well as the role their families play in the help-seeking process. The study focuses on Chinese Americans with depression who do not utilize formal mental health services. The three research goals are: (1) To study the explanatory models of mental illness of Chinese Americans with depression and their families, (2) to describe the help-seeking pathways and their relationships to explanatory models of illness, and (3) to study the role of traditional Chinese medicine in the conceptualization of mental illness and help-seeking behaviors. Findings of this study are reported in the form of individual family profiles, a theoretical model explaining the relationship between explanatory models of depression and help-seeking, and a set of culturally appropriate suggestions to reach out to and educate Asian American families who have members with depression.

Fellowships (Merit)

New Jersey

Improving Self-Awareness and Functional Independence for Persons with TBI: Investigation of the Efficacy of a New Therapeutic Technique

Yael Goverover, PhD

Kessler Medical Rehabilitation Research and Education Corporation

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West Orange, NJ 07052-1424

ygoverover@kmrrec.org

Principal Investigator: Yael Goverover, PhD

Public Contact: 973/530-3654; Fax: 973/243-6984

Project Number: H133F040018

Start Date: October 01, 2004

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 04 \$45,000; FY 05 \$0 (No-cost extension through 9/30/2006)

Abstract: This project addresses problems of self-awareness and activity limitations among individuals with traumatic brain injury (TBI). The main purpose of the project is to conduct an experimental investigation on the effects of an awareness training technique, embedded within practice in instrumental activities of daily living (IADLs). The treatment to be tested is geared toward helping patients self-discover their own errors, to develop the ability to evaluate task difficulty in relationship to their own strengths and weaknesses and desires, to plan ahead, and to choose appropriate strategies. Broader effects on self-regulation and satisfaction with the therapy process are also examined.

Fellowships (Merit)

New York

The Development and Psychometric Testing of the Dyspnea Management Questionnaire (DMQ)

Anna Migliore, PhD
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450 Clarkson Avenue, Box 81
Boston, MA 02108
amigliore@downstate.edu

Principal Investigator: Anna Migliore, PhD

Public Contact: 718/270-7732; Fax: 718/270-7464

Project Number: H133F040015

Start Date: August 01, 2004

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 04 \$45,000; FY 05 \$0 (No-cost extension through 12/31/2005)

Abstract: This study develops and evaluates a new rehabilitation outcome measure, the Dyspnea Management Questionnaire (DMQ). This new self-administered clinical and research tool addresses inadequacies in current assessments in measuring the psychosocial and behavioral functioning of adults with chronic obstructive pulmonary disease (COPD). The ICF-2's taxonomy and the Dyspnea Theoretical Model by Carrieri-Kohlman et al. are used to guide the instrument's development. The DMQ consists of three domains: symptoms, functional status, and consumer satisfaction. The ultimate aims of developing the new outcome instrument are to better measure and understand clients' experience of dyspnea and dyspnea-related anxiety, promote rehabilitation goal setting, guide appropriate application of dyspnea management strategies, and to better measure pulmonary rehabilitation outcomes. Dissemination focuses on promoting the use of this new assessment in future longitudinal rehabilitation outcome studies and different settings for both rehabilitation services and community support programs.

Fellowships (Merit)
Oregon

Operation Determination: Using an Authentic Assessment Approach to Determine Eligibility for IDEA Part C Early Intervention Services

Marisa Macy, PhD
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Eugene, OR 97403-5253
mmacy@uoregon.edu

Principal Investigator: Marisa Macy, PhD
Public Contact: 541/346-0809; Fax: 541/346-5639

Project Number: H133F050019
Start Date: October 01, 2005
Length: 12 months
NIDRR Officer: A. Cate Miller, PhD
NIDRR Funding: FY 05 \$45,000

Abstract: The purpose of Operation Determination is to investigate an authentic and linked assessment strategy that is effective in determining young children's eligibility for Early Intervention IDEA services. The traditional assessment process used to determine a child's eligibility for Early Intervention services is problematic for at least three reasons: (1) traditional assessments do not produce information about a child that can be used beyond the eligibility determination phase of the assessment process, (2) traditional assessments often do not provide functional information, and (3) traditional assessments are usually not aligned with developmentally appropriate practice. This study examines traditional and authentic eligibility assessment practices in an effort to discover an improved strategy for determining a child eligible for services that will: link assessment information from the eligibility phase to programmatic phases (i.e., instructional) of a service delivery system, include parent(s) in the assessment process, align with developmentally appropriate practices, and provide functional information for effective service delivery. Research questions focus on understanding how well the authentic eligibility assessment accurately classifies children for services, how the authentic eligibility assessment compares to traditional eligibility assessments, and how reliable the authentic eligibility assessment is when used by multiple examiners.

Fellowships (Merit)
Oregon

**Lost in Foster Care: What are the Experiences of Youth with
Disabilities in Foster Care**

Jennifer M. Hogansen, PhD
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Principal Investigator: Jennifer M. Hogansen, PhD
Public Contact: 503/725-9603; Fax: 503/725-4180

Project Number: H133F050028

Start Date: October 01, 2005

Length: 12 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$45,000

Abstract: This project examines the incidence, characteristics, and experiences of youth with disabilities in foster care. The extant data from the State of Oregon's Statewide Automated Child Welfare Information System (SACWIS) is analyzed and used to obtain project objectives. There are five major project objectives: (1) Systematically examining the characteristics of children and youth with disabilities in the foster care system; (2) examining the foster care experiences of adolescents with disabilities; (3) identifying and evaluating any differences that exist for adolescents in foster care based on type of disability; (4) comparing the experiences of adolescent youth with disabilities in foster care to peers in foster care without disabilities; and (5) developing and disseminating products for researchers, service providers, individuals with disabilities, and their families. Project outcomes include: Disability statistics for foster care youth, results of comparative analyses between adolescent foster youth with disabilities and those without, publications in peer- and non-peer review formats, meetings with state policy makers, and presentations to national foster care organizations.

Advanced Rehabilitation Research Training Projects
Clinician Researchers and Engineers: Advanced Rehabilitation
Research Training

Marquette University
Orthopaedic and Rehabilitation Engineering Center
735 North 17th Street; PO Box 1811
Milwaukee, WI 53201
depps@mcw.edu
<http://www.orec.org>

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

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 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
California

Advanced Rehabilitation Research Program: Ed Roberts Fellowship in Disability Studies

University of California
IURD
104 Wheeler Hall MC 1870
Berkeley, CA 94720-1870
sschweik@uclink.berkeley.edu
<http://www-iurd.ced.berkeley.edu/Press/2003-02-12disability-studies-fellowship.htm>

Principal Investigator: Susan Schweik

Public Contact: 510/642-4874 (V); 510/549-1865; 510/913-5791; Fax: 510/643-9576

Project Number: H133P020009

Start Date: October 01, 2002

Length: 60 months³

NIDRR Officer: Ruth Brannon

NIDRR Funding: FY 02 \$150,000; FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Other Funding: FY 04 \$150,000

Abstract: This program trains scholars who have PhD, MD, or other advanced professional degrees, conferred in the last five years, to be leaders in disability studies and rehabilitation research, teaching and mentorship. Based at the University of California, Berkeley, a San Francisco Bay area-wide consortium of universities, research institutes, and disability agencies recruits people who want to broaden their theoretical outlook and their disability research methodological skills. In particular, the project recruits scholars with significant disabilities from minority groups who have not had the opportunity for collaborative cross-disciplinary research study of disability that includes social science and the humanities. The project supports three nine-month-long (September to May) Ed Robert Postdoctoral Fellowships a year for each of the five program years. Fellows devote their full-time effort to Fellowship activities on site. Funding includes a stipend and travel funds.

Advanced Rehabilitation Research Training Projects
Florida

Interdisciplinary Rehabilitation Research Post-Doctoral Program

University of Florida
Department of Occupational Therapy
P.O. Box 100164
Gainesville, FL 32610-0164
wmann@hp.ufl.edu
<http://www.hp.ufl.edu/rehabsci/>

Principal Investigator: William C. Mann, PhD
Public Contact: 352/392-2617; Fax: 352/846-1042

Project Number: H133P020005

Start Date: August 01, 2002

Length: 60 months

NIDRR Officer: Margaret Campbell, PhD

NIDRR Funding: FY 02 \$150,000; FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: This project addresses the shortage of rehabilitation researchers through an interdisciplinary postdoctoral training program in rehabilitation research. The focus is on recruiting and training postdoctoral fellows with backgrounds in professions of high need, specifically rehabilitation engineering, physical therapy, and occupational therapy. There is also a strong focus on recruiting members of groups that have been traditionally underrepresented in rehabilitation research positions. The participating faculty for this program have large funded programs of rehabilitation research and also have considerable experience in serving as mentors for advanced research training. The program offers postdoctoral fellowships from two to three years to qualified individuals interested in rehabilitation research. Postdoctoral fellows focus in an area related to one of the levels of these models: neurological rehabilitation, rehabilitation engineering, and rehabilitation outcomes research.

Advanced Rehabilitation Research Training Projects
Illinois

Advanced Rehabilitation Research Training

University of Illinois at Chicago
Department of Disability and Human Development
College of Health and Human Development Sciences
1640 West Roosevelt Road
Chicago, IL 60608-6904
theller@uic.edu
<http://www.uic.edu/dhd>

Principal Investigator: Tamar Heller, PhD

Public Contact: 312/413-1537; Fax: 312/996-6942

Project Number: H133P000005

Start Date: April 01, 2000

Length: 60 months

NIDRR Officer: Margaret Campbell, PhD

NIDRR Funding: FY 00 \$150,000; FY 01 \$150,000; FY 02 \$150,000; FY 03 \$150,000; FY 04 \$150,000; FY 05 \$0 (No-cost extension through 3/31/2006)

Abstract: This project provides an intensive interdisciplinary postdoctoral training program for disability and rehabilitation research scholars. The program combines immediate immersion in an ongoing research program with a focused didactic training experience, providing trainees with knowledge of the critical values, current issues, and innovative approaches in contemporary disability research. The training is offered through a cooperative effort of three units within the College of Health and Human Development Sciences: the Department of Disability and Human Development, Department of Occupational Therapy, and the Department of Physical Therapy. These departments have an established record of successful collaboration in advanced training, including creating the Interdisciplinary in Disability Studies at UIC, a unique interdisciplinary doctoral program that addresses the multidimensional nature of disability. A central theme of this program is that the current fragmentation of knowledge regarding disability can be rectified only by preparing future scholars and researchers who have a coherent, integrated, and in-depth knowledge of the multidimensional nature of disabilities. All three academic units offering this advanced research training have senior faculty with established, ongoing research programs capable of guiding postdoctoral training in three specialized content areas of disability research: disability measurement, disability experience, and disability service and policy.

Advanced Rehabilitation Research Training Projects
Illinois

Advanced Rehabilitation Research Training Project in Rehabilitation Services Research

Northwestern University
Rehabilitation Institute Research Corporation
Center for Rehabilitation Outcomes Research
345 East Superior Street
Chicago, IL 60611
a-heinemann@northwestern.edu
<http://www.ric.org/research/fellowships.php>

Principal Investigator: Allen W. Heinemann, PhD
Public Contact: 312/238-2802; Fax: 312/238-2383

Project Number: H133P030002

Start Date: July 01, 2003

Length: 60 months

NIDRR Officer: Ruth Brannon

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: This project develops a five-year fellowship program in rehabilitation-related health services research at Northwestern University's Institute for Health Services Research and Policy Studies and the Department of Physical Medicine and Rehabilitation. It uses available expertise and collaborators to train postdoctoral fellows in rehabilitation health services research. Over two years the program includes course work, a practicum, original research, and grant writing. Fellows new to health services research have six core courses, as well as the two additional courses for all fellows. The first year concentrates on beginning Masters in Public Health (MPH) courses. The second year includes intermediate MPH course work plus electives. Each fellow is expected to develop an individual research project by the end of the first training year, a publishable article by the end of the first year, and two articles by the end of the second year, in addition to submitting at least one grant application related to the research activity.

Advanced Rehabilitation Research Training Projects
Illinois

Rehabilitation Science for Basic Scientists & Engineers: An Advanced Training Program

Northwestern University
Rehabilitation Institute of Chicago
345 East Superior, Room 1406
Chicago, IL 60611-4496

Principal Investigator: W. Zev Rymer, MD, PhD
Public Contact: 312/238-3919; Fax: 312/238-2208

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

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
Massachusetts

Advanced Research Training Program in Psychiatric Rehabilitation

Boston University
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940 Commonwealth Avenue
Boston, MA 02215-1303
zlatka@bu.edu; ellison2@bu.edu
<http://www.bu.edu/SARPSYCH>

Principal Investigator: Zlatka Russinova, PhD; Marsha Ellison, PhD
Public Contact: 617/353-3549; Fax: 617/353-7700

Project Number: H133P020011

Start Date: September 01, 2002

Length: 60 months

NIDRR Officer: A. Cate Miller, PhD

NIDRR Funding: FY 02 \$149,984; FY 03 \$149,991; FY 04 \$149,996; FY 05 \$149,988

Abstract: This project prepares a cadre of six advanced-level researchers in the area of psychiatric rehabilitation. The recruitment efforts target consumers, with the expectation that one or more consumers will be selected for the training program. Six fellows are recruited over the course of the project. The training program consists of two consecutive cycles of 2.25-year postdoctoral fellowships in psychiatric rehabilitation research. In order to optimize the training experience, three fellows are in residence during each cycle. While the fellowship is designed to provide 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 oriented systems, recovery framework and consumer issues, research design/methodology, statistics, computer literacy, conduct of applied rehabilitation research, and grant and professional writing.

Advanced Rehabilitation Research Training Projects
Massachusetts

**Post-Doctoral Fellowship in Rehabilitation Outcomes and Effective
Research**

Boston University
Health and Disability Research Institute
53 Bay State Road
Boston, MA 02215
mtripodi@bu.edu
<http://www.bu.edu/cre/training>

Principal Investigator: Alan M. Jette, PhD 617/358-3472

Public Contact: Maria Tripodi 617/353-4202; Fax: 617/353-1355

Project Number: H133P050001

Start Date: September 01, 2005

Length: 60 months

NIDRR Officer: Ruth Brannon

NIDRR Funding: FY 05 \$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 Rehabilitation Research Training Projects
Michigan

The UMHS/MSU/AACIL Rehabilitation Research Training Program

University of Michigan
Department of Physical Medicine and Rehabilitation
Rehabilitation Psychology
325 East Eisenhower, Suite 100
Ann Arbor, MI 48108
dgtate@umich.edu
<http://www.med.umich.edu/pmr/arrtp/>

Principal Investigator: Denise G. Tate, PhD, ABPP

Public Contact: 734/936-7052; Fax: 734/936-7048

Project Number: H133P030004

Start Date: September 01, 2003

Length: 60 months

NIDRR Officer: Ruth Brannon

NIDRR Funding: FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

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
New Jersey

**Advanced Rehabilitation Research Training Center on Outcomes and
Intervention Effectiveness**

University of Medicine & Dentistry of New Jersey
Department of Physical Medicine and Rehabilitation, B261
150 Bergen Street
West Orange, NJ 07103
mjohnston@kmrrec.org
http://www.kmrrec.org/KM/careers/outcomes_fellows.php3

Principal Investigator: Mark V. Johnston, PhD 973/243-6810

Public Contact: Mark V. Johnston, PhD 973/243-6810; Fax: 973/243-6963

Project Number: H133P020012

Start Date: March 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$149,847; FY 03 \$149,500; FY 04 \$149,500; FY 05 \$149,500

Abstract: This postdoctoral research training program develops researchers who advance knowledge of the impact of interventions—medical, activity-based, social-psychological, and environmental—on outcomes for persons with physical and neurological disabilities. The program emphasizes the actual conduct of research, leading to publication. Outcomes-related study topics include research on prognosis and severity adjustment, treatment guidelines, quality improvement strategies, cost-effectiveness, and issues of health policy. Fellows typically begin by participating in one or more research projects suggested by their mentor and studying to improve their knowledge and skills. Fellows also develop their own research grant proposals. The program is supported by the University of Medicine and Dentistry of New Jersey/New Jersey Medical School and the Kessler Medical Rehabilitation Research and Education Corporation.

Advanced Rehabilitation Research Training Projects
New York

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
<http://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: A. Cate Miller, PhD

NIDRR Funding: FY 05 \$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, 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
Texas

Interdisciplinary Rehabilitation Research Training Program

University of Texas Medical Branch
301 University Boulevard
Galveston, TX 77555-1137
kottenba@utmb.edu
<http://www.sahs.utmb.edu/rehab/>

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

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

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Department of Physical Medicine and Rehabilitation
One Baylor Plaza
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drintala@bcm.tmc.edu

<http://public.bcm.tmc.edu/pm&r/education/Fellowships/RehabResearch.html>

Principal Investigator: Diana H. Rintala, PhD 713/791-1414, ext. 5807

Public Contact: Jacquie Parish 713/797-5940; Fax: 713/797-5982

Project Number: H133P020003

Start Date: October 01, 2002

Length: 60 months

NIDRR Officer: Theresa San Agustin, MD

NIDRR Funding: FY 02 \$150,000; FY 03 \$150,000; FY 04 \$150,000; FY 05 \$150,000

Abstract: This program trains postdoctoral fellows in the skills necessary to become independent investigators in rehabilitation. Research training in the Department of Physical Medicine and Rehabilitation is multidisciplinary in nature, and encompasses the spectrum from basic mechanism to societal integration. Through this program, fellows develop research expertise in spinal cord injury, stroke, Parkinson's disease, amputee rehabilitation, neuropsychological rehabilitation/cognitive neuropsychology, rehabilitation outcomes, and social policy. The coursework includes topics such as research methodology, statistical methods, ethical issues, special populations, and scientific writing. The Applied Rehabilitation Research Course complements the Clinical Scientist Training Program by emphasizing the unique characteristics of research in rehabilitation. Fellows also participate in other education activities such as the department's Research, Education, and Development Seminar and are expected to present and produce documentation for publication on their independent research and prepare applications for federal funding building on their project for career development. They also attend, and submit abstracts for presentation at, national professional meetings to begin to integrate into the greater rehabilitation research community.

Advanced Rehabilitation Research Training Projects
Virginia

Advanced Research Training Program

Virginia Commonwealth University
Department of Medicine and Rehabilitation
Box 980542
Richmond, VA 23298-0542
lalivegston@vcu.edu
<http://advanced.rehabilitationresearch.com>

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

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.

Advanced Rehabilitation Research Training Projects
Wisconsin

**Advanced Rehabilitation Research Training for Physicians and
Biomedical Engineers**

Marquette University
Orthopaedic and Rehabilitation Engineering Center
735 North 17th Street; P.O. Box 1881
Milwaukee, WI 53201
depps@mcw.edu
<http://www.orec.org>

Principal Investigator: Gerald F. Harris, PhD 414/288-0698

Public Contact: Deborah Epps, Project Administrator 414/288-0696; Fax: 414/288-0713

Project Number: H133P020004

Start Date: July 01, 2002

Length: 60 months

NIDRR Officer: William V. Schutz, PhD, MSW, MPH

NIDRR Funding: FY 02 \$84,566; FY 03 \$144,506; FY 04 \$148,634; FY 05 \$149,186

Abstract: This project develops expertise, enthusiasm, and productivity in rehabilitation research that results in an increase in the number of rehabilitation-trained physicians and biomedical engineers able to conduct independent transdisciplinary research on problems related to disability and rehabilitation. The program is specifically designed to give the postdoctoral trainees the skills needed to become productive career researchers. The training program utilizes a rehabilitation research team consisting of a focused cadre of mentors and two postdoctoral fellows (one postdoctoral physician and one postdoctoral biomedical engineer). The trainees are enrolled in the research training program for 18 months. A total of three physicians and three biomedical engineers participate in this training program over the five-year period.