NATIONAL INSTITUTE ON DISABILITY, INDEPENDENT LIVING, AND REHABILITATION RESEARCH

PROGRAM DIRECTORY

2017
The mission of the National Institute on Disability, Independent Living, and Rehabilitation Research is to generate new knowledge and promote its effective use to improve the abilities of people with disabilities to perform activities of their choice in the community, and also to expand society’s capacity to provide full opportunities and accommodations for its citizens with disabilities.
NIDILRR Mission

The mission of the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR) is to generate new knowledge and promote its effective use to improve the abilities of people with disabilities to participate in community activities of their choice, and also to enhance society’s capacity to provide full opportunities and accommodations for its citizens with disabilities. NIDILRR funds 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 individuals of all ages, with all types and degrees of disability including low-incidence disability.

With the passage of the Workforce Innovation and Opportunity Act (WIOA) in July, 2014, the National Institute on Disability and Rehabilitation Research (NIDRR) was renamed to the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR) and moved from the Department of Education to the Administration for Community Living at the Department of Health and Human Services.

This edition of the NIDILRR Program Directory lists all projects funded by NIDILRR during the 2017 fiscal year.

NIDILRR’s Research Programs/Funding Mechanisms

NIDILRR is committed to maintaining its focus on research and development; knowledge translation; and capacity building as strategic areas to improve the lives of individuals with disabilities and their families. Under the 2013-2017 Long Range Plan, NIDILRR supports a wide range of research, development, and other related activities aimed at improving long-term outcomes in health and function, employment, and community living and participation, NIDILRR’s Long-Range Plan for 2013-2017 was published in the Federal Register in April 2013. To download a copy, go to https://federalregister.gov/a/2013-07879.

The majority of NIDILRR grantees are universities or organizations of rehabilitation or related services. NIDILRR makes awards through several program mechanisms including ADA National Network Projects, Advanced Rehabilitation Research Training Projects, Disability and Rehabilitation Research Projects, Mary E. Switzer Research Fellowships, Model Systems, NIDILRR Contracts, Rehabilitation Engineering Research Centers, Rehabilitation Research and Training Centers, and Small Business Innovation Research. Program descriptions are provided below.

ADA National Network Projects

NIDILRR funds the ADA National Network to provide information, training, and technical assistance related to the Americans with Disabilities Act (ADA) to any persons or entities that have rights and responsibilities under the ADA, as well as conducting ADA-related research. Presently, ten ADA regional centers and one ADA collaborative research center are funded under this program. Beginning in 2011, NIDILRR also funded an ADA Network Knowledge Translation (ADA KT) Center to support knowledge translation activities of all ADA National Network centers.
Advanced Rehabilitation Research Training Projects

The Advanced Rehabilitation Research Training (ARRT) Program provides research training and experience at an advanced level to individuals with doctorates, or similar advanced degrees, who have clinical or other relevant experience. ARRT projects provide training to rehabilitation researchers, including researchers with disabilities, with particular attention to research areas that support the implementation and objectives of the Rehabilitation Act of 1973, as amended (Act), and improve the effectiveness of services authorized under the Act.

Grants are made to institutions to recruit qualified persons who will receive a training program that includes didactic and classroom instruction, is multidisciplinary, emphasizes scientific research methodology, and may involve collaboration among institutions.

Disability and Rehabilitation Research Projects

The Disability and Rehabilitation Research Projects (DRRP) program funds projects that include a range of activities including research, demonstration, training, knowledge translation, technical assistance, and related activities, including international activities. These projects may develop methods, procedures, and rehabilitation technology to assist in achieving the full inclusion and integration into society, employment, independent living, family support, and economic and social self-sufficiency of individuals with disabilities, especially individuals with the most significant disabilities, or to improve the effectiveness of services authorized under the Rehabilitation Act.

Mary E. Switzer Research Fellowships

The Research Fellowships Program builds research capacity by providing one-year support to highly qualified individuals, including those who are individuals with disabilities, to conduct original research in the rehabilitation of individuals with disabilities. The program provides two categories of research fellowships: Merit Fellowships and Distinguished Fellowships. Merit Fellowships are awarded to individuals who are in the earlier stages of their career in research and have either advanced professional training or experience in independent study in an area which is directly pertinent to disability and rehabilitation. Distinguished Fellowships are awarded to individuals who have seven or more years of research experience in subject areas, methods, or techniques relevant to research on rehabilitation, independent living, and other experiences and outcomes of individuals with disabilities, and must have a doctorate, other terminal degree, or comparable academic qualifications. Institutions are not eligible to be recipients of Switzer research fellowships.

Model Systems

NIDILRR administers Model Systems programs for persons with burn injuries (BI), spinal cord injuries (SCI), and traumatic brain injuries (TBI). The Model Systems establish innovative projects for the delivery, demonstration, and evaluation of comprehensive medical, vocational, and other rehabilitation services in those three injury areas. 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 longitudinal data on the individuals’ demographics, diagnoses, causes of injury, interventions, outcomes, and costs,
to the Model Systems National Databases housed at the NIDILRR-funded Burn, SCI, and TBI National Data and Statistical Centers. The Model Systems projects also conduct research, both independently and collaboratively with other Model System centers as well as coordinate research efforts with other related grant recipients. Beginning in 2006, NIDILRR funded a Model Systems Knowledge Translation Center (MSKTC) to support knowledge translation activities of all three Model Systems.

**NIDILRR Contracts**

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

**Rehabilitation Engineering Research Centers**

The Rehabilitation Engineering Research Centers (RERCs) engage in the systematic application of engineering sciences to design, develop, adapt, test, evaluate, apply, and distribute technological solutions to problems confronted by individuals with disabilities in functional areas such as mobility, communications, hearing, vision, and cognition, and in activities associated with employment, independent living, education, and integration into the community. RERCs may focus their efforts at the individual level such as developing assistive technology devices that enhance the physical, sensory, and cognitive abilities of individuals with disabilities. RERCs may also focus on the systems level such as mitigating or eliminating barriers found in large social systems in the areas of public transportation, telecommunications, information technology, and the built environment. RERCs conduct research and development that lead to the transfer of technology into commercialized or non-commercialized products that can be readily accessed and used to improve the lives of individuals with disabilities. Since 2008, NIDILRR has funded the Knowledge Translation for Technology Transfer (KT4TT) Center to assist RERC grantees in their technology transfer efforts.

**Rehabilitation Research and Training Centers**

Rehabilitation Research and Training Center (RRTC) programs conduct coordinated, integrated, and advanced programs of research, training, and information dissemination in topical areas that are specified by NIDILRR. RRTCs conduct research to improve rehabilitation methodology and service delivery systems; improve health and functioning; and promote employment, independent living, family support, and economic and social self-sufficiency for individuals with disabilities. They also provide training, including graduate, pre-service, and in-service training, to assist rehabilitation personnel to more effectively provide rehabilitation services to individuals with disabilities. RRTCs serve as centers of national excellence in rehabilitation research for providers and for individuals with disabilities and their representatives.
Small Business Innovation Research

The purpose of NIDILRR’s Small Business Innovative Research (SBIR) program is to help support the development of new ideas and projects that are useful to persons with disabilities by inviting the participation of small business firms with strong research capabilities in science, engineering, or educational technology. Small businesses must meet certain criteria to participate: The company must be American-owned and independently operated, for-profit, employ no more than 500 employees, and the principal researcher must be employed by the business. NIDILRR supports Phase I and Phase II projects. During Phase I, NIDILRR funds firms to conduct feasibility studies to evaluate the scientific and technical merit of an idea. During Phase II, NIDILRR-funded firms expand on the results of Phase I to pursue further development and to begin to explore the potential for commercialization.

Grant Numbers

Active grants originally awarded before October 2014 will include grant numbers as assigned by both the Department of Education and the Administration for Community Living. Grants awarded after October 2014 will only have the ACL-assigned grant number.

NARIC and the NIDILRR Program Directory

The Program Directory is compiled by the National Rehabilitation Information Center (NARIC). NARIC functions as a specialized library, providing the public with disability- and rehabilitation-related information and services to help locate those materials and resources. Since 1977, NARIC has been the primary source of rehabilitation and disability information about, and information generated by, NIDILRR-funded projects.

NARIC also produces REHABDATA, an index of disability and rehabilitation literature produced by NIDILRR grantees as well as commercial publishers. Grantees submit copies of NIDILRR-supported research products to NARIC and they are added to the reference collection and REHABDATA database. Information about holdings is available online at http://www.naric.com.

Neither NARIC nor NIDILRR 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 NIDILRR funds are allocated; its purpose is to display the range of programs that NIDILRR supports. This listing is current as of December 29, 2017. The directory includes some projects that will be officially complete by the directory’s publication date.

NARIC operates under Administration for Community Living contract GS-06F-0726Z.
Employment

As stated in NIDILRR’s Long-Range Plan for 2013-2017, employment and earnings are essential to independence, self-determination, and contribution to society. NIDILRR’s employment research focuses on the lifelong challenges to and opportunities presented by transitions in employment experienced by people with disabilities. Employment research addresses methods to integrate the unique needs of employers and disability populations to improve employment outcomes across the life span. NIDILRR supports centers and projects that address unemployment, underemployment, and unnecessary dependence on public benefits. The research and development activities in this domain examine employment policies and practices, vocational rehabilitation services, and technologies and accommodations that contribute to improved employment and career outcomes for individuals with disabilities.

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Rehabilitation Research and Training Centers (RRTCs)
Maryland

RRTC on VR Practices for Youth and Young Adults

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Principal Investigator: Laura Owens, PhD; Ellen Fabian, PhD (University of Maryland); Todd Honeycutt, PhD (Mathematica Policy Research) 301/424-2002; 301/405-2872; 609/945-3397

Public Contact: Laura Owens, PhD 301/424-2002; Fax: 301/251-3762

Project Number: 90RT5034 (Formerly H133B140043)
Start Date: October 01, 2014
Length: 60 months

NIDILRR Officer: Hugh Berry, EdD

NIDILRR Funding: FY 14 $875,000; FY 15 $875,000; FY 16 $875,000; FY 17 $875,000; FY 18 $875,000

Abstract: The RRTC on Vocational Rehabilitation (VR) Practices for Youth and Young Adults provides a comprehensive, balanced, and rigorous view of the strategies, methodologies, and models of VR service for youth and young adults (Y&YA) with disabilities in the United States. The Center’s activities provide knowledge for ongoing academic analysis, policy development, and in-the-field practice by: (1) analyzing the association between individual and agency level factors and outcomes of transition-age youth seeking VR services; (2) designing, implementing, and testing a data analytic system to support VR agency learning and continuous improvement of service delivery to transitioning youth; (3) evaluating the efficacy and utility of a comprehensive VR-led transition program; (4) identifying characteristics and strategies used by highly effective VR staff in order to develop and test a training resource for promoting highly effective performance; (5) analyzing the role and impact of VR services in inclusive higher education for students with significant disabilities; (6) producing robust and extensive publications of research findings; (7) compiling, creating, and disseminating information on the Center’s research that is accessible and useful to interested stakeholders; and (8) providing training and technical assistance in order to address gaps in knowledge and practice. The Center is a partnership of TransCen, Inc.; University of Maryland-College Park; Mathematica Policy Research, Inc.; and the Institute for Community Inclusion at the University of Massachusetts-Boston, as well as the Council of State Administrators of Vocational Rehabilitation (CSAVR) and other relevant stakeholders to provide a deeper understanding of the knowledge, policies, and practices that enable Y&YA to transition to successful employment and productive careers.
Vocational Rehabilitation and Developing Strategies to Meet Employer Needs in Changing Economic Environments

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Principal Investigator: Susan Foley, PhD
Public Contact: 617/287-4317

Project Number: 90RT5016 (Formerly H133B120002)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 12 $650,000; FY 13 $650,000; FY 14 $650,000; FY 15 $650,000; FY 16 $650,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: This center produces strategies for assessing employer needs and expectations; develops strategic planning models that support state vocational rehabilitation (VR) agency efforts to anticipate and prepare for changing employer and labor market needs; identifies existing programs that may be useful to VR agencies; and produces methods for tracking, analyzing, and reacting to changing employer needs. Research, training, technical assistance, and dissemination activities build upon current knowledge of demand-side strategies and fill a knowledge gap on agency-level practices to address three main themes in improving VR responsiveness to employer needs: (1) integrating labor market and business relations data into business intelligence and strategic planning efforts in Alabama, (2) aligning just-in-time job training with industry needs to ameliorate middle skill labor shortages in Nebraska, and (3) testing an emerging and piloted model in four state VR agencies of “no-risk, low risk” dual customer job placement services created in Vermont. This project is a partnership with the Institute for Community Inclusion at the University of Massachusetts Boston, the Alabama Department of Rehabilitation Services, the Nebraska Vocational Rehabilitation, the Vermont Division of Vocational Rehabilitation, and the New England Council.
Rehabilitation Research and Training Centers (RRTCs)
Massachusetts

Rehabilitation Research and Training Center on Advancing Employment for Individuals with Intellectual and Developmental Disabilities

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Project Number: 90RT5028 (Formerly H133B140026)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 14 $875,000; FY 15 $875,000; FY 16 $875,000; FY 17 $874,999; FY 18 $874,999

Abstract: The goal of this RRTC is to address the elements needed to bring integrated employment to scale for all adults with intellectual and developmental disabilities (I/DD). Research suggests that bringing individual and local successes in employment to scale requires an integrated approach that engages all stakeholders in addressing: individual and family expectations and knowledge; employment consultants’ ability to provide high quality individual employment services and supports; community rehabilitation providers’ effectiveness to rebalance resources and transform their organizations to a focus on integrated employment; and states’ effectiveness at implementing policies and practices that establish employment as the first priority across all service systems including vocational rehabilitation, education, and I/DD. The Center: (1) develops and tests a comprehensive information, outreach, and support framework for individuals and families; (2) assesses a cost-effective strategy for improving the implementation of employment support practices by integrating online training, data-based performance feedback, and facilitated peer supports; (3) develops and tests an evidence-based intervention to support organizational transformation and rebalancing across networks of community rehabilitation providers; and (4) analyzes state employment systems policies and practices and their relationship to individual outcomes at a multi-agency level and defines policies and practices of high-performing state employment systems.

This project includes a cross-stakeholder network of advisors and seven organizational dissemination partners to extend the effectiveness and utilization of project findings and resources. Project partners include The Arc of the United States, the University of Minnesota, the National Association of State Directors of Developmental Disabilities Services, SABE, and APSE. Participation of a cross-stakeholder network of advisors and eight organizational dissemination partners extend the effectiveness and use of project findings and resources.
Rehabilitation Research and Training Center on Improving Employment Outcomes for Individuals with Psychiatric Disabilities

Trustees of Boston University
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cpr.bu.edu/research/current-research/rrtc-2014-2019

Principal Investigator: Marianne Farkas, ScD; E. Sally Rogers, ScD
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Project Number: 90RT5029 (Formerly H133B140028)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 14 $499,596; FY 15 $574,991; FY 16 $574,956; FY 17 $574,959; FY 18 $574,965
Other Funding: FY 14 $375,400 (SAMHSA); FY 15 $375,400 (SAMHSA); FY 16 $375,400 (SAMHSA); FY 17 $375,400 (SAMHSA); FY 18 $375,400 (SAMHSA)

Abstract: The goal of this project is to improve employment outcomes through the development of technology; examination of individual and work environment factors associated with improved employment outcomes; and by investigating the effects of government practices, policies, and programs on employment outcomes for individuals with psychiatric disabilities, including those from traditionally underserved groups. To achieve this goal, this project develops a National Resource Center (NRC) on Employment and Vocational Recovery to conduct training, provide technical assistance, and conduct dissemination activities to increase the utilization of research findings targeted to states seeking to implement evidence-based supported employment; to organizations delivering or planning to deliver employment services; and to individuals with psychiatric disabilities, families, employers, providers, administrators, and other key stakeholders. This project is a collaboration between the Center for Psychiatric Rehabilitation, Dartmouth Medical School Psychiatric Research Center, and other organizations from around the nation.
The Learning and Working During the Transition to Adulthood Rehabilitation Research and Training Center

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Project Number: 90RT5031 (Formerly H133B140040)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 14 $499,596; FY 15 $499,593; FY 16 $499,595; FY 17 $499,593; FY 18 $499,593
Other Funding: FY 14 $375,400 (SAMHSA); FY 15 $375,400 (SAMHSA); FY 16 $375,400 (SAMHSA); FY 17 $375,400 (SAMHSA); FY 18 $375,400 (SAMHSA)

Abstract: This project focuses on school-to-work transitions with an integrated research program examining this developmental stage for transition-age youth and young adults (Y&YAs) with serious mental health conditions (SMHCs). The Center develops and translates knowledge from state-of-the-art rigorous research on education and work in 14-30 year olds with SMHCs. Research is conducted in real-world settings in partnership with Y&YAs with lived experience and informed by family input to address three critical areas: (1) identifying the range of paths in the transition to employment and the factors that contribute to the variability in educational and working success of Y&YAs with SMHCs; (2) continuing to develop and test interventions with preliminary evidence of efficacy; and (3) continuing to examine the ways in which state vocational rehabilitation, child mental health, and adult mental health agencies can improve employment success within subpopulations of those vulnerable to poor transitions to employment (i.e., young parents and individuals with justice-system involvement). This fundamental research increases capacity-building for service providers, and the movement of findings into practice and policy. The Learning and Working During the Transition to Adulthood Rehabilitation Research and Training Center provides national leadership in this area and shares developing knowledge with key stakeholders including youth and young adults, their families, researchers, policymakers, and practitioners.
Rehabilitation Research and Training Centers (RRTCs)
Mississippi

Employment for Individuals with Blindness or Other Visual Impairments

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Principal Investigator: Karla Antonelli; Michele Capella McDonnall, PhD; Jennifer Cmar; Adele Crudden, PhD; BJ LeJeune
Public Contact: 662/325-2001

Project Number: 90RT5040
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 15 $874,947; FY 16 $874,807; FY 17 $874,881; FY 18 $875,853; FY 19 $874,801

Abstract: This project conducts research that generates new knowledge about the efficacy of rehabilitation services and technology used to support employment outcomes for individuals who are blind or visually impaired (B/VI), utilizing multiple stages of research. Research and related training, technical assistance, and dissemination activities contribute to improving competitive employment outcomes for individuals who are B/VI, including subpopulations such as youth, persons who are deaf-blind (DB), and persons with combined traumatic brain injury (TBI) and B/VI. Project 1 is an intervention development project to create an app for parents of youth who are B/VI or DB and youth who are B/VI that will help them focus on the steps they need to take, starting early in the youth’s life, to obtain employment upon completion of their education, including a checklist of age-appropriate activities that should be accomplished to aid in the transition process. Project 2 is an intervention efficacy project that involves adding a guided job search component to an existing summer work experience program conducted by a vocational rehabilitation (VR) agency with youth in their local community. This modification is supported by research that indicates finding a job independently is associated with better employment outcomes later, whereas sponsored work activities are not beneficial. Project 3 evaluates the effectiveness of different approaches to a first meeting between a VR representative and an employer. This intervention efficacy project evaluates the ability of four different approaches to change attitudes and intent to hire. Project 4 implements and evaluates the effectiveness of an evidence-based approach to VR counselor training on working with businesses. Project 5 is an exploratory study, surveying with individuals with B/VI to
identify factors that helped them retain their jobs and a survey with VR agencies to explore policies for job retention cases. Analyses with RSA-911 and survey data explore job retention cases nationally and evaluates the impact of agency policies on consumer employment outcomes. Case studies provide more in-depth information. Project 6 is an exploratory study utilizing two large secondary databases to increase our knowledge about subpopulations (youth and adults who are DB, persons with combined TBI and B/VI) and the impacts on employment outcomes of changes associated with WIOA legislation.
Rehabilitation Research and Training Centers (RRTCs)
New Hampshire

Rehabilitation Research and Training Center on Employment Policy and Measurement

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Project Number: 90RT5037
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 15 $875,000; FY 16 $875,000; FY 17 $875,000; FY 18 $875,000; FY 19 $875,000

Abstract: The Rehabilitation Research and Training Center on Employment Policy and Measurement (EPM-RRTC) supports the disability and policy communities as they take on important policy issues, generating and translating new knowledge about disability employment policy and ways to measure the labor market experiences of people with disabilities. The Center conducts 11 research projects and 12 knowledge translation projects that involve a range of dissemination, training, and technical assistance activities. These research projects support the disability and policy communities in three priority areas by generating new knowledge about the interactions of public programs, assessing the potential impact of SSDI policy reform options, and developing and disseminating innovative, valid, and reliable methods of measuring employment outcomes. Dissemination projects promote access to timely and relevant information through monthly reports that track employment trends in a timely manner, a compendium of state-level policy variables, policy briefs, a journal volume compiling research findings around a unified theme, publications in peer-reviewed journals, and the Center website. Training projects improve the utilization of evidence-based information by increasing the capacity of end users to effectively utilize disability employment policy research and data through monthly webcasts designed to facilitate knowledge translation to practitioners, policy makers, and people with disabilities; a State-of-the-Science conference; presentations at scientific conferences; and a junior researcher training program. Lastly, technical assistance projects further build and cement the utilization of evidence-based information by providing technical assistance to policy and program stakeholders and information/referral services.
Rehabilitation Research and Training Centers (RRTCs)
Virginia

Rehabilitation Research and Training Center on Employment of Individuals with Physical Disabilities

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Project Number: 90RT5035 (Formerly H133B130011)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 13 $873,811; FY 14 $862,741; FY 15 $871,087; FY 16 $874,918; FY 17 $871,129

Abstract: This project is developing and implementing five research studies that directly impact the employment outcomes of individuals with physical disabilities. These studies focus on: (1) technology that improves employment outcomes for individuals with physical disabilities; (2) individual and environmental factors associated with improved employment outcomes; (3) interventions that contribute to improved employment outcomes; (4) effects of government practices, policies, and programs on employment outcomes; and (5) practices and policies that contribute to the improved outcomes for transition-aged youth and young adults with physical disabilities. The activities of this project include: (1) conducting a mixed-method, quasi-experimental study to identify the barriers and facilitators of employment for individuals with physical disabilities and testing the effectiveness of specific knowledge translation strategies used by individuals with physical disabilities to promote the use of employment disability research findings; (2) conducting research on customized employment to identify evidence-based practices that will facilitate the employment of transition-age youth with physical disabilities; (3) conducting research on the employment of veterans with amputation conditions; (4) conducting research to evaluate demand-side employment and a toolkit for use by rehabilitation professionals; (5) studying successful employment and quality of work life after severe disability for individuals with multiple sclerosis and spinal cord injury; and (6) establishing and maintaining a National Resource Center for individuals with physical disabilities and their families that is guided by Rehabilitation Research and Training Center research. This project is a collaboration of Virginia Commonwealth University, the Medical University of South Carolina, and the University of Wisconsin-Madison.
Rehabilitation Research and Training Centers (RRTCs)
Virginia

Research and Training Center (VCU-RRTC) on Employer Practices Leading to Successful Employment Outcomes for Individuals with Disabilities

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Principal Investigator: Paul Wehman, PhD
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Project Number: 90RT5041
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 16 $874,220; FY 17 $873,973; FY 18 $874,877; FY 19 $874,397; FY 20 $874,408

Abstract: The Rehabilitation Research and Training Center on Employer Practices Leading to Successful Employment Outcomes for Individuals with Disabilities provides needed information in employer practices that are associated with better employment outcomes for individuals with disabilities. The cornerstone of this research is a series of studies embedded in businesses to examine the business practices that facilitate the hiring and advancement of individuals with disabilities. These studies examine the complex interactions between a wide range of variables that directly impact the employment outcomes of people with disabilities. The researchers actively involve business professionals, including human resource professionals, hiring managers, and coworkers, in the design and implementation of the research, and resulting knowledge translation activities. Studies examine, in real time, the decision-making processes that frontline supervisors go through when deciding to hire, retain, or promote individuals with disabilities, to understand the factors that influence these important decisions. Employers share their diversity policies, employer practices, accommodation process, and factors that influence businesses to employ and retain workers with disabilities, as well as the characteristics of the businesses that employ individuals with significant disabilities. The VCU-RRTC works collaboratively with stakeholders in the design and implementation of the research by establishing a Business Advisory Board. Some of the key activities for the VCU-RRTC include establishing a National Resource Center that is related to the employment of people with disabilities and providing informational and technical assistance to stakeholder groups. This research is conducted in collaboration with the University of Wisconsin-Madison and Bon Secours Virginia Health System.
Evaluating the Impact of a School-to-Work Collaborative on the Employment Outcomes of Transition-Aged Youth

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Project Number: 90DP0057 (Formerly H133A130028)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 13 $471,327; FY 14 $474,403; FY 15 $474,678; FY 16 $474,314; FY 17 $474,729

Abstract: This project collaborates with state and local partners and the Indiana University’s Center on Community Living and Careers at the Indiana Institute on Disability and Community to evaluate the effects of a school-to-work collaborative on the employment outcomes of transition-age youth with disabilities. The goal of the Collaborative is to provide employment opportunities for transition-age youth by embedding employment resources into the school to focus on employment outcomes and reduce or eliminate duplication of services; specifically, a provider employment specialist who serves as a single point-of-contact representing a coalition of providers serving the Collaborative while overlapping supports with schools to ensure a coordinated and seamless system of transition. Five sites for the study are selected to implement the local collaborative and five additional sites are selected as the control group. Key elements of the local Collaborative include: a single point of contact, development of student personal profiles, self-determination/soft skill training, immersed internship, family training, and benefits counseling with asset development/financial literacy training. Each local Collaborative includes key stakeholders: local vocational rehabilitation counselors or supervisors, community employment/rehabilitation providers, school districts representatives, INSOURCE parent representative, and other representatives that are locally determined. Results from this study provide data for a replicable model both within Indiana and across the country enhancing the employment outcomes for transition-age youth.
Integrated Scaling Approach: A Model for Large Scale Implementation of Effective Interventions for Employment

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Principal Investigator: Marianne Farkas, ScD
Public Contact: 617/353-3549

Project Number: 90DP0096
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 16 $499,984; FY 17 $499,412; FY 18 $499,799; FY 19 $499,844; FY 20 $499,765

Abstract: The goal of this project is to more efficiently expand delivery of effective employment interventions, by developing a comprehensive, integrated approach that increases the demand for and the supply of such practices, through interactive technology and personal contact. “Scaling up” evidence-based employment practices (EBP) involves increasing access to effective programs in order to benefit more people over time. Despite having effective employment practices for people with psychiatric disabilities, widespread implementation remains difficult due to factors such as the resource intensive methods traditionally used, negative stakeholder attitudes towards work for people with psychiatric disabilities and lack of knowledge about existing EBPs. This project focuses on two Development Stages (Proof of Concept and Proof of Product) through four objectives: (1) establishing the conceptual elements of an innovative approach for scaling up employment interventions, designed for people with psychiatric disabilities (Integrated Scaling Approach: ISA); (2) testing a working prototype for ISA; (3) evaluating the resulting product; and (4) transferring the technique for others to use in scaling up future effective employment interventions. Outcomes of this project include a better understanding of large scale implementation of new employment practices; more providers with increased skills in new employment practices across several states and more agencies with the capacity to embed such practices. Project products include: a systematic review of the scaling literature; scaling up of the two practices; a certificate program; two toolkits to promote positive messages about work for people with psychiatric disabilities; an ISA Handbook; and an evaluation of the approach itself and the application of these learnings to other sites, states, providers and stakeholders.
Development Center to Enhance Evidence-Based Supportive Employment with a Technology-Based Management System

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Project Number: 90DP0052 (Formerly H133A120164)  
Start Date: October 01, 2012  
Length: 60 months  
NIDILRR Officer: Hugh Berry, EdD  
NIDILRR Funding: FY 12 $496,422; FY 13 $499,576; FY 14 $499,107; FY 15 $499,412; FY 16 $498,886; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project develops a range of technology-based products as part of an overall platform, called the Individual Placement and Support (IPS) Management System, to enhance the availability, consumer-centeredness, service quality, expansion, effectiveness, and efficiency of vocational services for people with serious mental illness on a national scale. The IPS model of supported employment is firmly established as the most effective practice to help people with serious mental illness become employed and succeed as steady workers. The IPS Management System builds on existing technology and evidence-based components that are not yet computerized. It includes a variety of tools to help consumers, families, vocational rehabilitation counselors, employers, employment specialists, mental health teams, supervisors, and administrators. The tools are iteratively developed and tested for acceptability and usability using methods that have been empirically proven in the development of treatment technology. Examples of these tools include: consumer-empowering software to enable consumers to build their own career profiles and job plans, information on disability benefits and employment for families, IPS training for vocational rehabilitation counselors, information for employers on the advantages of hiring IPS participants, job development tracking systems for employment specialists, IPS training for mental health teams, and management systems for supervisors and administrators.
Manual and Training Program to Promote Career Development Among Transition Age Youth and Young Adults with Psychiatric Conditions

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Project Number: 90DP0063 (Formerly H133A130092)
Start Date: December 23, 2013
Length: 48 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 13 $499,954; FY 14 $499,145; FY 15 $499,951; FY 16 $499,998; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project develops, evaluates, and implements an innovative career development intervention, Helping Youth on the Path to Employment (HYPE), a manual and training program to integrate Supported Education (SEd) with Supported Employment (SE) and other vocational services in order to adequately support transition-age youth and young adults (TAYYA) with psychiatric conditions in achieving self-sufficient lives. HYPE is a comprehensive, integrated career development intervention for TAYYA with psychiatric conditions that can be implemented across a variety of settings. A manualized model that is guided by a National Advisory Council (NAC) and Participatory Action Committee (PAC) consisting of young adults and youth with lived experiences is informed by the findings of four activities of the development program: (1) a scoping literature review; (2) an innovative practices survey; (3) qualitative interviews with TAYYA to learn about the practices that promote career development, obstacles commonly faced, and critical times for service delivery; and (4) activity synthesis and consensus conference where all activity findings are integrated and vetted through the NAC and PAC in order to reach consensus agreement regarding the critical features of career development for TAYYA. The manual addresses strategies for meeting common challenges such as cognitive deficits, substance abuse, and legal involvement, as well as how to integrate SE and SEd interventions that specifically target TAYYA. The manual also features a training materials section to prepare staff in providing career development services for young adults and youth. This project is a collaboration of the University of Medicine and Dentistry of New Jersey (UMDNJ) Department of Psychiatric Rehabilitation and Counseling Professions and the University of Massachusetts Medical School Transitions Research and Training Center.
The Diversity Partners Intervention: Moving the Disability Employment Needle Through Value Added Relationships Between Talent Acquisition Providers and the Business Community

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Project Number: 90DP0065 (Formerly H133A140011)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 14 $499,999; FY 15 $499,999; FY 16 $499,999; FY 17 $499,999; FY 18 $499,999

Abstract: This project develops and evaluates the Diversity Partners Intervention (DPI) to augment the knowledge, skills, and behaviors of general placement professionals (GPPs) and disability placement professionals (DPPs) for the purpose of improving employment outcomes for people with disabilities. DPI prepares GPP and DPP provider organizations in the development of organizational practices and policies which support meaningful relationships with employers and aids in the development and testing of intervention tools designed to provide on-going support to placement professionals in their daily practice. The DPI enables placement professionals to build relationships with employers by adding value to employers’ efforts to hire and fully include employees with disabilities. Placement professionals improve their knowledge of best practice around all aspects of employing people with disabilities; strengthening their ability to engage employers around hiring and retaining employees with disabilities; and helping employers to build disability-inclusive organizational cultures and practices that support their on-going recruitment, hiring, retention, and career advancement of people with disabilities. The project also creates systems and tools to support national dissemination and broad adoption of these tools in provider organizations within the context of their work and their local communities.
Translate and Adapt VR Assessment Tools into ASL

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Project Number: 90DP0067 (Formerly H133A140053)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 14 $489,988; FY 15 $489,999; FY 16 $489,998; FY 17 $489,995; FY 18 $489,956

Abstract: This goal of this project is to improve vocational rehabilitation (VR) services and enhance employment outcomes for individuals who are Deaf. The project: (1) translates and adapts widely used VR instruments into American Sign Language (ASL) and validates these assessment tools for use with VR consumers who are Deaf; (2) develops a vocational assessment instrument in ASL designed specifically for use with Deaf VR consumers; (3) develops online access to these ASL-based VR assessment instruments for Deaf consumers; (4) evaluates the feasibility, usability, and adoption of online assessment resources by VR counselors and consumers who are Deaf and hard-of-hearing; and (5) promotes utilization of DRRP-developed ASL resources to state and territorial VR agencies with a targeted knowledge translation strategy.
Project CAREER: Development of an Interprofessional Demonstration to Support the Transition of Students with Traumatic Brain Injuries from Postsecondary Education to Employment

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Project Number: 90DP0062 (Formerly H133A130066)
Start Date: October 01, 2013
Length: 60 months

NIDILRR Officer: Leslie J. Caplan, PhD

NIDILRR Funding: FY 13 $474,945; FY 14 $474,917; FY 15 $474,968; FY 16 $474,947; FY 17 $474,945

Abstract: Project Career is an inter-professional development project to improve the employment success of undergraduate college and university students with traumatic brain injury (TBI). This project develops, tests, and implements a technology-driven, long-term, and resource-rich individualized support program by merging assistive technology (AT) for cognition (e.g., Cognitive Support Technology [CST]) and a collection of vocational rehabilitation (VR) services and supports to improve career readiness and employment outcomes of civilian and veteran students with TBI participating in and graduating from postsecondary two- and four-year colleges and universities. In a collaborative venture, Kent State University, JBS International, Inc., West Virginia University, and Boston University implement this project, providing services and supports to a minimum of 150 civilian and veteran students with TBI at all stages of postsecondary education. iPads, provided to each participating student, are used as a CST device and as a virtual platform to provide coaching, education, counseling, and career mentoring services. Additional services include field-based internship placements, and support for post-graduation job placement. Guided by stakeholders including people with TBI, those in the allied health and rehabilitation professions, employers, and CST experts, the following full range of services and supports are included: (1) Comprehensive assessment and planning of (a) students’ needs, readiness, and preferences for CSTs to compensate for cognitive limitations, and (b) students’ vocational goals and preferences; (2) individualized CSTs targeted toward the needs and capabilities of each student; (3) training in the use of the iPad and the specific CSTs; (4) an electronic-mentoring (e-mentoring) program based on a peer support model; (5) individualized vocational case management services provided by Certified Rehabilitation Counselors; (6) assistance in securing field-based internships; (7) a resource-directed job placement and accommodation planning seminar focused on technology transfer, self-advocacy, and professional networking; and (8) post-graduation follow-along employment support provided by Certified Rehabilitation Counselors.
Disability and Rehabilitation Research Projects (DRRPs)
South Carolina

Successful Employment and Quality Work Life After Severe Disability Due to Spinal Cord Injury

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academicdepartments.musc.edu/chp/Health_Employment_Longevity_Project/Beyond90Days/funded_projects/successful_employment/index.htm
www.sciandtbiresearch.blogspot.com
www.facebook.com/longevityafterinjuryproject
www.linkedin.com/groups/MUSC-Longevity-after-Injury-Project-5043886?trk=myg_ugrp_ovr

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Project Number: 90DP0050 (Formerly H133A120122)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 12 $499,805; FY 13 $499,412; FY 14 $498,646; FY 15 $499,195; FY 16 $499,790; FY 17 (No-cost extension through 9/30/2018)

Abstract: The purpose of this project is to perform a state-of-the-art study of employment after spinal cord injury (SCI) to identify factors related to successful employment throughout the life cycle. Research and service delivery models of employment after disability typically focus heavily on transition or return to work, rather than a focus on maintaining employment, advancing in career, and maximizing earning potential. This is a two-stage research study beginning with a qualitative component that elicits factors related to successful employment from the perspective of stakeholders with SCI, including those who have had highly successful careers. A large-scale, quantitative study, incorporating the qualitative findings and input from advisory panels is used to develop econometric models of participation in employment and quality employment outcomes throughout the work life cycle. The project includes an integrated program of dissemination, training, and technical assistance to ensure the new knowledge generated may be translated into policy and practice.
Disability and Rehabilitation Research Projects (DRRPs)
Virginia

Facilitating Employment for Youth with Autism: A Replication Study of an Internship Model to Identify Evidence Based Practices

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Project Number: 90DP0051 (Formerly H133A120140)
Start Date: October 01, 2012
Length: 60 months

NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 12 $499,995; FY 13 $489,085; FY 14 $499,466; FY 15 $497,639; FY 16 $497,639; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project is designed to determine the efficacy of a nine-month hospital-based internship intervention for transitioning young adults with autism spectrum disorders (ASD). This internship program, based on the Project SEARCH model, is currently being tested and evaluated in a randomized clinical trial at two Bon Secours Hospitals in Richmond, Virginia. This project replicates this intervention in two new Virginia hospitals: one in Northern Virginia and one in the Norfolk area. The intervention consists of two components: (1) 900 hours of onsite training over 9 consecutive months at the host hospital site, and (2) training and support provided by employment specialists with expertise in autism, applied behavior analysis, supported employment, and business networking. Data collection focuses on a number of key measures when comparing the outcomes of the youth participating in the randomized clinical trials. First, did the young adults with ASD obtain and retain competitive employment? Second, did they earn a commensurate wage (at least minimum wages) and benefits? Third, how many hours per week were they employed? This project is a collaboration of Virginia Commonwealth University’s Department of Physical Medicine and Rehabilitation and the Virginia Department of Aging and Rehabilitative Services.
VR-ROI Project: Estimating Return on Investment in State Vocational Rehabilitation Programs

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Project Number: 90DP0070 (Formerly H133A140095)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 14 $499,856; FY 15 $499,902; FY 16 $499,530; FY 17 $499,819; FY 18 $499,771

Abstract: This project examines the return on investment (ROI) in eight state vocational rehabilitation (VR) programs. ROI information for the state-federal VR program is increasingly seen as a way to demonstrate the effectiveness of VR. Recent years have seen substantial growth in the numbers of ROI studies of state VR programs. However, the analytic methods, time periods covered, and data used in existing VR ROI studies have varied widely. Most recent analyses have serious shortcomings that limit the credibility and utility of their results. This project refines and tests existing ROI models using a more heterogeneous set of state agencies and a more recent cohort of applicants for VR services. The project also tests a “turnkey” approach to ROI analysis that can generate rigorous and credible estimates for any size agency, for individuals with virtually any type of disability, and for different types of VR services. The project includes development of a user-friendly, web-based “ROI Estimator” to allow state agencies to simulate the impact of different VR services on the employment outcomes of VR clients, and to develop ROI estimates for the entire state program. Project activities include VR ROI estimates for specific populations, including youth in transition, individuals with several low-incidence disabilities, and individuals with disabilities from minority backgrounds; development and dissemination of training materials for state VR agencies interested in conducting ROI analyses; and training in effective use of both the project’s methodological framework and the agency-specific results produced by the ROI Estimator. This project is a collaboration of the University of Richmond, the Virginia Department for Aging and Rehabilitative Services, the George Washington University, and the University of Arkansas CURRENTS.
Effects of Customized Employment on the Employment Outcomes of Transition-Age Youth with Disabilities: A Randomized Clinical Trial

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Project Number: 90DP0085
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 16 $499,932; FY 17 $499,945; FY 18 $499,983; FY 19 $499,881; FY 20 $499,902

Abstract: This project researches the use of customized employment (CE) as an intervention to assist individuals with intellectual disabilities (ID) and/or autism spectrum disorder (ASD) to achieve integrated employment outcomes. Project activities include: (1) operationalizing the term customized employment as an evidence-based practice for individuals with ID/ASD; (2) evaluating and comparing the employment outcomes of individuals with ID/ASD who receive the CE intervention to those who receive “services as usual”; and (3) conducting knowledge translation activities (e.g., training, technical assistance, utilization, and dissemination) to facilitate vocational rehabilitation professionals’ and other stakeholders’ implementation of customized employment as an evidence-based practice. Outcomes include: (1) improving the employment outcomes of individuals with ID/ASD in careers of their choice, (2) maximizing their full inclusion and integration into community employment, and (3) enhancing vocational rehabilitation professionals and other stakeholders’ capacity to provide customized employment services to these individuals. Dissemination activities include: (1) providing training activities such as webcasts, an online course on customized employment, participation in national, state, and local conferences, and face-to-face training as requested; (2) disseminating research findings through a project website and other means including use of social media, scholarly articles and articles in popular media, research briefs, fact sheets, and a project replication manual; and (3) providing technical assistance through an online rapid response database and through other traditional means (e.g. telephone, TDD, email, etc.) as requested. This project is a collaboration of the Virginia Commonwealth University (VCU) in partnership with TransCen, Inc.; the Virginia Department for Aging and Rehabilitative Services (VA/DARS), the state’s general vocational rehabilitation (VR) agency; and Griffin-Hammis, Inc.
Field Initiated Projects (FIPs)
Alaska

Customized Employment for Individuals with Serious Psychiatric Disabilities

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Project Number: 90IF0118
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 16 $197,844; FY 17 $201,242; FY 18 $197,378

Abstract: This project is researching a customized employment (CE) model with individuals with serious psychiatric disabilities (SPD). The objective is to determine the feasibility and outcomes of CE, when implemented with fidelity, as a strategy for increasing job acquisition and sustained integrated competitive employment. To fulfill the project’s objective, researchers deliver CE training to 18 employment specialists, support these employment specialists in implementing CE with individuals with SPDs, assess the feasibility of the CE model, create a CE fidelity scale and assess CE implementation integrity, evaluate CE for effects on employment outcomes, compare the results to vocational rehabilitation data and the supported employment literature, and disseminate findings to inform future research.
Integrated Program to Improve Competitive Employment in Dually Diagnosed Clients

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Project Number: 90IF0085 (Formerly H133G140261)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 14 $200,000; FY 15 $200,000; FY 16 $200,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: This study extends the research on the Individual Placement and Support (IPS) model, a well-established evidence-based supported employment model for people with severe mental illness, to people with a dual diagnosis of severe mental illness and opioid use. Individuals who are dually diagnosed with severe mental illness and substance use face multiple barriers to recovery. This group also faces lower employment levels, which is even more pronounced for African Americans in urban areas. The project integrates the IPS model with a highly successful treatment program employing medication-assisted therapy to reduce opioid use, combined with a tailored cognitive behavior therapy approach. Using a randomized controlled design, this study evaluates whether IPS improves employment outcomes over a 12-month period. The project’s secondary goal is to assess whether employment lessens substance use and psychiatric symptoms, and improves quality of life and healthy friendships. A qualitative sub-study examines staff and client experiences with this innovative employment program. This study is being conducted by senior clinician-researchers from the Department of Psychiatry at Howard University in collaboration with Dartmouth University.
Field Initiated Projects (FIPs)
Georgia

Assistive Software Knowledgebase for Computers and Mobile Devices

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Project Number: 90IF0125
Start Date: September 30, 2016
Length: 36 months

NIDILRR Officer: William V. Schutz, PhD, MSW, MPH
NIDILRR Funding: FY 16 $200,000; FY 17 $200,000; FY 18 $200,000

Abstract: This project develops the Assistive Software Knowledgebase, a centralized resource for information about computer software/apps that enable an employee with a disability to use a computer or perform other work tasks. The project goal is to improve the provision of workplace accommodations by providing a tool that employees with disabilities, employers, and rehabilitation professionals can use to make informed choices about selecting, acquiring, and using assistive software. The site includes searchable information about features, usage tips, compatibility, and user experiences with a variety of software, such as screen readers or scheduling apps. Project objectives are to: (1) create a database of product descriptions, leveraging Center for Assistive Technology and Environmental Access’ (CATEA) Assistivetech.net/ATWiki, Tools for Life’s Our Favorite Apps, and Raising the Floor’s Unified Listing and Marketplace; (2) engage stakeholders through social networking and crowd sourcing to post tips and reviews; (3) optimize the site and mobile app for usability; (4) provide training on mobile apps as work accommodations; and (5) disseminate the tool through Assistive Technology Industry Association (ATIA), state Assistive Technology Act projects, and employer, disability, and rehabilitation provider networks. Stakeholders can explore accommodations that better fit their needs, are more likely to be used, and may be cheaper. Products of this three-year project are the Assistive Software Knowledgebase, a mobile app version, and trainings on workplace apps. CIDI is a consortium of the CATEA and AMAC Accessibility / Tools for Life (Georgia’s Assistive Technology Act Project). Partners include Raising the Floor and ATIA.

NIDILRR Program Directory FY 2017 - Employment
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Field Initiated Projects (FIPs)
Georgia

Field Initiated Project (Research) on Contingent Employment of Individuals with Disabilities (FIP-CE)

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Project Number: 90IFRE0004
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 17 $198,376; FY 18 $198,343; FY 19 $198,281

Abstract: This project produces empirical evidence about the participation, practices, and characteristics of people with disabilities engaged in contingent work, as well as their rationales, attitudes, perceptions, and experiences in contingent work arrangements. Millions of American workers, including people with disabilities, have contingent work arrangements that differ from standard work arrangements characterized by permanent jobs with traditional employer-employee relationships. Contingent workers include agency-placed and direct-hire temporary employees (temps), contract company workers, independent contractors, on-call workers, and day laborers. The recent emergence of online-based or mobile app-based employment opportunities has further contributed to the redefinition of employment and the labor market. Researchers interview subjects from two sample groups: people with disabilities in contingent employment and people without disabilities in contingent employment. Findings from these interviews are used to develop, test, and administer a Survey on Contingent Employment Practices by People with Disabilities. Research instruments and evidence-based findings from the survey may be used by researchers on employment statistics and measures, disability and employment policymakers, and employer groups that rely on contingent employment arrangements.
Field Initiated Projects (FIPs)
Illinois

PRIDE (Partners of Refugees in Illinois Disability Employment)

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Project Number: 90IF0110
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 16 $199,495; FY 17 $196,262; FY 18 $196,623
Abstract: The Partners of Refugees in Illinois Disability Employment (PRIDE) project develops innovative strategies and tools to improve vocational rehabilitation (VR) access and employment outcomes for refugees with disabilities. The PRIDE project has four goals: (1) building organizational capacity among refugee service providers; (2) providing comprehensive training interventions and supports to promote competitive and self-employment; (3) improving connectivity between refugees with disabilities, VR providers, and potential employers by developing and field testing an information technology application; and (4) disseminating PRIDE’s outputs and products in culturally relevant ways. The PRIDE project offers culturally tailored employment training to 50 job-seeking refugees with disabilities. Concurrent with the training sessions, participants receive personalized case management services from staff of partner agencies, peer mentoring, and personal consultation with a business consultant. By facilitating new connections between the state VR systems, refugee-serving agencies, and employers, the PRIDE project assists in building economic self-sufficiency of refugees who have disabilities, while shaping future VR and employment policies and practices pertaining to this underserved group.
Developing and Validating a Measure of Career Advancement for Individuals with Psychiatric Disabilities:
A Field Initiated Research Grant

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Project Number: 90IFRE0006
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 17 $199,946; FY 18 $199,242; FY 19 $199,856

Abstract: This project develops a standardized measure of career advancement for individuals with psychiatric disabilities. Increased attention is being paid to the career development of individuals with psychiatric disabilities, particularly for young adults. However, little is known about the concept of career development for individuals with psychiatric disabilities. Assessment of career advancement is a critical first step in understanding the vocational trajectory of individuals with psychiatric disabilities and determining the longer-term impact of employment services. The goals of this project are to: (1) Develop a theoretical framework for a measure of career advancement for use with adults with psychiatric disabilities, especially young adults; (2) conduct rigorous psychometric testing of the instrument and assess its utility in practice; and (3) disseminate the scale widely to key stakeholders, including consumers, researchers, and evaluators in the mental health and rehabilitation fields, using a variety of mechanisms.
Field Initiated Projects (FIPs)
Massachusetts

Progressive Employment for Individuals with the Most Significant Disabilities

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Project Number: 90IFRE0009
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 17 $199,932; FY 18 $199,880; FY 19 $199,943

Abstract: This field-initiated project is researching the progressive employment (PE) model for individuals with the most significant disabilities served by state vocational rehabilitation agencies and community rehabilitation providers. The PE model is a dual-customer strategy that uses work-based learning strategies to meet the needs of both the business and the jobseeker with a disability while minimizing the risks for both parties. Fidelity to the model is measured in the key areas of: (1) dual-customer design; (2) team approach; (3) focus on high-risk or difficult to place consumers; (4) emphasis on rapid engagement; (5) mechanism for set asides or training offsets for work experience pay; (6) liability and workers’ compensation insurance for trainees; and (7) data tracking tools for PE. The objective of this project is to determine the impact of PE, when implemented with fidelity, as a strategy for improving competitive employment outcomes for people with barriers to employment. To meet this objective, researchers conduct systematic data collection and secondary analysis of progressive employment implementation data and vocational rehabilitation case file data recorded in four states; create a PE fidelity of implementation scale and measure PE model implementation integrity; compare employment outcomes for groups receiving PE and not receiving PE services in a three-to-four year period; and disseminate research findings to inform future randomized control trials of PE.
Field Initiated Projects (FIPs)
Minnesota

Evaluating the Effectiveness of CareProfiler Post-Hire System for Staff Supporting People with Disabilities and Age-Related Needs:
Cluster Randomized

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Project Number: 90IF0109
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 16 $196,778; FY 17 $196,778; FY 18 $199,271

Abstract: This project is based on a conceptual framework for the delivery of supports for employees with disabilities and their employers. The research for this project is designed to validate the CareProfiler Post-Hire system, which is designed to maximize the effectiveness of supports provided to people with intellectual and developmental disabilities (IDD) and age-related support needs (ARSN). This system builds the capacity of supervisors to serve as more effective leaders, increase job retention, and maximize the impact of organization training on staff skills and competencies by maximizing engagement with clients and one’s job. The Institute on Community Integration (ICI) at the University of Minnesota serves as an evaluator of the effectiveness of the CareProfiler Post-Hire System. The evaluation is designed as a cluster randomized control trial of the three components of the Post-Hire System on supervisor competencies and direct support staff engagement, skills, competencies, and retention on the job supporting people with IDD and ARSN.
Career Self-Management Through Job Crafting for People with Physical and Mild Cognitive Disabilities: A Mixed Methods Study

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Project Number: 90IFRE0008
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 17 $199,934; FY 18 $199,995; FY 19 $199,997
Abstract: The overarching goal of this project is to develop and test an intervention program to improve job retention and facilitate job growth among people with physical and mild cognitive disabilities through the use of career self-management strategies. The project is a mixed methods study to develop and test a career self-management intervention based on job crafting. Job crafting is an informal, idiosyncratic, strengths-based approach where employees are constantly redefining and renegotiating their daily job tasks. Job crafting includes modifying the physical (how and where the task is performed), cognitive (meaning attached to the job task), and relational (social interactions) boundaries inherent in the job task. Anticipated outcomes for study participants include: (1) improving occupational self-efficacy and work engagement, and (2) an understanding of how the job crafting approach can be used over the long-term to problem-solve barriers and to seize opportunities for career growth.
Treating Hidden Barriers to Employment: Integrated Treatment for PTSD in Supported Employment

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Principal Investigator: Weili Lu, PhD; William Waynor, PhD
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Project Number: 90IF0074 (Formerly H133G140147)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 14 $199,914; FY 15 $199,978; FY 16 $199,986; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project evaluates the feasibility and effectiveness of integrated cognitive behavioral treatment (I-CBT), an intervention aimed at enhancing employment among people with psychiatric disabilities and co-morbid post-traumatic stress disorder (PTSD) who are receiving supported employment services. The project adapts an existing evidence-based CBT intervention proven to reduce PTSD symptoms in individuals with psychiatric disabilities, and integrates it into a supported employment program. The goal is to develop an evidence-based program to support individuals with co-occurring psychiatric disabilities and PTSD seeking employment, and address PTSD as a hidden barrier to their success.
Getting and Keeping People with Disabilities in the Workforce: Negotiating Work, Life, and Disability

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Principal Investigator: LaWanda H. Cook, PhD
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Project Number: 90IF0051 (Formerly H133G130136)
Start Date: October 01, 2013
Length: 36 months
NIDILRR Officer: Shelley Reeves

NIDILRR Funding: FY 13 $200,000; FY 14 $200,000; FY 15 $200,000; FY 16 (No-cost extension through 9/29/2017); FY 17 (No-cost extension through 3/31/2018)

Abstract: This project examines the strategies and resources used by individuals with disabilities who are successfully employed to negotiate the work and non-work domains leading to longer, more satisfying work lives, and the role of employers and disability service professionals in supporting this. Balance between work and the rest of life is vital to individuals’ employment success and overall well-being. Employees who lack work-life balance (WLB) may experience reduced productivity, decreased job satisfaction, and opt to leave their jobs or exit the workforce altogether rather than struggle to meet competing demands. The project aims to: (1) understand how individuals with disabilities perceive WLB, and its relationship with Quality of Work-Life (QWL); (2) categorize the strategies and resources these individuals utilize to manage their work-life needs; (3) identify the individual and work context factors which facilitate positive WLB for employees with disabilities; and (4) inform and support individuals with disabilities, employers, and service professionals about how to improve the QWL for employees with disabilities. The project utilizes surveys and focus groups with individuals with disabilities in various job sectors, as well as targeted outreach to employers and disability service professionals.
Evaluating the Effectiveness of Online, Portal-Based Vocational Rehabilitation Services

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**Public Contact:** 937/775-1484; Fax: 937/775-1495

**Project Number:** 90IF0081 (Formerly H133G140194)
**Start Date:** October 01, 2014
**Length:** 36 months

**NIDILRR Officer:** Hugh Berry, EdD

**NIDILRR Funding:** FY 14 $199,999; FY 15 $199,988; FY 16 $199,990; FY 17 (No-cost extension through 9/29/2018)

**Abstract:** This project evaluates the effectiveness of online, portal-based vocational rehabilitation (VR) services by comparing the outcomes and cost effectiveness of online VR services with the outcomes and cost effectiveness of traditional VR services offered in Ohio, Illinois, and Kentucky. Many individuals with significant disabilities have limited access to VR services because of physical, cultural, and social barriers, such as mobility issues and communication difficulties. The goal of this portal project is to improve access to VR services and enhance employment outcomes for these individuals with disabilities. Specific aims are to: (1) implement online VR services that are delivered through personal portals that are optimized for use on cell phones, tablets, and computers; (2) compare employment outcomes and cost effectiveness of online and traditional VR services in a randomized controlled trial; and (3) evaluate the feasibility, usability, and adoption of online services by VR counselors and consumers. The long-term goal is to train and encourage VR counselors across the nation to use online technology to provide services to VR consumers when time, distance, and/or disability constrain the delivery of traditional VR services.
Mobile Accommodation Tool: Development, Implementation, and Evaluation

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Principal Investigator: D.J. Hendricks, EdD
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Project Number: 90IF0097
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 15 $199,897; FY 16 $199,737; FY 17 $199,942

Abstract: The goal of this project is the successful development and deployment of a cloud-based Mobile Accommodation Tool (MAT) for use in the disability field to provide individualized accommodation support. The MAT supports the user by guiding and documenting the good faith efforts made during the interactive accommodation process. Intended users include employers, hiring managers, disability management staff, return-to-work specialists, rehabilitation professionals, and service providers as well as people with disabilities who are seeking work, candidates for employment, or current employees. The MAT contains a downloadable database for storing and exporting individualized accommodation case records, how-to resources for making an accommodation, forms for generating communication between the individual with a disability and the employer representative, and various other tools such as an accommodation checklist to manage the accommodation process. The MAT enables those responsible for accommodating applicants, candidates, and employees with disabilities and aims to demystify the process and minimize common mistakes made during the interactive process. This project is a partnership with the International Center for Disability Information at West Virginia University, the Job Accommodation Network (JAN), and IBM.
Community Living and Participation

NIDILRR is committed to improving the opportunities and abilities of individuals with disabilities to live as integrated members of their communities and to participate in community activities of their choice. NIDILRR supports centers and projects to increase community living and participation through improvements in policy, services and support delivery, assistive technologies, environmental modifications, and person-centered planning and therapeutic interventions. Activities funded in this area are consistent with the underlying principles of the independent living programs authorized under the Rehabilitation Act and the ADA.

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Rehabilitation Research and Training Centers (RRTCs)
California

Rehabilitation Research and Training Center on
Community Living Policy

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Project Number: 90RT5026 (Formerly H133B130034)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Phillip Beatty, PhD
NIDILRR Funding: FY 13 $875,000; FY 14 $875,000; FY 15 $875,000; FY 16 $875,000; FY 17 $875,000

Abstract: The Community Living Policy Center (CLPC) at the University of California San Francisco (UCSF) aims to identify methods of improving the long-term services and support (LTSS) system in the states, improve data collection on community living policy, and develop a strategic plan for community living research. Research focuses on the following areas: (1) Identification of promising practices in state LTSS systems, focusing especially on managed LTSS and on streamlining the LTSS system; (2) investigation of quality and outcome measurement in LTSS and development of methods for improved monitoring of progress in state LTSS systems; (3) collecting and disseminating information on state LTSS policies, practices, and programs, including policies related to access to home- and community-based services (HCBS), data on HCBS participants and expenditures, information on worker registries and consumer-worker matching services, data on worker wages and benefits, and information on worker training standards and their development; (4) conducting evaluations of managed LTSS systems in California and Illinois; (5) analysis of national survey datasets on selected topics in community living, including trends in family caregiving and state variation in community participation among people with disabilities; and (6) developing a strategic plan for community living research. CLPC training activities include the College of Personal Assistance and Caregiving (CPAC), an online training curriculum for both paid home care workers and family caregivers, with an emphasis on person-centered, consumer-directed services that support independent living in the home and community. This project includes partnership with the following organizations: Disability Rights Education and Defense Fund, National Council on Aging and the Disability and Aging Collaborative, Department of Disability and Human Development at the University of Illinois at Chicago, PHI (formerly the Paraprofessional Healthcare Institute), Topeka Independent Living Resource Center, and the Sibling Leadership Network.
Rehabilitation Research and Training Center (RRTC) on Family Support

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Principal Investigator: Sandra M. Magaña, PhD; Tamar Heller, PhD; Joe Caldwell, PhD (National Council on Aging)
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Project Number: 90RT5032 (Formerly H133B140046)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 14 $874,999; FY 15 $874,999; FY 16 $874,995; FY 17 $874,983; FY 18 $874,989

Abstract: The goal of the RRTC on Family Support is to bridge aging and disability research, practice, and policies to generate new knowledge in family supports which contributes to improvements in community living, participation, health and function, and other outcomes for individuals with disabilities from different racial and ethnic backgrounds who are supported by family members. The Center conducts six research projects: (1) Development of a Strategic Plan for Family Support uses a participatory approach to generate and prioritize research topics and questions, an expert panel to design research strategies, and secondary analysis of national data to answer identified questions; (2) Identifying Promising Practices in Family Support Services uses a participatory approach with stakeholders to nominate, investigate, and synthesize promising local and state family support practices that can be disseminated and used more widely; (3) Family Member Roles and Well-Being in Self-Directed Waiver Programs examines the relationship between self-directed waiver program components, family environment, and caregiver well-being; (4) Understanding Experiences, Trends, and Needs in Self-Directed Support Programs uses mixed methods to investigate national trends in self-directed support, and the experience and satisfaction of caregivers in self-directed support programs; (5) Family Support in Managed Care investigates the impact of transitioning from fee-for-service to managed care on families and individuals who receive services; and (6) Parents Taking Action: A Parent Training Program for Latino Families of Children with Autism Spectrum Disorders (ASD) tests the efficacy of an intervention that engages parents of children with ASD in providing education and training to other parents. The Center partners with the Lurie Institute for Disability Policy at Brandeis University, the National Resource Center for Participant-Directed Services at Boston College, the RTC on Community Living at the University of Minnesota, and the National Council on Aging as well as various organizational partners.

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Rehabilitation Research and Training Centers (RRTCs)
Kansas

Rehabilitation Research and Training Center on Promoting Interventions for Community Living (RRTC/PICL)

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Project Number: 90RT5043
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 16 $875,000; FY 17 $875,000; FY 18 $875,000; FY 19 $875,000; FY 20 $875,000

Abstract: The Rehabilitation Research and Training Center on Promoting Interventions for Community Living (RRTC/PICL) promotes community participation outcomes for adults with physical and multiple co-occurring disabilities, living in the community or transitioning from nursing facilities to the community. The objectives of this Center are to use a person-environment fit model to investigate evidence-based, multifaceted interventions that target change in individual characteristics and environmental factors to support enhanced community participation. The Center’s research begins with a systematic literature review on multifaceted community-based interventions and progresses to a single research project that involves three studies: (1) development and refinement of the Out and About Intervention, teaching problem solving and goal setting to support community participation; (2) an efficacy study that utilizes a randomized control trial to study the impact of the Home Base intervention to empower consumers to self-assess their home environment and to provide support to enhance their home usability, resulting in a guide for assessing home usability; and (3) a second efficacy study that investigates the impact on the community participation of consumers that receive both interventions. Outcomes are measured quantitatively and qualitatively, including increased usability of consumers’ homes, increased health and reduction of secondary health conditions, personal goal achievement, and increased participation in the community. Dissemination activities include systematic reviews, webinars, publications, and a National Community Living Resource Center.
Rehabilitation Research and Training Centers (RRTCs)
Minneapolis

Research and Training Center on Community Living for
People with Intellectual Disabilities

University of Minnesota
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Principal Investigator: Amy Hewitt, PhD
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Project Number: 90RT5019 (Formerly H133B130006)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 13 $875,000; FY 14 $875,000; FY 15 $875,000; FY 16 $875,000; FY 17 $875,000

Abstract: The University of Minnesota’s Research and Training Center on Community Living (RTC/CL) conducts research, training/technical assistance, and dissemination activities focused on community living and participation of individuals with intellectual and developmental disabilities (I/DD). Research studies within the RTC/CL include policy and outcome analyses using the largest, most comprehensive data set of individual outcomes for a random sample of adults with I/DD from 36 geographically representative states; intervention studies related to participation through self-determination, social inclusion, employment, and the direct support workforce in a variety of community living service settings including family and individual homes. The RTC/CL provides a comprehensive training program that has and will continue to develop new generations of competent and skilled disability researchers and professionals. Outreach programs provide training and technical assistance to agencies and individuals across the US. The RTC/CL training programs include: (a) the annual Reinventing Quality Conference; (b) presentations at national, regional, and state conferences; (c) a state of the science conference; and (d) training and technical assistance with national, state, and local community organizations. The RTC/CL’s College of Direct Support, an acclaimed national interactive internet-based training program, trains over 390,000 direct support personnel each year. The RTC/CL disseminates practical information to targeted varied audiences through nationally recognized video/film productions and publications, including IMPACT, Policy Research Brief, and Frontline Initiative. RTC/CL websites provide access to its various publications and products.

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Rehabilitation Research and Training Centers (RRTCs)
Minnesota

Rehabilitation Research and Training Center on Home and Community-Based Services Outcomes Measurement

Regents of the University of Minnesota
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Project Number: 90RT5039
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 15 $875,000; FY 16 $875,000; FY 17 $875,000; FY 18 $875,000; FY 19 $875,000

Abstract: The Rehabilitation Research and Training Center on Home and Community-Based Services Outcomes Measurement (RRTC/OM) conducts research, training, and technical assistance activities to promote quality outcome measurement in home and community-based services (HCBS), working in close alignment with the National Quality Forum (NQF), the Administration for Community Living, and other stakeholders. Research activities identify and prioritize HCBS outcome domains, identify measure gaps and evolve new measures, catalog existing measures and evaluate these for validity and appropriateness, select the best measures for each outcome domain/topic area, test measures for reliability and validity, and assess measures using prioritized risk adjusters. Focus is on cross-disability measures at the individual HCBS recipient, organization, and systems levels gathered directly from people with disabilities or through program administrative and encounter data. Each measure will be prepared and submitted for approval by the NQF. In addition to identifying and testing measures, the RRTC/OM investigates methodological issues with regard to outcome measurement by working with numerous outcome measurement programs to identify existing data collection/reporting methods, evaluate their rigor, and evolve recommendations for preferred data collection and reporting. The RRTC/OM also provides training and technical assistance to federal agencies, states, organizations, and other stakeholders on HCBS quality outcome measurement and systems. These activities include but are not limited to: training on how to use an online searchable database of HCBS measures by domain area, development and implementation of webinars regarding HCBS measurement, and participation in conferences and other coordinated dissemination activities.
Rehabilitation Research and Training Center on Disability in Rural Communities

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Project Number: 90RT5025 (Formerly H133B130028)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 13 $875,000; FY 14 $875,000; FY 15 $875,000; FY 16 $875,000; FY 17 $875,000

Abstract: The Research and Training Center on Disability in Rural Communities (RTC: Rural) at the University of Montana advances the science of rural disability and rehabilitation by finding solutions to rural issues experienced by people with disabilities (PWD) in the areas of health, employment, and community living. Current research and development projects include: Geography of Rural Disability, which uses GIS and national data sources (i.e. American Community Survey and Public Use Microdata Samples) to examine the distribution of PWDs and availability of services in rural communities; Ecology of Rural Disability, which uses longitudinal data to examine how personal and environmental factors impact community participation; Resilience in Community Participation, which studies factors that contribute to active community participation among PWDs; Person-Environment Fit in Rural Communities, which uses real-time assessment data to predict community participation; Measuring Opportunity in Rural Events, which creates a validated measure for assessing the accessibility of rural community events; Rural Contracted Employment Services, which develops recommendations for increasing employment support providers in rural communities by examining variations in provider payments structures; Social Media for Employment, which aims to improve use of online job search and social media strategies to improve rural employment opportunities; Rural Self-Employment Opportunities, which evaluates a process for increasing the skills of vocational rehabilitation counselors in the area of self-employment; Community Accessibility of Rural Environments, which demonstrates how community accessibility data can be used to advocate for community improvement; and Rural Mobile Health Promotion Intervention, which develops a mobile device application to addresses common secondary health conditions. The RTC: Rural Knowledge Translation activities communicate research findings to a broad audience through dissemination, training, and technical assistance (TA). Dissemination includes publications,
conference presentations, print and electronic mailings, websites, and social media. Specific training efforts include a state of the science conference series, development of a rural rehabilitation and disability curricula, mentoring student researchers, a rural policy series, and continued training on established projects. TA includes rapid research response to stakeholder requests and supporting the Association of Programs for Rural Independent Living National Training and TA in rural policy issues.
Rehabilitation Research and Training Centers (RRTCs)
Oregon

Research and Training Center for Pathways to Positive Futures: Building Self-Determination and Community Living and Participation

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Project Number: 90RT5030 (Formerly H133B140039)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 14 $499,600; FY 15 $499,600; FY 16 $499,600; FY 17 $499,600; FY 18 $499,600
Other Funding: FY 14 $375,400 (SAMHSA); FY 15 $375,400 (SAMHSA); FY 16 $375,400 (SAMHSA); FY 17 $375,400 (SAMHSA); FY 18 $375,400 (SAMHSA)

Abstract: This Center conducts research, training, and dissemination activities focused on building self-determination and enhancing community living and participation outcomes in young people with serious mental health conditions (SMHCs). The Center conducts six intervention-based projects: FUTURES tests an approach to improving college retention and success, as well as community participation and self-determination, among first-year college students with SMHCs who are, or have been, in foster care. EASA Connections tests a web-based psychoeducation and decision-aid intervention designed to increase the extent to which young people who are experiencing a first episode of psychosis are engaged and self-determined with regard to their treatment. A third project, Mentee-Nominated Mentoring, is a developmental investigation of a cutting-edge approach to helping young people who have been living in psychiatric inpatient facilities transition back to the community and build social and cultural capital. Two additional projects develop and evaluate interventions designed to increase providers’ skill in working with youth and young adults with SMHCs to increase their self-determination and enhance their community living and participation: Technology-Enhanced Coaching for Positive Development focuses on professional providers and their supervisors, while AMP+: Developing the Young Adult Peer Support Workforce works with young adult peer support providers and their supervisors and agency administrators. Both of these projects employ new technology to improve training, coaching, and supervision. Finally, System/Policy Analysis and Change is focused on understanding key system issues and policy challenges that impede or support accessible and effective services for young adults with SMHCs. This project also examines examples of young adult-led policy change and the challenges young adult advocacy organizations face when they enter the policy arena. Additionally, this RRTC assesses the utiliza-
tion of Promoting Positive Pathways to Adulthood, a series of online training modules designed for service providers who work with youth and young adults with SMHCs. Collaborations with young people and other stakeholders, including providers, researchers and family members, ensure that interventions are practical and feasible, and that training and dissemination are relevant and useful. This project is also supported by the Substance Abuse and Mental Health Services Administration (SAMHSA).
Rehabilitation Research and Training Centers (RRTCs)
Pennsylvania

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

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Project Number: 90RT5021 (Formerly H133B130014)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 13 $875,000; FY 14 $875,000; FY 15 $875,000; FY 16 $875,000; FY 17 $875,000

Abstract: This project advances the development of interventions that maximize community living and participation of individuals with psychiatric disabilities through research and knowledge translation activities in partnership with consumers and other key stakeholders. This project conducts seven research studies in the areas of technology, individual and environmental factors, and interventions, and includes transition-aged youth. The research includes randomized, controlled designs; cross-sectional studies where structural equation modeling and geographic information systems technology are utilized; and epidemiological methods. This project also conducts three technical assistance, three training, and two dissemination projects.
Disability and Rehabilitation Research Projects (DRRPs)
Kansas

I-CONNECT PLUS: Enhancing Community Participation for Adolescents and Adults with ASD Using Online Instruction, Coaching, and Accessible Self-Management Technologies

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Principal Investigator: Jay Buzhardt, PhD; Linda S. Heitzman-Powell, PhD; Ben Mason, PhD; Rose Mason, PhD; Howard Wills, PhD; 913/321-3143, ext. 2603

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Project Number: 90DP0058 (Formerly H133A130032)
Start Date: October 01, 2013
Length: 60 months

NIDILRR Officer: Hugh Berry, EdD

NIDILRR Funding: FY 13 $458,224; FY 14 $474,772; FY 15 $467,313; FY 16 $462,543; FY 17 $473,103

Abstract: This project develops I-CONNECT PLUS, a technology-supported instructional system to teach social competence, problem-solving skills, and organizational/self-monitoring skills for adolescents and young adults with Autism Spectrum Disorder (ASD). The project provides remote tele-coaching by community providers, peers, and family members for promoting generalized use; and focuses on the use of self-management and monitoring of outcomes to promote independence and full engagement across settings. This project includes five objectives: (1) developing instructional technology including use of mobile applications (e.g., I-CONNECT PLUS) to teach social competence, problem solving, and organization/self-monitoring skills for adolescents and young adults with ASD; (2) developing tele-coaching materials to generalize skills to community settings; (3) adapting a self-management system to include applicable system features (e.g., skill task analysis, link to instructional modules) for I-CONNECT PLUS; (4) conducting initial pilot trial of the entire I-CONNECT PLUS program; and (5) assessing the feasibility of I-CONNECT PLUS program.
Disability and Rehabilitation Research Projects (DRRPs)
Kansas

Online and Applied Systems for Intervention Skills (OASIS) Parent Training Program: Translating Research to Practice

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Principal Investigator: Linda S. Heitzman-Powell, PhD; Jay Buzhardt, PhD
Public Contact: 913/945-6604

Project Number: 90DP0097
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 16 $149,940; FY 17 $149,938; FY 18 $149,993
Abstract: The overall goal of this project is to create the infrastructure necessary for the dissemination and uptake of Online and Applied Systems Intervention Skills (OASIS), a training system developed through NIDILRR’s development and research field initiated programs. This project seeks to improve access to services for families, specifically those families that otherwise would not have access to services. The objectives of this project are to: (1) collaborate with key health-care partners to create the infrastructure needed to enable service providers to receive compensation for implementation of OASIS; (2) to develop the processes necessary to disseminate OASIS to the behavioral health care community to include appropriate, timely, and cost-effective training on the use of OASIS; and (3) train service providers from key agencies to implement OASIS.
Measurement of Community Participation Using a Computer Adaptive Test (CAT) in Persons with Burn Injuries (PWB)

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Project Number: 90DP0055 (Formerly H133A130023)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 13 $475,000; FY 14 $475,000; FY 15 $475,000; FY 16 $475,000; FY 17 $474,999

Abstract: This project develops and evaluates a computerized adaptive test (CAT) metric for assessing outcomes in adults with burn injuries for purposes of assessing community participation during ambulatory outpatient rehabilitation. The Burn Injury Computer Adaptive Test (BI-CAT) is developed by focusing on three domains: social interaction, work re-integration, and sexual function, with the goal of improving long-term community participation and functioning of individuals with burn injuries. A demonstration of BI-CAT provides an evaluation of reliability and validity in outpatients with burn injury. Comparisons are made between well-established legacy measures and BI-CAT at two different time periods. This project builds on the resources of the BH-BIMS, Boston University School of Public Health, MGH Burn Care Unit and Spaulding Rehabilitation Hospital, the National Phoenix Society, American Burn Association, and World Burn Congress.
Disability and Rehabilitation Research Projects (DRRPs)
Massachusetts

Enhancing the Community Living and Participation of
Individuals with Psychiatric Disabilities

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Project Number: 90DP0066 (Formerly H133A140032)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 14 $494,906; FY 15 $494,829; FY 16 $494,721; FY 17 $494,502; FY 18 $494,474

Abstract: This project includes several studies targeting the development of a new measure of community living and participation for individuals with psychiatric disabilities and the development and effectiveness testing of an innovative peer-led intervention promoting community living and participation in this population, titled “Bridging Community Gaps Photovoice.” These development activities are informed by a comprehensive exploratory study examining the barriers and facilitators to the community engagement of individuals with psychiatric disabilities. Finally, this project provides training and technical assistance in the use of the Bridging Community Gaps Photovoice and widely disseminates the intervention manuals, the new Multi-Dimensional Assessment of Community Participation (MDACP) instrument, and findings from related exploratory research activities.
Disability and Rehabilitation Research Projects (DRRPs)
Massachusetts

Parents Empowering Parents: National Research Center for Parents with Disabilities and their Families

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Project Number: 90DPGE0001
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 16 $500,000; FY 17 $499,999; FY 18 $500,000; FY 19 $500,000; FY 20 $500,000

Abstract: This project addresses the knowledge gaps regarding parents with disabilities and their families through: (1) population-based research and analysis of national datasets to inform policy and practice; and (2) the systematic analysis of state legislation and child welfare policies to identify facilitators and barriers to systemic change. Researchers are developing, adapting, testing, and scaling-up interventions that include: (1) a parent peer specialist model for parents with psychiatric disabilities; (2) a virtual peer support intervention for Deaf parents; (3) a parent-centered planning intervention for parents with intellectual, developmental, and physical disabilities; and (4) a targeted, informed legal services model for parents with diverse disabilities. Resources, tools, and training and intervention materials are made available through the accessible online Parents Empowering Parents Portal and its sister site, Padres Apoderando a Padres. The project is also building on the Disabled Parenting Project web site, where parents and family members currently interact, share knowledge, and empower each other.
Building Capacity to Improve Community Participation for People Aging with Long-Term Disability Through Evidence-Based Strategies

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Project Number: 90DPCP0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 17 $497,342; FY 18 $493,489; FY 19 $497,204; FY 20 $496,635; FY 21 $497,343

Abstract: This project identifies and addresses barriers to successful community participation for people aging with long-term physical disability. People in this group are living longer and experiencing the challenges of aging, including the onset of secondary and age-related chronic health conditions, leaving them at high risk of diminished functional abilities and compromised participation. Goals and activities of this project include: (1) developing a community-based research network (CBRN), including long-term supportive services, to serve as a platform for continued intervention development and refinement and for the future implementation and dissemination of evidence-based practices; (2) identifying the barriers and supports to community participation for people aging with long-term physical disabilities to inform service delivery through an ongoing cohort survey; (3) translating and adapting an existing evidence-based intervention to enhance community participation for individuals aging with long-term disabilities; and (4) evaluating the feasibility, fidelity, and preliminary efficacy of the adapted intervention for the new target population.
Disability and Rehabilitation Research Projects (DRRPs)
New York

The Community for All Project to Develop a Series of Six Online Toolkits to Improve Community Living and Participation for People with Intellectual and Developmental Disabilities

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Project Number: 90DP0068 (Formerly H133A140063)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 14 $420,139; FY 15 $484,055; FY 16 $499,972; FY 17 $495,699; FY 18 $404,305

Abstract: This project develops a six-part toolkit for self-advocates, families, professionals, and policymakers designed to improve community living and participation for people with intellectual and developmental disabilities (I/DD). The toolkits are based on the 2004 Community for All: Resources for Supporting Community Living. The six components are entitled Deinstitutionalization for All (an update of the 2004 toolkit); Self-Advocacy and Choices for All; Community Participation for All; Lifelong Learning for All; Family for All; and Digital Communities for All. Each toolkit consists of downloadable materials, a website, and an app. Development and modification of the toolkits are based on literature, suggestions from participants in Policy Institutes for each toolkit topic area, and recommendations from a technology conference for self-advocates. Annual Design Institutes advise the project regarding universal design and accessibility, and the development of basic computer instruction videos. Each toolkit prototype is field tested in New York with final versions tested nationally. Technical assistance is available throughout the project and there are four planned toolkit trainings. This project is a collaboration between the Center of Human Policy, Law, and Disability Studies; Taishoff Center for Inclusive Higher Education; the University of Delaware; and the Self-Advocacy Association of New York State (SA-NYS).
Understanding and Increasing Supported Decision-Making’s Positive Impact on Community Living and Participation Outcomes

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Project Number: 90DP0076
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 15 $498,978; FY 16 $498,140; FY 17 $499,318; FY 18 $497,152; FY 19 $499,023

Abstract: This project creates and tests an intervention using a randomized control trial approach examining whether training individuals with intellectual and developmental disabilities (I/DD), their families, and support networks to use Supported Decision Making (SDM) approach improves life satisfaction and integration in community living and daily life outcomes. In Study 1, researchers use valid and reliable measures to survey study participants in order to determine their decision-making methods, level of self-determination, and life satisfaction outcomes, including community integration. This study investigates decision-making methods that lead to greater self-determination, life satisfaction outcomes, and community integration; and demographic variables, including legal decision-making status, that are associated with self-determination, quality of life outcomes, and community integration. Study 2 is a field-based intervention examining variables to determine the extent in which training in SDM leads to improvements on community participation. Project findings are used to recommend changes in policy and practice with the target population across the life course (i.e., youth in transition, working-age adults, aging population). Knowledge translation activities target policymakers, service providers, persons with disabilities and their families, and supporters, focusing on the impact and benefits of SDM. Materials and technical assistance are customized to target audience learner needs and preferences. This project is a collaboration between the Burton Blatt Institute at Syracuse University, the Beach Center/Kansas University Center on Developmental Disabilities, and Quality Trust for Individuals with Disabilities.
Disability and Rehabilitation Research Projects (DRRPs)
Washington

Collaborative on Health Reform and Independent Living

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Project Number: 90DP0075
Start Date: September 30, 2015
Length: 60 months

NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 15 $499,342; FY 16 $499,803; FY 17 $497,472; FY 18 $499,803; FY 19 $497,472

Abstract: The objective of the Collaborative on Health Reform and Independent Living (CHRIL) is to provide disability stakeholders with accurate, current, and actionable information on how recent changes in health policy directly or indirectly impact the community living and participation of working-age adults with disabilities. The CHRIL brings together disability advocates and researchers from four institutions (Washington State University, the University of Kansas, George Mason University, and the Independent Living Research Utilization program at TIRR Memorial Hermann Hospital) to systematically investigate and disseminate essential findings about how the Affordable Care Act’s (ACA) implementation effects adults with disabilities. Specific CHRIL research activities include: (1) Documenting the experiences of working-age adults with disabilities in obtaining and maintaining health insurance, and identifying the impact of insurance on their access, health, and function through phone interviews, internet surveys, and analysis of the Health Reform Monitoring Survey (HRMS); (2) assessing the health insurance information, training, and technical assistance needs of Centers for Independent Living (CILs) and other disability stakeholders through internet surveys, phone interviews of CIL directors, and town-hall meetings at national independent living conferences; (3) analyzing post-reform insurance coverage trends among working-age adults with disabilities using the National Health Interview Survey (NHIS); (4) identifying gaps in coverage and potential areas of undue cost-burden for people with disabilities by analyzing health care expenditures, including premium costs, deductibles, and co-pays using the Medical Expenditure Panel Survey (MEPS); and (5) assessing the impact of the ACA on disability program enrollment and workforce participation by testing how the Medicaid expansion influences SSI activity using the American Community Survey (ACS). The CHRIL engages in knowledge translation activities including: Presenting research findings at professional and scientific meetings; submitting manuscripts for inclusion in scientific and professional journals; offering webinars and creating self-paced tutorials on various aspects of health care policy, organization, and financing; and developing and maintaining the CHRIL website that includes access to all publications and presentations in accessible formats.
Access to Success: Replication and Impact of a Training Program Supporting Post-Secondary Students in Requesting Disability Accommodations

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Project Number: 90IF0082 (Formerly H133G140213)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 14 $199,774; FY 15 $199,774; FY 16 $199,636; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project investigates the efficacy of a training program, Access to Success, in supporting postsecondary students with disabilities to request accommodations from community-college faculty and staff, to maximize their opportunity for success in their postsecondary career. Access to Success provides students with disabilities with the knowledge and skills enabling them to advocate for accommodations needed to succeed in their coursework as well as to learn skills that may help gain more independence. The training model, developed through a previous NIDILRR Field Initiated Development Project, includes two components: First, an interactive online tutorial that provides knowledge about (a) students’ rights through the ADA and other legislation, including how to establish eligibility for accommodations in postsecondary settings; (b) self-assessment activities to help students understand their own strengths and needs and the most appropriate accommodations to support them; and (c) an introduction to the seven-step negotiation framework for requesting accommodations, including videos of students demonstrating the skills. The second component emphasizes skills development and consists of an in-person workshop with students, providing negotiation skills practice through role-play scenarios. For this project, researchers investigate whether the training results in more long-term outcomes, related to attitudes toward requesting and using supports, generalized use of the skills taught, and successful completion of courses.
Cooperative Learning and Individualized Mentoring to Build Self-Efficacy, Persistence, and Goal Attainment in Postsecondary African American Students

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Project Number: 90IF0103
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 15 $200,000; FY 16 $200,000; FY 17 $200,000

Abstract: This project develops methods and procedures that maximize the full inclusion and integration into society, employment, independent living, family support, and economic and social self-sufficiency of individuals with severe disabilities, especially those from traditionally underserved groups. Project CLAIM strives to improve the effectiveness of services authorized under the Americans with Disabilities Act, via the conduct of theory-driven research and targeted dissemination activities designed for vocational rehabilitation (VR) clients, their families, communities, practitioners, and employers. Project CLAIM focuses on issues related to employment skills gap from the perspective of educational opportunities, access to multi-disciplinary services, and incorporation of demand-side placement strategies in vocational rehabilitation. The project uses a mixed-methods research study to construct and validate an effective pedagogical framework for promoting self-efficacy, persistence, and goal attainment among African American postsecondary education (AA PSE) students with disabilities. The project ensures achievement of goal by focusing on: (1) Offering of cooperative learning and self-directed career planning opportunities; (2) provision of individualized and culturally sensitive mentoring to assist in adjustment to college life; and (3) identification of modes of integrating needs of employers and AA PSE students with disabilities so that quality employment-related outcomes can be achieved. Project CLAIM utilizes the two well-known and evidence-based pedagogical techniques and two-pronged employment skills development training to guide AA PSE students with disabilities to academic persistence, goal attainment, and job placement: (a) Intervention 1: Cooperative learning, (b) Intervention 2: Mentoring, (c) Intervention 3a: On-campus employment skills development, and (d) Intervention 3b: Community-based employment skills development.
Recovery 4 US - Development of a Photovoice-Based Social Media Program to Enhance the Community Participation and Recovery of Individuals with Psychiatric Disabilities

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Project Number: 90IF0079 (Formerly H133G140190)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 14 $199,895; FY 15 $199,994; FY 16 $199,966; FY 17 (No-cost extension through 9/29/2018)
Abstract: This project develops, evaluates, and disseminates a new social media program aimed at the enhancement of community participation and overall recovery of individuals with psychiatric disabilities. Recovery 4 US is an innovative e-mental health program that integrates Internet and mobile technologies and is designed to be a self-sustaining recovery-oriented virtual community for individuals living with a psychiatric disability based on the principles of Photovoice – a public health community-based participatory research method with significant mental health promise. Members of the Recovery 4 US virtual community post their personal experiences of recovery using photographs and corresponding narratives (i.e., Photovoice works) and share their thoughts on the work of others. In addition to building a virtual community based on ongoing Photovoice creation and dialog about posted work, the Recovery 4 US program includes a Meet-Up feature which enables participating members to engage in joint activities, if they so choose, in their actual communities of residence. Finally, the program is designed to provide members with ongoing personal support and encouragement through a mobile phone application which delivers tailored hope-inspiring messages and images to participating members’ smartphones.
Increasing Community Participation Among Adults with Psychiatric Disabilities Through Intentional Peer Support

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Project Number: 90IF0098
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 15 $200,000; FY 16 $200,000; FY 17 $200,000

Abstract: This project examines the comparative effectiveness of Intentional Peer Support (IPS) in improving community living and participation for adults with psychiatric disabilities. IPS is a peer-developed, theoretically-based, manualized approach that is unique in conceptualizing peer support as a relationship-based learning process in the context of personal growth and community-building. The study compares IPS practiced at peer-run organizations in New York, Massachusetts, and Connecticut with the standard peer support practiced by staff at peer-run programs in Massachusetts. Using a quasi-experimental design, 125 participants were recruited from the intervention site, where peer support staff have been trained in IPS; another 125 participants were recruited from the second peer-run program, the control site, where standard peer support practices are used. Study participants complete two in-person interviews that assess self-efficacy, self-esteem, self-stigma, social connectedness, community participation, and quality of life. All participants are interviewed at two time-points: within a month of initial receipt of individual peer support services and at six months after the first interview. Repeated self-assessments of peer support practices are completed by peer support staff at both sites. Focus groups are conducted with peer support recipients and staff to collect qualitative information on receiving and providing peer support. Randomized regression models and content analyses are used to examine whether any significant differences on outcome measures occur between the groups and are maintained over time. Study results provide important information on how an innovative model of peer support may enhance community living and integration for adults with psychiatric disabilities.
Field Initiated Projects (FIPs)
Minnesota

National Core Indicators: Advance Exploration of Factors Affecting Quality of Life Outcomes of Adults with Intellectual Disabilities

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Project Number: 90IF0101
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 15 $200,000; FY 16 $200,000; FY 17 $200,000

Abstract: This project uses data from the National Core Indicators Program (NCI) to describe and analyze outcomes for people with intellectual and developmental disabilities (I/DD). This project builds on a previous NIDILRR-funded initiative focused on the development and analysis of the NCI Program, the most widely-used program of outcomes for persons with I/DD in the US addressing their community inclusion, employment and other services, health and wellbeing, and choice/rights. Currently, 42 states participate in at least bi-annual NCI-based outcome research on a minimum of 400 randomly selected individuals with I/DD receiving publicly-financed services. The project: (1) utilizes sophisticated research design and analytical approaches including multivariate analysis to examine patterns of factors across outcomes; (2) uses a hierarchical analytic approach to separate out and better account for state-level variability; (3) focuses on areas important to the lives of individuals with I/DD specifically related to community inclusion, employment, health, and rights; (4) explores trends over time using annual data from participating states; (5) disseminates and translates materials, practices, and policies clearly rooted in state-of-the-art analytic work and dissemination technology and formats that are accessible to persons with disabilities and their caregivers; and (6) compares outcomes for individuals with I/DD to outcomes for specific subgroups as well as to the general population. The project team analyzes a combined data set including at least 13,000 people interviewed for the NCI survey in 2013 and subsequent years. Participating states receive validated, psychometrically-tested instrumentation, technical assistance with random selection procedures, standardized training of interviewers, and a centralized system of data quality review, coding, and analysis. This project is a collaborative effort of the University of Minnesota, the National Association of State Directors of Developmental Disabilities Services, the Human Services Research Institute, and the University of Sydney.
Field Initiated Projects (FIPs)
Montana

Effort Capacity and Choice:
Investigating a Dynamic Model of Participation

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Project Number: 90IF0111
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 16 $199,935; FY 17 $199,989; FY 18 $199,924

Abstract: This collaborative project is investigating the behavioral economics of effort and participation by randomly assigning study participants into either a physical activity intervention to increase personal effort capacity, an environmental intervention to decrease the effort-cost required for bathing, or a control group. Ecological momentary assessment (EMA) is used to measure in situ effort and participation before and after the interventions. The project is also studying how effort is associated with a broader range of personal factors (PF), environmental factors (EF), and choices to participate. This project is helping to build an economic model of disability and participation that begins to specify the relationship between effort capacity, effort cost, and participation choices. Further development of this model helps to further rehabilitation and community living research and practice by providing a framework for helping individuals with disabilities and providers choose interventions that can improve participation outcomes.
Field Initiated Projects (FIPs)  
New York

Field Initiated Research Project on Optimizing Accessible Public Transportation

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Project Number: 90IFRE0010  
Start Date: September 30, 2017  
Length: 36 months

NIDILRR Officer: Thomas Corfman  
NIDILRR Funding: FY 17 $199,968; FY 18 $199,968; FY 19 $199,743

Abstract: Accessible public transportation provides individuals with disabilities access to work sites, educational programs, health care facilities, and social and recreational activities. This Field Initiated Research Project focuses on a critical component of accessible public transportation—wheeled mobility device securement systems. Existing research and experience in practice has identified the need for innovation in securement. The four-point tiedown is the predominant form of securement in transit buses and paratransit vehicles in the US. But, it poses usability challenges and safety risks for both wheeled mobility device users and bus operators. New technologies are being introduced, but there is no research to evaluate their efficacy on large accessible transit vehicles in fixed-route service their value to transit providers, or their usability in other transit vehicle types. This research project evaluates the strengths and limitations of two innovative wheelchair securement systems in actual service: a three-point, fully-integrated forward-facing system (Q’Pod) and a fully automated rear-facing securement system (Quantum). Both systems have previously been evaluated in a laboratory setting and demonstrate significant benefits over the conventional four-point tiedown securement approach. Collaborating with the Niagara Frontier Transportation Authority and Q’Straint, the industry leader in wheeled mobility device securement, this project verifies the findings of the laboratory research in service conditions, quantifies the usability benefits for riders and the performance improvements for operators, and identifies the need for future design improvements to increase adoption of these systems. Phase I evaluates the use of both systems in large accessible transit vehicles in fixed-route service. Phase II evaluates the Quantum in a paratransit vehicle. Phase III explores the ramifications of introducing automated securement in autonomous transit vehicles. The project outputs include peer-reviewed articles, conference proceedings, and recommendations for transit providers to guide them in their securement purchasing decisions.

NIDILRR Program Directory FY 2017 - Community Living and Participation  
2-28
Improving Outcomes Using Aided Augmentative and Alternative Communication for Children who are Deaf or Hard of Hearing

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Project Number: 90IF0122
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 16 $199,859; FY 17 $199,722; FY 18 $199,872

Abstract: This project develops a technology-assisted language intervention (TALI) program that incorporates aided augmentative and alternative communication (AAC) using iPads to improve language in children who are Deaf or hard of hearing (DHH). Project goals include: (1) Demonstrating the efficacy of a technology-assisted language intervention program for improving language outcomes in children who are DHH, (2) testing the relationship between language outcomes and adherence to the TALI program, and (3) evaluating whether the impact of the TALI on language is sustained 6 months post-intervention. Children ages 5-12 are randomized to either 24 weeks of the TALI program or 24 weeks of usual care. The project conducts focus groups with families and stakeholders to understand barriers to interventions and additional outcomes important to families, as well as AAC application monitoring to measure adherence. Outcomes include primary language components of syntax, semantics, and discourse collected from language samples. The final product is a model of evidence-based practice for language intervention that maximizes the full inclusion and integration of children who are DHH into society and allows for social self-sufficiency through improved language skills.
In the Classroom: Supporting Students with TBI

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Project Number: 90IF0067 (Formerly H133G140059)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 14 $199,674; FY 15 $199,670; FY 16 $199,672; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project utilizes the educational and training program In the Classroom (ITC): Supporting Students with Traumatic Brain Injury (TBI) to increase the knowledge and skills of educators related to students with TBI. The program includes interactive learning modules that offer specific strategies and techniques for managing TBI-related cognitive, behavioral, and social problems in a school setting and includes printable forms, resource links, and practical tools for the classroom. The project uses a randomized control study to establish evidence that the ITC program produces a positive change in educator knowledge, knowledge application and self-efficacy. A multiple baseline study examines impact of the training program on teacher behavior and student outcomes. Dissemination activities include making the series available to state departments of education, offering the series as an online university class for credit for pre-service and in-service teachers.
Field Initiated Projects (FIPs)
Oregon

Traumatic Brain Injury (TBI) Trainer Skill Builder

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Project Number: 90IF0124
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 16 $199,990; FY 17 $199,994; FY 18 $199,939

Abstract: This project develops and evaluates the Traumatic Brain Injury (TBI) Trainer Skill Builder, an interactive education and training resource for paraprofessionals that addresses the specific needs of individuals with moderate to severe TBI. Individuals with moderate to severe TBI frequently experience significant, long-lasting changes in physical, behavioral, cognitive, and social functioning that affect their participation in activities of daily life at home and in the community. Project activities occur in three phases: development, usability, and evaluation. During Phase I and II, researchers develop and evaluate a prototype of the TBI Trainer Skill Builder resource for paraprofessionals with the goal of promoting knowledge and skill acquisition, ongoing review, and practice and feedback. During Phase III, researchers evaluate the effectiveness of the program through (1) an experimental single case study involving paraprofessionals and individuals with TBI, and (2) a within-subjects product evaluation study involving paraprofessionals and professionals only. The outcome of this project is a fully-developed, evidence-based skills builder that is a cost-effective, accessible resource for paraprofessional to work effectively with adults with TBI.
Our Lives: Safe and Strong Program Toolkit

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Project Number: 90IF0108
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 16 $200,000; FY 17 $200,000; FY 18 $200,000
Abstract: The Our Lives: Safe and Strong (Our Lives) Program Toolkit provides topic-specific, gender relevant, abuse-related training and technical assistance, and specialized training on the best practices of trauma-informed services delivery, to Centers for Independent Living (CIL) staff so they have the knowledge base and skill set necessary to work directly with CIL consumers with disabilities on issues related to interpersonal violence (IPV). The Toolkit is built upon previous field-tested, web-based abuse awareness tools: the Women’s and Men’s Safer and Strong Programs, which provide safety-planning options and resources for people with disabilities related to abuse, mistreatment, and neglect. A six-member CIL Consortium works together to implement and deliver effective IPV prevention and safety-planning supports and services to CIL consumers, and technical assistance to CIL staff to deliver IPV-related program activities. The CIL Consortium includes: Northern West Virginia Center for Independent Living (NWVCIL); Prairie Independent Living Resource Center (PILR) of Hutchinson, KS; REACH Center for Independent Living of Plano, TX; Disability Network Wayne County/ Detroit (DNWCD); Eastern Oregon Centers for Independent Living (EOCIL) of Ontario, OR; and Living Independently in Northwest Kansas (LINK) of Hays, KS.
Identifying Enabling Environments Affecting Adults with Psychiatric Disabilities

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Project Number: 90IF0065 (Formerly H133G140040)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 14 $200,000; FY 15 $200,000; FY 16 $200,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project aims to help people with psychiatric disabilities move from institutional care to more integrated settings and to increase their opportunities to participate in a wide range of roles in their communities by generating knowledge about enabling environments that affect them. The project focuses on utilizing emerging research methods, such as Global Position System (GPS) and geographic information systems technologies, to identify social/environmental characteristics that stimulate and support full and meaningful mobility and participation and facilitate the creation of enabling environments for individuals with psychiatric disabilities. By paying attention to the environment, the project offers a new direction in psychiatric rehabilitation research and focus for policy, program, and practice innovations.
Field Initiated Projects (FIPs)
South Carolina

PHOENIX: Development of a Spinal Cord Injury Peer-Supported Self-Management Intervention

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Project Number: 90IFRE0012
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 17 $199,783; FY 18 $199,940; FY 19 $199,960

Abstract: This project develops and pilot tests a spinal cord injury (SCI) peer navigator intervention for implementation across South Carolina, integrating online and telehealth platforms. The Peer-supported Health Outreach, Education, aNd Information eXchange (PHOENIX) intervention, which builds on a pilot Peer Navigator study, is specifically designed to promote self-management after SCI. The broad goals of PHOENIX are to improve participants’ community participation and quality of life and decrease subjective impact and occurrence of secondary conditions and re-hospitalization after SCI. Researchers complete translation of the existing in-person SCI Peer Navigation program for online and telehealth delivery, including integration of mobile technology to improve access and reach of PHOENIX, and development of additional multimedia online educational content. Next, the project conducts a randomized waitlisted pilot trial to identify potential logistical and methodological issues of both intervention implementation and study procedures including evaluation of feasibility, acceptability, and fidelity of intervention implementation and study design and procedures, and obtaining estimates of variability of relevant outcome measures.
Field Initiated Projects (FIPs)
South Dakota

Sinte Gleska University Disability Center

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Principal Investigator: Burdette Clifford
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Project Number: 90IFST0002
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 17 $195,189; FY 18 $197,520; FY 19 $199,931
Abstract: The Sinte Gleska Disability Center (SGDC) program model seeks to improve the effectiveness of service delivery to the underserved and unserved populations of American Indians and Alaska Natives by enhancing the knowledge and education of professionals and non-professionals working or caring for those with disabilities. SGDC addresses awareness, education, and training needs of Tribal disability program personnel and family members in rural Tribal communities throughout the South Dakota Region (including neighboring states). Goals of the program are to: (1) Improve the effectiveness of culturally relevant disability services delivered to Rural Underrepresented Tribal Communities in the South Dakota Region for improved community living and inclusive participation; and (2) provide access to continuing education and training for personnel employed as providers of disability-focused services including Tribal rehabilitation service programs to maximize inclusion and integration into society through independent living, employment, family supports, and self-sufficiency. The focus area is South Dakota and neighboring states due to the high population and reservation representation, yet, the SGDC model can be implemented through other Tribal Colleges and Universities that want to better serve their Tribal members and students with disabilities.
Maximizing health and function among people with disabilities is critical to the achievement of NIDILRR’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. NIDILRR supports centers and projects on health and function that improve understanding of health status, health needs, and health care access of individuals with disabilities. These centers and projects also develop and test interventions, including public policy interventions, to improve health outcomes, increase or maintain functional abilities, and contribute to more effective medical rehabilitation and long-term services and supports, including integrated health and long-term services and support approaches.

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Rehabilitation Research and Training Center on Developmental Disabilities and Health

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Project Number: 90RT5020 (Formerly H133B130007)
Start Date: October 01, 2013
Length: 60 months

NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 13 $874,992; FY 14 $874,992; FY 15 $874,999; FY 16 $874,992; FY 17 $874,994

Abstract: This project enhances the health and function of adults with intellectual and developmental disabilities (I/DD) over their lifespan through a coordinated set of research, training, technical assistance, and dissemination activities. The goals of the center are to (1) increase the understanding of health status, health access, and health behaviors of adolescents and adults with I/DD; (2) improve the health and function of persons with I/DD through health promotion interventions; and (3) improve health care access through integrated care practices. Research activities include, but are not limited to, national database analyses of the Medical Expenditure Panel Survey, the National Health Interview Survey, Survey of Child Special Health Care Needs, and the Survey of Adult Transition and Health; a continuing prospective cohort study of health behaviors on health and function over a 10-year period, including minorities with I/DD; the development of a technology-based intervention to reduce obesity; and evaluation of the scaling up of the evidence-based “Health Matters” exercise and nutrition program for individuals with I/DD developed by the project under a previous grant. The Center includes a prospective study to assess the impact of changes in health and long-term practices to health and function, health care access, preventative services, and satisfaction of adults with I/DD in the process of a change from fee-for-service to integrated health and long-term care with specific analyses targeting persons with diabetes, heart disease, and Alzheimer’s disease. The project’s innovative training and technical assistance approaches include (1) dissemination through national provider, professional, and consumer collaborations; (2) development of user-friendly products in various formats; (3) use of the train-the-trainer and peer training models to promote local ownership of effective practices; (4) targeted promotion of systemic changes that maintain programmatic and policy changes; (5) leadership in national task forces; and (6) use of web-based technologies to provide global access to knowledge and training products, including dissemination through the project’s website, the National Center on Health, Physical Activity, and Disability, and the Health Matters Program; and (7) provision of certificate programs in disability and health promotion. This project continues its leadership role in increasing the self-determination of adults with I/DD and their families by involving consumers in all phases of its research, training, and dissemination activities.
Rehabilitation Research and Training Centers (RRTCs)
Illinois

RRTC on Developing Optimal Strategies in Exercise and Survival Skills to Increase Health and Function

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Project Number: 90RT5027 (Formerly H133B140012)
Start Date: October 01, 2014
Length: 60 months

NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 14 $874,864; FY 15 $874,768; FY 16 $874,820; FY 17 $874,793; FY 18 $874,782

Abstract: This RRTC develops and tests innovative strategies to enable people with disabilities to achieve and maintain their optimal health and function; assesses the optimal dosing, cost-effectiveness, and value of selected approaches to achieve and maintain their health and function; and disseminates information regarding these strategies to various stakeholders. Specific project objectives include: (1) establishing and operating a coordinated, comprehensive, and interdisciplinary Center comprised of a team of specialists with expertise in clinical rehabilitation and research methodology; (2) evaluating the contributions of the task-specific training parameters, intensity, and variability on lower extremity function post-stroke; (3) evaluating the impact of focused, intensive training applied during clinical inpatient physical therapy on mobility outcomes, health, and community participation in patients with acute neurological injury; (4) conducting a randomized clinical trial to compare the efficacy and cost-effectiveness of two different dosing methods for providing an Intensive Comprehensive Aphasia Program; (5) developing and evaluating the feasibility, acceptability, and effectiveness of a targeted evidence-based Peer Health Navigator program for Medicaid beneficiaries with physical disabilities; and (6) assessing the economic and social value of each proposed research intervention. This project also conducts knowledge translation activities and builds research capacity through educating future generations of disability researchers, professionals, people with disabilities and their families, and the general public by providing them with the tools and training they need to be able to understand important information regarding health, function, community living, and research methods.
Rehabilitation Research and Training Centers (RRTCs)
Illinois

Rehabilitation Research and Training Center on
Self-Directed Recovery and Integrated Health Care

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Project Number: 90RT5038
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 15 $574,951; FY 16 $574,991; FY 17 $574,986; FY 18 $574,937; FY 19 $574,927
Other Funding: FY 15 $300,000 (SAMHSA); FY 16 $300,000 (SAMHSA); FY 17 $300,000 (SAMHSA); FY 18 $300,000 (SAMHSA); FY 19 $300,000 (SAMHSA)

Abstract: This project creates, modifies, and improves self-directed models of medical care and mental health services that promote recovery, health, and employment for people with psychiatric disabilities. The goal of the Center is to enhance the health and well-being of people with psychiatric disabilities and co-occurring medical conditions, stimulate the development of self-directed recovery models that are peer-led, and improve employment outcomes. Research activities include: a multisite randomized controlled trial of self-directed care for adults with psychiatric disabilities, and development of a transition intervention that supports patients as they move from the hospital to the community using teams of community health workers and mental health peer specialists. Evaluation activities include: an evaluation of costs, medical service utilization, and 30-day readmissions following discharge from medical hospitalizations using the national Truven Health Analytics MarketScan Multistate Medicaid Database; and evaluation of the impact of personal budgets called Career Accounts on the employment outcomes of individuals receiving evidence-based supported employment services. The Center also implements the UIC Health & Recovery Solutions Practice, Policy, and Science Exchange to promote knowledge translation through training, dissemination, and technical assistance. Each component of the Exchange meets the specific needs of its audience with varied dissemination, training, or technical assistance formats. The Health & Recovery Solutions Suite is a set of tools, curricula, and manuals that help people with psychiatric disabilities, their supporters, service providers, and policymakers to promote self-directed recovery of health and wellness. The Health & Recovery Academy for Policymakers utilizes modalities that are tailored to the needs of human service system designers, including a policymaker mentoring initiative, legislative action alerts, and an online technical assistance web portal staffed by ex-
perts in state systems change and transformation. The Health & Recovery Solutions Science Showcase meets the needs of researchers, scholars, and students by informing them about the Center’s research and evaluation projects, creating or highlighting research tools, featuring recent publications on self-directed recovery and health care integration, and offering podcasts and free mini-courses on disability research topics. The Center also convenes a state-of-the-science national summit focusing on self-directed health and mental health care, integration of health and behavioral health care, and self-determination in the vocational rehabilitation process.
University of Washington Rehabilitation Research and Training Center on Promoting Healthy Aging for Individuals with Long-Term Physical Disabilities

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Project Number: 90RT5023 (Formerly H133B130018)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 13 $875,000; FY 14 $875,000; FY 15 $875,000; FY 16 $875,000; FY 17 $875,000

Abstract: This project is devoted to better understanding the factors associated with healthy aging in persons with spinal cord injury (SCI), multiple sclerosis (MS), late effects of polio (PPS), and muscular dystrophy (MD). Research activities focus on the impact of secondary conditions and barriers to health care access; testing the feasibility of community-based health and wellness intervention to promote healthy aging in persons with SCI, MS, PPS, and MD; testing the efficacy of an existing telephone-based community intervention aimed at promoting happiness and resilience in individuals with multiple sclerosis; enhancing understanding of the effect of federal programs such as Medicaid Managed Care on receipt of and satisfaction with health care services; and serving as a national resource center on aging with long-term physical disabilities. Four interrelated scientific studies on healthy aging and disability make up this project and are conducted with the full involvement of consumers and key stakeholder groups. Project I continues a recently-completed, longitudinal survey of 1,600 individuals with long-term physical disabilities, creating the largest longitudinal database of secondary health conditions in the target population. Project II tests the efficacy of an existing, empirically supported health and wellness intervention in promoting healthy aging for adults with SCI, MS, MD, or PPS in collaboration with a large, regional community senior services agency. Project III tests the efficacy of a telephone-based format for an existing community intervention designed to promote positive psychological factors that are key to healthy aging in individuals with MS. Project IV builds on an existing study of Medicaid Managed Care to evaluate the impact of Medicaid Managed Care on health care utilization, function, and consumer satisfaction in a sample of more than 14,000 individuals with long-term physical disabilities. Dissemination activities include (1) holding a state-of-the-science webinar series on aging with disabilities; (2) publishing the findings from the studies in national and international journals; and (3) presenting the findings at high profile scientific conferences in the field. This project plans for knowledge translation to occur through pre-service curricula, national consumer organizations, and web-based platforms.
**Dose-Response Effects of Transformative Exercise in Improving Health and Function in Adults with Spinal Cord Injury and Multiple Sclerosis**

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**Project Number:** 90DP0059 (Formerly H133A130044)  
**Start Date:** October 01, 2013  
**Length:** 60 months  
**NIDILRR Officer:** Pimjai Sudsawad, ScD  
**NIDILRR Funding:** FY 13 $475,000; FY 14 $475,000; FY 15 $475,000; FY 16 $475,000; FY 17 $475,000

**Abstract:** This project consists of three overlapping studies focused on developing and implementing sustainable and effective approaches to improving health and function in people with stroke and multiple sclerosis (MS). The first study (R1) develops and conducts a longitudinal trial focused on prospectively examining the relationships between variables such as sociodemographics, physical activity, diet, health outcomes, and environmental and sociocultural factors in a longitudinal cohort of adults with neurological conditions including MS and stroke. Each participant receives twice-yearly assessments via questionnaire and annual laboratory health/physical function tests. Anticipated outcomes include increased knowledge of variables that affect the health trajectories of people with stroke and MS as well as a data-driven framework for the development and testing of interventions to address secondary health conditions, functional deficits, and quality of life in people with disabilities. The second study (R2) is a randomized controlled trial examining the dose-response effects of two types of innovative group exercise classes on the health and functional status of adults with stroke and MS, and determines the relationship between gains in physical function and health status in this population. Finally, the third study (R3) utilizes a tele-health exercise training and monitoring system (e.g., tele-exercise) in translating clinical findings into a home-based exercise program addressing the needs of adults with stroke and MS that is supervised via a remote tele-coach.
ReInventing Yourself After SCI: A Multi-Site Randomized Controlled Trial of an Intervention to Improve Outcomes After Spinal Cord Injury

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Project Number: 90DPHF0002
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 17 $499,530; FY 18 $495,118; FY 19 $498,859; FY 20 $485,660; FY 21 $499,613

Abstract: The purpose of this study is to conduct a multi-site randomized controlled trial (RCT) to evaluate the replicability and efficacy of a structured six-week, manualized, group therapy intervention, ReInventing Yourself After Spinal Cord Injury (SCI), that delivers positive psychology concepts within a cognitive behavioral therapy (CBT)-based model. The intervention is delivered through six sessions, each lasting approximately two hours. Eight skills are presented over the course of the intervention to address reframing a person’s method of looking at events, building confidence by focusing on personal strengths, developing methods of recognizing and appreciating the good in one’s life, and expressing gratitude for positive attributes. These skills are presented in a specific sequence through a workbook so that participants can gain mastery of introductory concepts before undertaking those that are both more difficult and complex. The goals of this RCT are to increase SCI-specific and general self-efficacy, enhance emotional well-being, and improve participation in society for people with SCI living in the community.
A Lifestyle Intervention Targeting Enhanced Health and Function for Persons with Chronic SCI in Caregiver/Care-Receiver Relationships: Effects of Caregiver Co-Treatment

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Project Number: 90DP0074
Start Date: September 30, 2015
Length: 60 months

NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 15 $498,572; FY 16 $497,183; FY 17 $498,908; FY 18 $499,403; FY 19 $484,761

Abstract: This project evaluates and tests a population-specific lifestyle intervention (LI) in persons with spinal cord injury (SCI) that significantly improves fitness, lessens the risk of cardiometabolic disease, and reduces body mass thus improving the execution of daily activities. An increase in body mass occurring early after SCI is widely reported to decay lifelong health and function. Obesity/overweight affects nearly 70 percent of the SCI population, imposing earlier and disproportionate risks for healthy-decaying cardioendocrine disease, inflammatory stress, musculoskeletal pain, and functional decline. These risks also impose significant physical and emotional stress on the caregivers of people with SCI, who are progressively challenged to maintain a reserve of health and function as they also age. Project goals include: (1) testing the impact of a model LI program on attributes of health and function that are recognized to compromise healthy aging in persons with SCI living in caregiver/care-receiver relationships, (2) examining the impact of the LI on the relationship of the caregiver/care-receiver dyad, and (3) determining whether co-intervention with the caregiver improves health/function for their partner. This two-center, randomized, parallel group, wash-in controlled study enrolls 60 men/women ages 18-65 with SCI for more than one year. Their caregivers are co-enrolled, and are defined as family members, significant others, or friends who provide social and/or physical support including personal assistance, routine emotional encouragement, and/or social interaction. All participants with SCI undergo an intense, 6-month LI program incorporating circuit resistance training, Mediterranean-style diet, and a customized 16-session behavioral intervention. A 6-month minimally supervised extension tests intervention durability. Half of the caregivers undergo a comparable, caregiver-targeted exercise, nutrition, and behavioral intervention; and the remaining caregivers receive a compilation of general exercise and nutrition recommendations vetted by medical and nutritional authorities. The outcomes for participants with SCI are examined for body mass and fitness; biomarkers of cardioendocrine risk and inflammation; function; multidimensional pain; and health-related quality of life, treatment acceptance, and symptoms of anxiety, and depression. Caregiver participants are evaluated for their function, multidimensional pain, and health-related quality of life, caregiver burden, life satisfaction, anxiety, and treatment acceptance. A
Consumer Advisory Board and Medical Monitor evaluate project progress and information, which is disseminated through consumer conferences, scientific presentations, juried manuscripts, web-based media, and conference symposia attended by health care professionals.
A Multi-Center Clinical Trial to Evaluate the Effectiveness of Intermittent Hypoxia Therapy in Individuals with Spinal Cord Injury

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Principal Investigator: W. Zev Rymer, MD, PhD
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Project Number: 90SIMS0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 17 $899,985; FY 18 $899,824; FY 19 $899,984; FY 20 $899,940; FY 21 $899,725

Abstract: This collaborative project evaluates a promising new treatment strategy for persons with spinal cord injury (SCI), using brief reductions in oxygen levels in the inspired air. While treatment options for persons with SCI have greatly improved, they are still limited in efficacy. The goal of this project is to evaluate a new strategy called acute intermittent hypoxia (AIH), during which a person is administered brief bouts of low oxygen through a facemask. AIH triggers the synthesis and release of specific spinal proteins that promote effective increased neural plasticity, improving muscle contractions. The objective is to test whether daily AIH improves upper-limb function in persons with incomplete cervical SCI. Researchers evaluate training when AIH is used alone, in combination with task-specific traditional training, or using a sensorized robotic device (RAPAEL Smart Glove). The project aims to improve hand and arm function in individuals with SCI, enhance reintegration into social and vocational activities, and provide a greater understanding of hypoxia-induced neuroplasticity.
Thresholds Health Literacy and Wellness Promotion Center

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Principal Investigator: Mary Anzilotti; Lisa Razzano, PhD
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Project Number: 90DPHF0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 17 $499,795; FY 18 $499,778; FY 19 $499,903; FY 20 $499,624; FY 21 $499,525

Abstract: The Thresholds Health Literacy and Wellness Promotion Development Center (TWC) seeks to address the health and wellness of individuals in recovery of psychiatric disabilities with other co-occurring disabilities and physical health conditions, focusing on health literacy and promoting wellness as a means to enhance recovery and function within the community. The developmental activities included in this Center include three projects. Project 1 is an exploratory longitudinal study of chronic physical health conditions among individuals with psychiatric disabilities, focusing on health screening and management of chronic health and utilization of health services over two years. Project 2 focuses on improving health literacy and promoting wellness among individuals with psychiatric disabilities and workforce providers. This project builds on data collected in Project 1 to develop, evaluate, and disseminate a 12-month comprehensive, coordinated series of health literacy and wellness promotion modules with integrated components specifically relevant to illness risk and health management for the target population and the workforce of providers. Project 3 focuses on developing, pilot testing, refining, and disseminating a state-of-the-science curriculum focused on promoting wellness and health and addressing needs related to sexuality and sexual behaviors among diverse individuals in recovery.
Robot-Aided Diagnosis, Passive-Active Arm Motor and Sensory Rehabilitation Post Stroke

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Project Number: 90DP0099
Start Date: May 01, 2017
Length: 30 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 17 $499,829; FY 18 $499,678

Abstract: This project develops a custom rehabilitation system to provide a robot-aided diagnosis and passive-active arm motor and sensory rehabilitation post stroke. Project objectives are threefold: (1) quantify the progression of neuromechanical properties throughout the upper extremity during recovery from stroke, (2) address allocation of therapy resources between the arm and hand, and (3) examine the benefits of combining passive stretching with active movement training. Custom devices are employed to both perturb and measure the arm and hand. The data captures the timeline for the advent of specific complications such as spasticity in the different joints and the extent to which they change over time and provides a guide for future treatment. The project investigates and assesses a rehabilitation paradigm for targeting the entire upper extremity, rather than just the arm or just the hand. Both passive stretching and active movement therapy are implemented by two unique devices, the IntelliArm and the X-Glove. The multi-joint IntelliArm rehabilitation robot is capable of controlling and measuring the shoulder, elbow, and wrist simultaneously in order to carry out multi-joint sensorimotor characterizations, forceful stretching, and robot-guided active movement training. The X-Glove robot independently actuates each digit, allowing for stretching and movement assistance customized for each digit. Subacute stroke survivors participate in a blinded, controlled longitudinal intervention trial. Outcome evaluations in stroke survivors capture changes both in clinical measures of upper extremity performance and in neuromechanical properties. The results provide important data for deciding how best to devote limited resources to therapy.
Motivating Self-Management Through Multi-Media Health Promotion

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Project Number: 90DP0073
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 15 $499,811; FY 16 $499,999; FY 17 $499,780; FY 18 $499,815; FY 19 $499,952

Abstract: This project develops two online, multimedia products that community-based agencies can use to deliver state-of-the-art health promotion services to people with disabilities living in the community. The first product, Multi-Media Living Well with a Disability (MMLWD) is based on the 4th edition of Living Well with a Disability curriculum created by the Research and Training Center on Disability in Rural Communities. The second product, Motivation for Self-Management, is a new multimedia health promotion module based on Self-Determination Theory that increases consumer motivation and confidence for engaging in self-management. These products help to improve the health of people with disabilities by increasing accessibility to evidence-based health promotion curricula that has been shown to be cost-effective for reducing limitation due to secondary conditions. While not focused solely on rural populations, this project partners with long-term collaborator, the Association of Programs for Rural Independent Living (APRIL), who has recruited eight Centers for Independent Living to participate on one of two development teams. These centers are located in urban areas across the country but also provide services to rural areas using satellite offices (e.g., Atlanta, Los Angeles, and Houston). These development teams work in parallel to develop each online multimedia curriculum using an Iterative Participatory Curriculum Development (IPCD) procedure. Knowledge translation activities include new training and technical assistance procedures, and along with outcome results, are widely disseminated to a variety of community-based programs (e.g., Aging and Disability Research Centers) and health promotion researchers.
Disability and Rehabilitation Research Projects (DRRPs)  
Pennsylvania

Collaboration on Mobility Training (COMIT)

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Project Number: 90DP0025 (Formerly H133A120004)  
Start Date: October 01, 2012  
Length: 60 months  
NIDILRR Officer: Theresa San Agustin, MD  
NIDILRR Funding: FY 12 $900,000; FY 13 $900,000; FY 14 $900,000; FY 15 $900,000; FY 16 $900,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project addresses lack of training in wheelchair use and maintenance provided to individuals with spinal cord injury (SCI) through randomized controlled trials of two training interventions: the Wheelchair Skills Program (WSP) and the Wheelchair Maintenance Training Program (WMTP). The WSP includes an assessment, the Wheelchair Skills Test (WST), and a training protocol (WSTP). This project: (1) tests the ability of the WSTP to improve manual wheelchair skills in individuals with chronic SCI; (2) refines and tests the WMTP, a readily translatable intervention to improve the maintenance of manual and power wheelchairs by users with SCI and their caregivers; (3) identifies the relative benefits of the combination of WSP and WMTP on quality of life of wheelchair users; and (4) develops and tests readily accessible web-based training programs for clinicians to learn the WSP and WMTP. By improving training in use and maintenance, the project aims to reduce wheelchair breakdowns and repetitive strain injuries for manual wheelchair users.
Promoting Independence and Self-Management Using mHealth

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www.youtube.com/watch?v=WKXtOngBmVw&feature=youtu.be

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Project Number: 90DP0064 (Formerly H133A140005)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 14 $499,911; FY 15 $499,562; FY 16 $499,291; FY 17 $499,619; FY 18 $499,581

Abstract: This project develops and implements mobile health (mHealth) tools to support self-management and aid youth with brain and spinal anomalies (BSA) in their transition to adulthood. Individuals with developmental BSAs, who may have impairments in self-management skills, are susceptible to secondary conditions. The early teen years are a developmentally appropriate time in one’s life to seek separation from one’s parents and gain full independence with regard to self-management. Many teens fail to develop the self-management skills necessary to independently manage medical and self-care routines. One major barrier identified was the lack of developmentally appropriate tools to help in this transition. The mHealth tools incorporate mechanisms for caregiver and family involvement and peer support. This project builds upon previous research with a self-management pilot project for individuals with spinal bifida, implementing the mHealth supported self-management program in a community setting, and developing educational support for participants.
Innovation in Disability Empowerment and Service Delivery

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Principal Investigator: Brad Dicianno, MD
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Project Number: 90DPGE0002
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 16 $499,960; FY 17 $496,919; FY 18 $497,153; FY 19 $492,835; FY 20 $481,355

Abstract: This project’s overall objective is to identify potential models of healthcare delivery for individuals with disabilities that are effective in improving health and the patient experience of care, while reducing cost. The project includes a systematic review of the research and health policy literature to identify innovative health service delivery models that offer long-term support services to people with disabilities and that are supported by evidence-based research, actionable policies, or both. Three rigorous research projects evaluate the impact of three different models of care on the Triple Aim: (1) a community-based care management program delivered by a non-profit organization through waiver funds, (2) the Program for All-Inclusive Care for the Elderly (PACE) applied to younger individuals with disabilities between ages 55-64, and (3) a state-of-the-art mobile health platform that supports community-based service delivery. A development project with participatory action design refines the existing mobile health system to support the third research project. Evidence-based studies demonstrate that delivering services via non-profit organizations or through PACE models of care have the potential to positively impact outcomes for people with disabilities. The main barrier that has prevented these programs from being fully implemented outside of research has been lack of integration into a system that can support financial sustainability. To overcome these barriers, this project includes partnerships between an integrated delivery system and community-based programs, identifying promising aspects of delivery systems, and proposing plans for implementation.
Disability and Rehabilitation Research Projects (DRRPs)
South Carolina

**A Multidisciplinary Approach to Translating New Knowledge into Practice to Promote Health and Well-Being after Spinal Cord Injury**

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**Principal Investigator:** James S. Krause, PhD

**Public Contact:** D’Andra Roper-Shine 843/792-1337; Fax: 843/792-5649

**Project Number:** 90DP0098
**Start Date:** September 30, 2016
**Length:** 36 months

**NIDILRR Officer:** Kenneth D. Wood, PhD

**NIDILRR Funding:** FY 16 $149,877; FY 17 $149,894; FY 18 $149,867

**Abstract:** This project translates new scientific knowledge relating to health and function to reduce risk of secondary health conditions (SHCs) and other health complications after spinal cord injury (SCI) by developing automated individualized risk profiles for use by consumers with SCI and interdisciplinary healthcare providers. This addresses a key limitation in current knowledge translation practices and utilization tools which are typically general in nature, such as factsheets, videos, or other self-help information. This project uses data on over 5,000 participants related to risk and protective factors for SHCs and other health outcomes, previously gathered under the NIDILRR-funded Rehabilitation Research and Training Center on SHCs after SCI, to develop the automated individualized risk profiles, as well as factsheets for those who do not have Internet access. Stakeholders, including those with SCI, health professionals, and those who work with SCI registries, identify the conditions upon which to focus, the types of formats and appropriateness of the tools for different environments and end-users, and the usefulness of the tools. The project includes the following activities: (1) convene stakeholder groups to identify the most important areas of focus, (2) develop the automated tools, (3) reconvene stakeholder groups throughout the project to evaluate the tools, (4) disseminate the tools through stakeholder, institutional, and public health agencies, and (5) evaluate the utility of the tools within those settings. The project collaborates with several stakeholder organizations including the RRTC on Independent Living at the University of Kansas, the South Carolina SCI Association, AccessAbility (local independent living center), Roper Hospital, the Minnesota Department of Health, and the South Carolina SCI Surveillance System.
Disability and Rehabilitation Research Projects (DRRPs)
Texas

Multicenter Evaluation of Memory Remediation After Traumatic Brain Injury with Donepezil (MEMRI-TBI-D)

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Project Number: 90DP0060 (Formerly H133A130047)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 13 $600,000; FY 14 $600,000; FY 15 $600,000; FY 16 $600,000; FY 17 $600,000

Abstract: This project evaluates the effectiveness of donepezil as treatment for traumatic brain injury (TBI)-related memory deficit. The study is a four-site, randomized, parallel design, double-blind, placebo-controlled, 10-week trial of donepezil 10 mg daily for verbal memory problems among adults with TBI in the sub-acute or chronic recovery period. The study recruits persons with TBI and functionally important memory problems during a four-year period of open recruitment to evaluate the effects of treatment with donepezil on verbal memory. Additionally, the study evaluates the effects of treatment with donepezil on memory-related activities. Data is collected assessing the effects of donepezil on attention, processing speed, neuropsychiatric symptoms, community participation, quality of life, and caregiver experiences.
Burn Injury Model Systems
Massachusetts

Boston-Harvard Burn Injury Model System

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Principal Investigator: Jeffrey C. Schneider, MD
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Project Number: 90DP0035 (Formerly H133A120034)
Start Date: October 01, 2012
Length: 60 months

NIDILRR Officer: Theresa San Agustin, MD

NIDILRR Funding: FY 12 $361,000; FY 13 $361,000; FY 14 $361,000; FY 15 $361,000; FY 16 $361,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: The goal of this project is to provide a multidisciplinary comprehensive system of care for individuals with burn injury that spans the complete continuum from preventative programs and emergency services to community reintegration and vocational rehabilitation, and fosters burn injury rehabilitation research. The project includes a site-specific project to treat pain, itch, and psychological impairments in burn injury using transcranial Direct Current Stimulation (tDCS), a novel, noninvasive method of brain stimulation. The project also contributes to the Burn Injury Model System national database to facilitate the comprehensive longitudinal assessment of burn injury outcomes. In addition, the Model System disseminates research findings in the region and nationally through seminars, presentations at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Translation Center. The project is a collaboration of clinical and research resources of Harvard Medical School, Partners Healthcare System (Spaulding Rehabilitation Hospital, Massachusetts General Hospital), and Shriners Hospitals for Children.
Burn Injury Model Systems  
Massachusetts

Boston-Harvard Burn Injury Model System

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Project Number: 90DPBU0001
Start Date: September 30, 2017
Length: 60 months

NIDILRR Officer: A. Cate Miller, PhD

NIDILRR Funding: FY 17 $363,000; FY 18 $363,000; FY 19 $363,000; FY 20 $363,000; FY 21 $363,000

Abstract: The overall goal of Boston-Harvard Burn Injury Model System (BHBIMS) is to provide a multidisciplinary, comprehensive system of care for burn survivors that fosters innovative burn injury rehabilitation research. The project includes multiple objectives: (1) provide model care, (2) facilitate the comprehensive longitudinal assessment of burn injury outcomes by contributing to the Burn Model System National Database, (3) carry out a high quality site-specific project to develop social recovery trajectories using the LIBRE Profile, (4) propose and participate in a collaborative module project, and 5) disseminate research findings for a variety of targeted populations developed through partnerships with the Model Systems Knowledge Translation Center and the burn survivor community.
Burn Injury Model Systems
Texas

North Texas Burn Rehabilitation Model System (NTBRMS)

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Project Number: 90DP0042 (Formerly H133A120090)
Start Date: October 01, 2012
Length: 60 months

NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 12 $383,000; FY 13 $383,000; FY 14 $383,000; FY 15 $383,000; FY 16 $383,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project provides comprehensive, multi-disciplinary services to children and adults who sustain major burn injuries from the time of injury to long-term follow-up. The project contributes data to the Burn Model System national database, including follow-up data on eligible subjects at 6 months, 1, 2, 5, and 10 years, and extends follow-up to every 5 years thereafter. North Texas Burn Rehabilitation Model System (NTBRMS) includes a quarterly rural satellite clinic to serve the needs of those patients who cannot return to the burn center for a follow-up. The project includes two site-specific studies: (1) The Effect of Heat Intolerance on Exercise and Physical Function, a prospective, randomized single center study on the efficacy of an exercise intervention and outcomes relating to heat intolerance among survivors of a burn injury to assess if perception of heat intolerance and the related fear of exercise among burn survivors changes following an exercise intervention; and (2) The Evaluation of a Web-Based Social Skills Training Program for Burn Survivors, a program that is designed to assist burn survivors who have a disfigurement in preparing for social situations after leaving the hospital. The NTBRMS collaborates with the Model System Knowledge Translation Center in planning its dissemination activities and providing scientific results and information to clinical and consumer audiences by participating in its systematic reviews of evidence and development of consumer factsheets. Other dissemination efforts include state-of-the-science meetings, several webinars, and other materials.
Burn Injury Model Systems  
Texas

North Texas Burn Rehabilitation Model System (NTBRMS)

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Project Number: 90DPBU0002  
Start Date: September 30, 2017  
Length: 60 months  
NIDILRR Officer: A. Cate Miller, PhD

NIDILRR Funding: FY 17 $380,000; FY 18 $380,000; FY 19 $380,000; FY 20 $380,000; FY 21 $380,000

Abstract: This project provides comprehensive, multi-disciplinary services to children and adults who sustain major burn injuries from the time of injury to long-term follow-up. Research activities for this center include: (1) assessing long-term outcomes of individuals with burn injury by enrolling participants into the Burn Model System National Database; (2) conducting one site-specific research project on Vitamin D Deficiency in Adults Following a Major Burn Injury, to examine if supplementation will improve levels in adult patients with major burn injury; and (3) conducting one module research project, Watch Your Steps (WYS), to promote regular exercise and physical activity as important components of a healthy lifestyle to improve functional health outcomes and prevent secondary complications in community-living individuals recovering from a major burn injury.
Burn Injury Model Systems
Texas

Effects of Anabolic Steroids and Blockade of Chronic Catecholamine-Mediated Stress on Psychosocial, Growth, Scar, and Physiologic Outcomes After Massive Burn Injury

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Project Number: 90DPBU0003
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 17 $375,000; FY 18 $375,000; FY 19 $375,000; FY 20 $375,000; FY 21 $375,000

Abstract: This Pediatric Burn Center conducts clinical research studies that aim to modulate the catabolic and hypermetabolic response to burn trauma and improve long-term outcomes in children with burn injuries. Research focuses on children with severe burns to assess the efficacy of propranolol, oxandrolone, or the combination of oxandrolone plus propranolol administered for one year post-burn to reduce the hypermetabolic and catabolic response. Research looks at outcomes within the first years after burn injury, as well as long-term outcomes.
Burn Injury Model Systems
Washington

Northwest Regional Burn Model System Center

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Project Number: 90DP0029 (Formerly H133A120024)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 12 $383,000; FY 13 $383,000; FY 14 $383,000; FY 15 $383,000; FY 16 $383,000; FY 17 (No-cost extension through 12/29/2017)

Abstract: This project builds upon past efforts to address significant issues of concern to burn survivors – pain management, distress, hypertrophic scarring, community re-entry, and return to work. In addition to participation in the long-term outcomes national database, the project includes one major dissemination project and one site-specific research project. Project 1 – Return to Work After Burn Injury Website Dissemination Project utilizes web-based dissemination efforts to provide education regarding challenges and processes encountered following a significant burn injury. Project 2 – Impact of Hypnosis on Post-Burn Pain and Itch: Randomized Controlled Trial utilizes expertise in clinical management of pain and itch, and experience with hypnosis as an innovative non-pharmacologic intervention. The control group receives pharmacologic treatment using an established treatment algorithm for post-burn itch; the experimental group undergoes hypnosis as well as a standard treatment regimen.
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Project Number: 90DPBU0004
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 17 $382,000; FY 18 $382,000; FY 19 $382,000; FY 20 $382,000; FY 21 $382,000

Abstract: The Northwest Regional Burn Model System (NWBRMS) (1) provides comprehensive, multidisciplinary services to individuals with burn injuries from the time of injury through recovery; (2) educates patients, families, care providers, and the public about the natural course of burn injury; and (3) creates and disseminates new knowledge about innovative evidence-based interventions that improve health and function, community living and participation, and employment after burn injury. NWBRMS includes a site-specific research project, a randomized controlled trial of a virtual-environment home rehabilitation. This project addresses the feasibility and practicality of a self-directed, technology-driven home rehabilitation program and analyzes whether technology-driven home-based rehabilitation improves outcomes for individuals with burn related disabilities in a real-world setting.
Abstract: Spinal Cord Injury Model System (UAB-SCIMS) provides comprehensive, multidisciplinary rehabilitation services to individuals with spinal cord injury (SCI) as a basis for conducting research that contributes to evidence-based rehabilitation interventions and clinical and practice guidelines. Activities of the UAB-SCIMS, both ongoing and during this cycle, reflect an active partnership within the components of UAB’s health system and between UAB and community organizations in Birmingham and across the state. Objectives of the UAB-SCIMS are: (1) Continue to be an effective participant in data collection activities for the National Spinal Cord Injury Statistical Center, enrolling a minimum of thirty newly-injured individuals annually with SCI and completing required follow-up examinations; (2) complete a controlled intervention trial of a home-based diet intervention to improve metabolic health, body composition, and quality of life; (3) participate in three collaborative research modules; (4) utilize the active involvement of persons with SCI in the design and execution of the proposed activities; and (5) disseminate project results via a variety of accessible formats and venues for both professionals and persons with SCI and their families, and in conjunction with the Model Systems Knowledge Translation Center (MSKTC). Outcomes of this project include: (1) Availability of a cost-effective diet approach with demonstrated efficacy to improve health and well-being; (2) achievement of recruitment goals for three collaborative modules; (3) dissemination of new knowledge to professionals who work in the field of SCI, persons with SCI, and their families; and (4) maintenance and improvement of UAB’s SCI comprehensive care continuum. Project outputs include: A cookbook to improve health with demonstrated efficacy, and nutritional guidance disseminated via a variety of venues, a periodic newsletter, ongoing dissemination via a website, development of a variety of Fact Sheets, Question and Answer topics, Rehab Tip Sheets, peer reviewed publications, and national and international presentations.
Southern California Spinal Cord Injury Model System at Rancho Los Amigos National Rehabilitation Center

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Project Number: 90SI5018
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Theresa San Agustín, MD

NIDILRR Funding: FY 16 $463,140; FY 17 $463,140; FY 18 $463,140; FY 19 $463,140; FY 20 $463,140

Abstract: The overarching goal of the Southern California Spinal Cord Injury Model System (SCIMS) at Rancho Los Amigos National Rehabilitation Center (RLANRC) is to generate new knowledge that fosters recovery of function, community re-integration, and wellness throughout the lifetime of individuals with spinal cord injury (SCI). RLANRC is designated as the Patient-Centered Medical Home for SCI in Los Angeles County, providing services to a large underserved and minority population. The objectives of this SCIMS are achieved through four integrated categories of effort during the five years: (1) Comprehensive service delivery; (2) participation in the National SCI Database; (3) site-specific research; and (4) a collaborative research module. SCIMS partners include Emergency Medical Services, Los Angeles County/USC Medical Center, and Harbor/UCLA Medical Center, treating a majority of the region’s trauma victims. The site-specific research evaluates outcomes and sustainability of two programs for promotion of physical activity after SCI. The collaborative research module evaluates a sensor system for establishing effective pressure relief behaviors and reducing risk of pressure ulcer development among wheelchair users. Anticipated outcomes include: (1) Increased knowledge about incidence, causes, and outcomes of traumatic SCI; (2) evidence-based interventions and technologies that facilitate healthy behaviors in individuals with SCI; (3) increase in practical, effective, and scientifically-informed knowledge and strategies for enhancing health, function, and well-being after SCI. Project outputs include peer-reviewed publications, factsheets, presentations, training materials, and guidelines for promoting physical activity and technology for motivating healthy behaviors after SCI.
Spinal Cord Injury Model Systems
Colorado

The Rocky Mountain Regional Spinal Injury System (RMRSIS)

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Project Number: 90SI5015
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 16 $483,644; FY 17 $483,644; FY 18 $483,644; FY 19 $483,644; FY 20 $483,644

Abstract: The Rocky Mountain Regional Spinal Injury System (RMRSIS) conducts a program of site-specific research, leads and participates in collaborative module research, maintains the SCI Model Systems National Database, and advances an established SCI Model System of care and research. Project objectives include: (1) conducting a site-specific research project to add to the literature regarding the use of statins in preserving bone health and mitigating neuropathic pain for people with SCI, (2) leading a module research project to evaluate the use of complementary and alternative healthcare to treat pain following SCI, (3) contributing at least 60 new cases each year to the SCI Model Systems National Database and continuing its record of outstanding longitudinal follow-up data collection, and (4) maintaining a successful system of care. Outcomes include: (1) individuals with chronic SCI having low-cost options for managing bone health and reducing neuropathic pain, (2) a greater understanding of the use of complementary and integrative healthcare for people with SCI, and (3) improving an already world-renowned system of care meeting the lifetime needs of people with SCI. This project produces manuscripts in high-impact peer-reviewed journals, presents at national professional scientific meetings, and disseminates research results to consumers and other stakeholders through collaborations with the Model Systems Knowledge Translation Center (MSKTC).
South Florida Spinal Cord Injury Model System

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Public Contact: 305/243-4497

Project Number: 90SI5023
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 16 $451,349; FY 17 $451,349; FY 18 $451,349; FY 19 $451,349; FY 20 $451,349

Abstract: The South Florida Spinal Cord Injury System (SFSCIS) serves a high volume of patients with spinal cord injury (SCI) providing comprehensive rehabilitation services specifically designed to meet their needs. The clinical components of the SFSCIS include in-patient rehabilitation at Jackson Memorial Rehabilitation Hospital, vocational services, community and job placement, and long-term community follow-up and health maintenance. Project research includes a site-specific study, as well as collaborative projects with other Model System centers. The goal is to improve outcomes in the preservation or restoration of function following SCI. Additionally, this project contributes to the National Spinal Cord Injury Database; utilizes culturally appropriate methods of education, training, and outreach throughout the care system; and includes a comprehensive evaluation program.
Southeastern Regional Spinal Cord Injury Model System (SR-SCIMS)

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**Project Number:** 90SI5016  
**Start Date:** September 30, 2016  
**Length:** 60 months  
**NIDILRR Officer:** Theresa San Agustin, MD  
**NIDILRR Funding:** FY 16 $483,867; FY 17 $483,867; FY 18 $483,867; FY 19 $483,867; FY 20 $483,867

**Abstract:** The Spinal Cord Injury Model System (SCIMS) at Shepherd Center offers multi-disciplinary rehabilitation specifically designed to meet the needs of individuals with SCI across the continuum of care. SCIMS is conducting two site-specific research projects, and one collaborative module. Project 1 evaluates the effects of motor-training plus non-invasive brain stimulation with an anticipated outcome to improve walking ability. Project 2 gathers data about how individuals with SCI utilize hospital emergency departments with an anticipated outcome to improve understanding of the circumstances wherein these services are used. In the collaborative module SCIMS serves as the lead center to evaluate and characterize the experience of spasticity in everyday life with the goal to understand how spasticity impacts function and well-being in individuals with SCI. SCIMS projects and collaborative efforts produce substantive scientific results, and information for dissemination to clinical and consumer audiences.
Midwest Regional Spinal Cord Injury Model System (MRSCIS)

Rehabilitation Institute of Chicago
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Principal Investigator: David Chen, MD; Allen W. Heinemann, PhD
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Project Number: 90SI5022
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 16 $479,482; FY 17 $479,482; FY 18 $479,482; FY 19 $479,482; FY 20 $479,482

Abstract: The Midwest Regional Spinal Cord Injury Model System (MRSCIS) provides comprehensive, multi-disciplinary medical and rehabilitation care to persons with spinal cord injury (SCI) from the site of injury to community reintegration. The objectives of the MRSCICS are to (1) provide a comprehensive continuum of care for persons with SCI, (2) contribute to assessment of long-term outcomes by enrolling 80 subjects per year into the national SCI database, (3) conduct one site-specific study, (4) disseminate research findings to various stakeholders in an effective and timely manner, (5) collaborate effectively with the Model System Knowledge Translation Center, and (6) involve individuals with disabilities in research and dissemination activities.
Spinal Cord Injury Model Systems
Massachusetts

Spaulding Hospital-New England Regional Spinal Cord Injury Center

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Project Number: 90SI5021
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 16 $459,759; FY 17 $459,759; FY 18 $459,759; FY 19 $459,759; FY 20 $459,759

Abstract: The Spaulding Hospital New England Regional Spinal Cord Injury Center is a comprehensive network of care spanning from preventative programs and emergency services to outpatient care with a special focus on community reintegration and vocational rehabilitation. Clinical and investigative activities are directed to developing evidence-based rehabilitation interventions and clinical practice guidelines through spinal cord injury (SCI) research. The project develops and improves its multidisciplinary system of rehabilitation care designed specifically to meet the needs of individuals with SCI, contribute to the SCI Model Systems National Database and facilitate the longitudinal assessment of long term SCI outcomes, and contribute to improved long term SCI outcomes by conducting a site-specific research project and participating in a collaborative research project.
Northern New Jersey Spinal Cord Injury System

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Principal Investigator: Trevor Dyson-Hudson, MD; Steven Kirshblum, MD 973/324-3576
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Project Number: 90SI5011 (Formerly H133N110020)
Start Date: October 01, 2011
Length: 60 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 11 $456,998; FY 12 $456,999; FY 13 $456,999; FY 14 $456,999; FY 15 $456,999; FY 16 (No-cost extension through 9/29/2017); FY 17 (No-cost extension through 12/31/2017)

Abstract: The Northern New Jersey Spinal Cord Injury System (NNJSCIS) provides a comprehensive continuum of state-of-the-art care for persons with spinal cord injury (SCI) and their families from the time of injury through rehabilitation and return to the community. Research and clinical activities at NNJSCIS include: a collaborative module with an associated model SCI system; a site-specific study to test a novel combination therapy using dalfampridine—a drug recently approved to improve walking in patients with multiple sclerosis—with a standardized program of locomotor training—a rehabilitative intervention that has improved walking and other functional outcomes in persons with SCI; and active communication with the SCI consumer and research communities through web and social media, consumer and professional conferences, newsletters, professional publications, and scientific presentations. The NNJSCIS is a cooperative effort of Kessler Foundation, Kessler Institute for Rehabilitation, Rutgers, the State University of New Jersey, and University Hospital.
Northern New Jersey Spinal Cord Injury System

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Principal Investigator: Trevor Dyson-Hudson, MD; Steven Kirshblum, MD 973/324-3576
Public Contact: Rachel Byrne 973/324-3567; Fax: 973/243-6984

Project Number: 90SI5026
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 16 $459,759; FY 17 $459,759; FY 18 $459,759; FY 19 $459,759; FY 20 $459,759

Abstract: The Northern New Jersey Spinal Cord Injury System (NNJSCIS) provides a comprehensive continuum of state-of-the-art care for persons with spinal cord injury (SCI) and their families from the time of injury through rehabilitation and return to the community. Research and clinical activities at NNJSCIS include pharmacologic approaches to managing bladder dysfunction, a complication that adversely affects quality of life for many individuals living with SCI. The project also maintains active communication with the SCI consumer and research communities through web and social media, consumer and professional conferences, newsletters, professional publications, and scientific presentations. The NNJSCIS is a cooperative effort of Kessler Foundation, Kessler Institute for Rehabilitation and University Hospital-Newark.
The goal of the Mount Sinai Spinal Cord Injury Model System (MSSCIMS) is to provide a comprehensive program of coordinated patient care, education, and research activities for individuals who have sustained spinal cord injury (SCI). Clinical activities are directed at promoting evidence-based practice, understanding the particular needs of the target population, and providing individualized life-time care to persons with SCI. Research activities include collecting longitudinal data on complications, impairments, activities, participation, and quality of life; participation in three collaborative modules with other Model Systems; and conducting a site-specific project in collaboration with the VA Center of Excellence on the Medical Consequences of Spinal Cord Injury in the Bronx by implementation and evaluation of a protocol for improving therapy participation by preventing orthostatic hypotension.
Northeast Ohio Regional Spinal Cord Injury Model System

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Project Number: 90SI5025
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 16 $453,282; FY 17 $453,282; FY 18 $453,282; FY 19 $453,282; FY 20 $453,282

Abstract: The Northeast Ohio Regional Spinal Cord Injury System (NORSCIS) at the MetroHealth Medical System/Case Western Reserve University (MHS) provides a comprehensive, multidisciplinary approach to the care of individuals with spinal cord injury (SCI). NORSCIS targets newly injured persons with traumatic SCI who come to the MHS for acute rehabilitation for inclusion in the National SCI Database (NSCID). This SCIMS project follows the new traumatic injuries along with the 495 persons already entered into the NSCID. NORSCIS utilizes intramural and collaborative research projects to test innovative approaches to treating SCI and to assess outcomes in health and function. NORSCIS includes two site-specific projects. Early Characterization of Upper Extremity (UE) Paralysis in Cervical SCI as a Means to Determine Patterns of Injury and Recovery, Informing Prognosis, and Guiding Time-Critical Interventions collects preliminary data demonstrating the power of unique UE muscle assessments, providing the groundwork for developing a patient-centered guide to UE treatment for the restoration of function for people with cervical SCI. Methods for Reduction of “Unavoidable” Pressure Ulcers in Persons with Acute SCI focuses on the redesign, fabrication, and testing of a new spine board that will reduce excessive body-board pressures currently found on standard spine boards. In addition, NORSCIS includes a collaborative module project, Early Predictors of Rehabilitation Outcomes After Acute Traumatic SCI, to identify trauma data variables that predict rehabilitation outcomes of persons that survive traumatic SCI. NORSCIS continues to improve care delivery and services through a quality initiative that is based on the preferences of SCI consumers. This initiative matches a peer navigator to a newly injured patient while the patient is in the acute hospital and followed for 1-year post-rehabilitation discharge. NORSCIS collaborates with MHS SCI Consumer Group, the Northeast Ohio Chapter of the United Spinal Injury Association, and NIDILRR’s Model System Knowledge Translation Center to ensure the participation of persons with SCI in conducting SCIMS research and to enable the production of internet and electronic media to serve as a vehicle for dissemination of project outcomes to clinical and consumer audiences.
Ohio Regional SCI Model System (ORSCIMS)

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Project Number: 90SI5020
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 16 $444,000; FY 17 $444,000; FY 18 $444,000; FY 19 $444,000; FY 20 $444,000

Abstract: The goal of this Regional Spinal Cord Injury Model System is to improve long-term quality of life for persons who have sustained a spinal cord injury (SCI). The objectives of this project are to (1) provide an exemplary and comprehensive system of care for individuals who have sustained an SCI; (2) contribute to the longitudinal study of outcomes following SCI; (3) identify biomarkers that predict patients who are at risk to develop infections; (4) conduct a collaborative project to evaluate an intervention to reduce substance misuse following an SCI; and (5) collaborate with the project’s Community and Scientific Advisory Boards to disseminate findings and develop products that can improve quality of life after an SCI. For objective 3, the project investigates whether sympathico-vagal instability identifies patients at risk for infections earlier than it is possible to obtain with routine blood samples.
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Project Number: 90SI5024
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 16 $468,364; FY 17 $468,364; FY 18 $468,364; FY 19 $468,364; FY 20 $468,364

Abstract: The goal of the Regional Spinal Cord Injury Center of the Delaware Valley (RSCICDV) is to provide and evaluate a comprehensive program of coordinated patient care, education, and research activities for individuals who have sustained a traumatic spinal cord injury (SCI). Clinical activities are directed at promoting evidence-based practice, understanding the particular needs of the target population, and providing individualized lifetime care to persons with SCI. Research activities are designed to generate longitudinal data on impairment, activities, participation, and quality of life as part of the national database. These activities include site-specific research and contribution to collaborative modules, including research in upper extremity neurological function, pressure ulcer prevention, spasticity after spinal cord injury, and risk determinants for cardiometabolic disease after spinal cord injury. Dissemination activities include development of educational resources and offerings for patients, healthcare providers, and researchers, including online materials and training workshops in the use of outcome measures.
University of Pittsburgh Model Center on Spinal Cord Injury

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Project Number: 90SI5014
Start Date: September 30, 2016
Length: 60 months

NIDILRR Officer: Theresa San Agustin, MD

NIDILRR Funding: FY 16 $459,759; FY 17 $459,759; FY 18 $459,759; FY 19 $459,759; FY 20 $459,759

Abstract: The University of Pittsburgh Model Center on Spinal Cord Injury (UPMC-SCI) builds upon work from a previous cycle to develop web-based transfer and wheelchair maintenance training materials targeted at wheelchair users and evaluates the impact of each training in single-blind randomized controlled trials. During the previous funding cycle, UPMC-SCI developed successful in-person training programs for wheelchair users, demonstrating that transfer training is a potential mediator for preventing secondary upper limb injuries, and that a strong association exists between wheelchair maintenance and decreasing adverse events (such as injuries, missing work, etc.). UPMC-SCI also continues to investigate equity and disparities in assistive technology through its module project. In addition to collecting cross-sectional data, researchers prospectively collect longitudinal data on wheelchair repairs and subsequent adverse consequences. UPMC-SCI continues its heavy focus on knowledge translation so that this research can lead to changes in clinical care. UPMC-SCI participates in collaborative modules investigating trauma databases for early predictors of rehabilitation outcomes after SCI, residential instability in chronic SCI, and characterizing experiences in spasticity after SCI.
Texas Model Spinal Cord Injury System

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Project Number: 90SI5027
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 16 $468,364; FY 17 $468,364; FY 18 $468,364; FY 19 $468,364; FY 20 $468,364

Abstract: The Texas Model Spinal Cord Injury System (TMSCIS) center conducts innovative spinal cord injury (SCI) research to improve outcomes and advance rehabilitation methods, procedures, and technologies. TMSCIS provides a comprehensive system of care for persons with SCI extending from emergency medical services to intensive acute medical care; comprehensive inpatient and outpatient rehabilitation; psychosocial services; and long-term follow-up. This center also contributes to the National SCI Database. TMSCIS includes a site-specific project to conduct a clinical trial of a psychological health promotion intervention for women with SCI, delivered in the online virtual world of Second Life. This trial uses a community-based participatory research approach, partnering closely with a National Community Advisory Board of people with SCI. This innovative approach reduces barriers to participation, representing the first group intervention designed to address the psychological needs of women with SCI. This intervention is tested with a national sample of 192 women with SCI randomly assigned to either an intervention or a control group, with assessments at three time points (pre-intervention, post-intervention, and six-month follow-up), to examine the immediate and longer-term efficacy of the intervention and mechanisms through which the intervention influences psychological health outcomes. The center also participates in multiple collaborative module projects on pain, predictors of acute care on outcomes, and exoskeleton use in SCI. TMSCIS develops knowledge translation materials in various accessible media, designed to reach consumers, clinicians, and researchers to inform health-related decision-making of persons with SCI and their medical service providers. TIRR-Memorial Hermann partners with Harris Health Systems, the University of Texas Health Science Center – Houston (UTHHealth), Baylor College of Medicine, and the University of Montana.
Principal Investigator: Thomas A. Novack, PhD
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Project Number: 90DP0044 (Formerly H133A120096)
Start Date: October 01, 2012
Length: 60 months

NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 12 $447,500; FY 13 $447,500; FY 14 $447,500; FY 15 $447,500; FY 16 $447,500; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project provides rehabilitation services specifically designed to meet the special needs of individuals with traumatic brain injury (TBI) through a multidisciplinary, comprehensive model system which spans the clinical continuum from emergency services through rehabilitation and community re-entry. Research activities include data collection for the Traumatic Brain Injury Model System national database and a site-specific research project aimed at addressing excessive weight gain following TBI, and tailoring an established, evidence-based program that has proved successful with other groups. In addition, the TBI Model System disseminates research findings in the region and nationally through seminars, presentations at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Center.
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Project Number: 90DPTB0015
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 17 $465,000; FY 18 $465,000; FY 19 $465,000; FY 20 $465,000; FY 21 $465,000
Abstract: The University of Alabama at Birmingham Traumatic Brain Injury Model System (UAB-TBIMS) provides multidisciplinary, comprehensive rehabilitation services specifically designed for individuals with TBI. The goal of this project is to improve the lives of people with TBI and their family members by identifying trends in recovery and predictors of outcome while developing interventions to improve outcome. The objectives are: (1) Maintain enrollment and follow-up for the TBI National Database; (2) complete one in-house research project, aimed at improving the health and function, as well as the community participation, of persons with TBI by addressing barriers to healthy lifestyle behaviors; and (3) completion of an exploration and discovery module study focusing on return to driving after TBI, an essential component to independent living for many individuals. UAB-TBIMS products include an Internet-based program to promote healthy lifestyles after TBI and dissemination of project results through professional meetings and journals, as well as distribution of information to stakeholders through the Model Systems Knowledge Translation Center.
The Rocky Mountain Regional Brain Injury Model System (RMRBIMS)

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Project Number: 90DP0034 (Formerly H133A120032)
Start Date: October 01, 2012
Length: 60 months

NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 12 $441,000; FY 13 $441,000; FY 14 $441,000; FY 15 $441,000; FY 16 $441,000; FY 17 (No-cost extension through 9/30/2018)

Abstract: This project provides comprehensive, multidisciplinary services for individuals with traumatic brain injury (TBI) and conducts research that develops evidence-based rehabilitation interventions and clinical practice guidelines. The Rocky Mountain Regional Brain Injury Model System (RMRBIMS) conducts two site-specific, randomized controlled clinical trials. The first study, entitled “Home-Based Virtual Reality Treatment for Chronic Balance Problems in Adults with TBI” evaluates a low-cost, home-based physical therapy program that incorporates the use of a commercially available virtual reality system aimed at increasing balance and community mobility, enhancing overall balance system function, reducing the risk of falls, maximizing treatment adherence, and improving participation in life activities for individuals with TBI who have exhausted their formal physical rehabilitation opportunities. The second study, entitled “Improving Well-Being After TBI Through Structured Volunteer Activity” evaluates the efficacy of a novel intervention to facilitate successful volunteer placement following TBI, and examines the effect of structured altruistic volunteering upon well-being. In addition to these projects, the RMRBIMS participates in collaborative module research and in the TBI Model Systems National Database, and works with the Model Systems Knowledge Translation Center to disseminate research to the widest audience.
The Rocky Mountain Regional Brain Injury System (RMRBIS)

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Project Number: 90DPTB0007
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 17 $459,000; FY 18 $459,000; FY 19 $459,000; FY 20 $459,000; FY 21 $459,000

Abstract: The Rocky Mountain Regional Brain Injury System (RMRBIS) provides a comprehensive multidisciplinary specialty system of traumatic brain injury (TBI) care for Colorado and beyond, with research focusing on the health and function and community living and participation of individuals with moderate to severe TBI. Research activities include a site-specific randomized controlled trial of a group intervention to improve Self-Advocacy for Independent Life (SAIL) after TBI and help people get the services they need, a collaborative multi-center module to develop and evaluate crosswalks for aligning legacy domain measures to new measures in the longitudinal TBI Model Systems National Database. RMRBIS also participates in one or more modules lead by other TBI Model System centers, contributes to the TBIMS National Database by enrolling new individuals with TBI each year and continuing to follow more than 900 cases already enrolled, and disseminates findings to stakeholders through presentations and publications for consumer and professionals.
South Florida Traumatic Brain Injury Model System (SF-TBIMS)

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Project Number: 90DP0046 (Formerly H133A120099)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 12 $427,188; FY 13 $503,526; FY 14 $426,780; FY 15 $426,484; FY 16 $427,145; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project provides rehabilitation services and research aimed at meeting the special needs of individuals with traumatic brain injury (TBI) through a coordinated, multidisciplinary, comprehensive TBI program. The project includes active participation and data collection for the TBI Model Systems national database, participation in collaborative modules, and two site-specific studies: (1) Evaluation and Intervention of Sleep Disordered Breathing (SDB) in Persons with Traumatic Brain Injury, and (2) in Evaluating Assessment Methods for Pain in Persons with Traumatic Brain Injury. Activities of the South Florida Traumatic Brain Injury Model System (SF-TBIMS) reflect an active partnership within the components of the University of Miami and Jackson Memorial Medical Center Health System (UM/JMMC) and Miami HealthSouth Rehabilitation Hospital, and between UM and community organizations such as the Brain Injury Association of Florida, The Florida Department of Health Brain and Spinal Cord Injury Program, and the WellFlorida Council. In addition, the TBI Model System disseminates research findings in the region and nationally through seminars, presentations at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Translation Center.
Brain Research in Aggression and Irritability Network (BRAIN): Building Evidence-Based Approaches to Managing Traumatic Brain Injury

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Project Number: 90DP0036 (Formerly H133A120035)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 12 $427,500; FY 13 $427,500; FY 14 $427,500; FY 15 $427,500; FY 16 $427,500; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project aims to further the evidence for improving clinical management and outcomes for irritability and aggression in individuals with traumatic brain injury (TBI). BRAIN is a comprehensive model service delivery and research system serving individuals with TBI. The System includes prevention and emergency medical services, intensive and acute care, comprehensive medical rehabilitation, long-term follow-up, community reintegration, and vocational rehabilitation. The project includes two site-specific studies: (1) Buspirone for the treatment of chronic post-TBI irritability and aggression: A 91-day single-site, flexible-dose, parallel group, randomized, double-blind, placebo-controlled trial; and (2) Preliminary Development of the Aggression and Irritability Impact Measure: Study 2 works towards the development of a standardized measure to evaluate the impact of irritability and aggression on various aspects of functioning and participation. Measuring impact is a novel, yet complementary approach to existing measures that evaluate the expression of irritability and aggression. In addition, the TBI Model System disseminates research findings in the region and nationally through seminars, presentations at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Translation Center.
This project aims to improve the lives of those affected by traumatic brain injury (TBI) through the following objectives: (1) to determine the breadth of post-TBI outcomes affected by alexithymia (poor emotional self-awareness) and to evaluate the effects of an alexithymia intervention on emotional self-awareness and related emotion regulation; (2) to provide high enrollment, quality data, and leadership to the TBI Model Systems; and (3) to produce knowledge about TBI rehabilitation. Alexithymia, a key component in impaired emotional control, is characterized by poor emotional awareness, difficulty describing and differentiating emotions, and problems acknowledging and associating physical sensations with emotions. This project includes a randomized controlled trial to assess the efficacy of an alexithymia intervention to teach people with TBI the fundamental awareness needed to regulate self-emotions. The project also includes a multi-site observational study to gain a greater understanding of the impact of alexithymia on variables beyond the intervention study.
Spaulding-Harvard Traumatic Brain Injury Model System

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Project Number: 90DP0039 (Formerly H133A120085)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD

NIDILRR Funding: FY 12 $430,100; FY 13 $430,100; FY 14 $430,100; FY 15 $430,100; FY 16 $430,100; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project provides comprehensive, multidisciplinary services for individuals with traumatic brain injury (TBI), and conducts neuroimaging research that favorably impacts persons with severe TBI, their families, and rehabilitation providers. The project contributes to the TBI Model System National Database and monitors long-term functional outcomes. Research includes a site-specific study using novel neuroimaging technologies to reduce diagnostic error and facilitate restoration of communication in persons with post-traumatic disorders of consciousness. The project also contributes to improved long-term TBI outcomes by participating in collaborative, multi-site research. The TBI Model System disseminates research findings in the region and nationally through seminars, presentations at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Center.
Spaulding-Harvard Traumatic Brain Injury Model System

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Project Number: 90DPTB0011
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 17 $441,500; FY 18 $441,500; FY 19 $441,500; FY 20 $441,500; FY 21 $441,500

Abstract: The overall goal of Spaulding-Harvard Traumatic Brain Injury Model System (SH-TBIMS) is to provide a multidisciplinary, comprehensive system of care for those with TBI that fosters innovative TBI rehabilitation research. Project objectives include: (1) providing model care, (2) facilitating comprehensive longitudinal assessment of TBI outcomes by contributing to the TBIMS National Database, (3) executing a high quality site-specific project to develop a recovery measure accessible to acute and postacute clinicians and patient families for tracking TBI recovery among those with the most severe injuries, (4) proposing and participating in a collaborative module project, (5) disseminating research findings, and (6) involving persons with TBI and their families in all stages of research. Final products include a unique recovery metric that bridges acute and postacute care and user-friendly dissemination products for a variety of target populations developed in partnership with the Model Systems Knowledge Translation Center and the TBI survivor and family community.
**Southeastern Michigan Traumatic Brain Injury System**

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**Project Number:** 90DPTB0006  
**Start Date:** September 30, 2017  
**Length:** 60 months  
**NIDILRR Officer:** A. Cate Miller, PhD

**NIDILRR Funding:** FY 17 $446,000; FY 18 $446,000; FY 19 $446,000; FY 20 $446,000; FY 21 $446,000

**Abstract:** This project studies and provides services to people with traumatic brain injury (TBI) and their families from injury onset through long-term community integration. Research activities for this center include a site-specific study, a randomized controlled trial of a group intervention to improve resilience and social support in family members of those with TBI, which addresses the well-established problem of burden and social/emotional distress associated with caring for persons with TBI, and the potential adverse effects of family emotional distress on the outcomes of the person with the brain injury. A multi-center collaborative study examines the role of menopause in women with TBI. Women with TBI have been woefully understudied and the proposed module will provide researchers an opportunity to determine if the experience of menopause is different in women with brain injury versus those without. This project contributes to the National TBI Model Systems Database and disseminates research findings in the region and nationally through seminars, presentations at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Translation Center.
This project provides comprehensive, integrated, team-based rehabilitation to individuals with traumatic brain injury (TBI) and their families to promote full personal and societal participation, and to fill gaps in research knowledge and service delivery. The project includes a trial of CONNECT, a model of care that connects individuals hospitalized with TBI, their families, and their local health care providers remotely to specialized brain rehabilitation resources. CONNECT utilizes traditional (i.e., phone) and customized information and communications technology to increase system capacity and access to services for those in a broader geographic region. The goal of CONNECT is to test the extent to which a complex brain rehabilitation intervention delivered remotely improves participation outcomes and satisfaction compared to a matched group receiving usual care in their communities. In addition, this project contributes to the TBI Model Systems national database, participates in collaborative modules, and disseminates research findings in the region and nationally through seminars, presenting at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Translation Center.
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Project Number: 90DPTB0012  
Start Date: September 30, 2017  
Length: 60 months  
NIDILRR Officer: A. Cate Miller, PhD  
NIDILRR Funding: FY 17 $441,500; FY 18 $441,500; FY 19 $441,500; FY 20 $441,500; FY 21 $441,500  
Abstract: This project tests a new way of delivering medical and social services to individuals with traumatic brain injury (TBI) and their families, addressing three chronic unmet needs: (1) ineffective connection to specialized medical and community resources in the transition from hospital to community-based care and beyond; (2) limited access to TBI experts; and (3) lack of primary care provider (PCP) knowledge about the complex needs of individuals with TBI. The study integrates medical-rehabilitation expertise with the services of resource facilitation (RF) from the Minnesota Brain Injury Alliance. This intervention delivers direct clinical care remotely using telemedicine and other information and communication technology, connecting individuals with TBI, their families, and PCPs to TBIMS clinicians. The goals are to improve participation and quality of life for individuals with TBI, reduce caregiver burden and distress, and increase self-efficacy and mastery among PCPs caring for individuals with TBI and their families. The long-term goal is development of a replicable, sustainable, and cost-effective model of telemedicine care that integrates TBIMS Centers and brain injury associations nationwide to improve outcome following TBI.
Traumatic Brain Injury Model Systems: Improving Longitudinal Assessment and Tracking of Activity Limitations in Individuals with Traumatic Brain Injury

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Project Number: 90DPTB0014
Start Date: September 30, 2017
Length: 60 months

NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 17 $437,450; FY 18 $437,484; FY 19 $437,308; FY 20 $437,963; FY 21 $437,854

Abstract: This project provides a coordinated, multidisciplinary system of neurorehabilitation designed to meet the needs of individuals with TBI. Project activities include contributing to the TBI Model System National Database by enrolling 42 participants annually, conducting longitudinal follow-up, and filling knowledge gaps by providing novel information about activity limitations and patterns of recovery for individuals with TBI. Collaborative multi-center research and site-specific research focus on functional recovery patterns. The goal of the site-specific project is to improve assessment of outcomes across all post-acute settings by evaluating activity limitations and changes in functional activity domains throughout the course of recovery and rehabilitation. Objectives are to: (1) evaluate the sensitivity of Activity Measure for Post-Acute Care (AM-PAC) to longitudinal changes in activity limitations during acute rehabilitation and through the first year of recovery after TBI; (2) demonstrate treatment-induced changes in activity limitations after post-acute rehabilitation; (3) examine the relationship between AM-PAC scales and traditional discipline-specific measures; and (4) evaluate agreement between patients and proxy AM-PAC respondents.
Northern New Jersey Traumatic Brain Injury System (NNJTBIS)

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Project Number: 90DP0032 (Formerly H133A120030)
Start Date: October 01, 2012
Length: 60 months

NIDILRR Officer: Theresa San Agustin, MD

NIDILRR Funding: FY 12 $441,000; FY 13 $441,000; FY 14 $441,000; FY 15 $441,000; FY 16 $441,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project provides a comprehensive continuum of state-of-the-art rehabilitation care for persons with traumatic brain injury (TBI) and conducts TBI research, including clinical trials and the analysis of standardized data. In this project, the Northern New Jersey Traumatic Brain Injury System (NNJTBIS) conducts a site-specific, double-blinded, randomized controlled trial of a cognitive rehabilitation intervention for processing speed deficits utilizing a proven methodology shown to be effective through multiple studies in the aging population. The project also includes a collaborative modular project to be determined. Finally, the NNJTBIS contributes new data to the National TBI Model Systems Database, and coordinates with the NIDILRR-funded Model Systems Knowledge Translation Center to provide scientific results and information for dissemination to clinical and consumer audiences.
Northern New Jersey Traumatic Brain Injury System (NNJTBIS)

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Project Number: 90DPTB0003
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 17 $446,000; FY 18 $446,000; FY 19 $446,000; FY 20 $446,000; FY 21 $446,000

Abstract: The goal of the Northern New Jersey Traumatic Brain Injury System (NNJTBIS) is improving the overall quality of life of individuals with TBI. Project objectives include: (1) enrolling at least 35 participants per year into the national database, following participants 1, 2, and 5 years post-injury and beyond, and meeting or exceeding National Data and Statistical Center benchmarks; (2) conducting a site-specific, double-blind, placebo controlled randomized clinical trial of an evidence-based cognitive rehabilitation intervention for learning and memory deficits following TBI; and (3) collaborating or leading at least two modular studies, including a modular project examining the relationship between social cognition and social integration following TBI. Project results, as well as prevention and education materials, are disseminated through the project’s website, scientific and consumer publications, presentations, and other activities in collaboration with the Model Systems Knowledge Translation Center.
Rusk Rehabilitation Traumatic Brain Injury Model System of Care at NYU

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Project Number: 90DP0047 (Formerly H133A120100)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 12 $427,452; FY 13 $427,253; FY 14 $427,151; FY 15 $427,171; FY 16 $427,218; FY 17 (No-cost extension through 9/29/2018)

Abstract: The goal of this model system is to generate new knowledge and scientific evidence to improve outcomes for all persons with traumatic brain injury (TBI) through the development of innovative interventions, clinical assessment and outcomes tools, and expanded service delivery options. The project conducts research and development activities including contribution to the TBI Model Systems National Database, participation in collaborative modules, and two site-specific studies. The first study uses a two-phase approach to examine cultural disparities in rehabilitation healthcare among patients with TBI. The first phase is a descriptive study to collect data on culturally diverse patients with TBI from both Bellevue and Rusk Rehabilitation, who have been admitted into acute inpatient rehabilitation. Data collection examines the patients’ race/ethnicity, acculturation, family support, trust in health care providers, and health and language literacy as related to retention in healthcare after discharge from acute inpatient rehabilitation. The second phase of the study involves the development of the Multimedia Multicultural Educational Program for TBI (MMEPT) to provide patients with culturally-accessible knowledge about their TBI and the rehabilitation process to facilitate improved outcomes, particularly return for follow-up outpatient care. The second study assesses the responsiveness and sensitivity of the Traumatic Brain Injury Quality of Life Measurement System (TBI-QOL) computerized adaptive tests. In addition, the TBI Model System disseminates research findings in the region and nationally through seminars, presentations at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Translation Center.
New York Traumatic Brain Injury Model System at Mount Sinai (NY-TBI-MS)

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Principal Investigator: Kristen Dams-O’Connor, PhD
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Project Number: 90DPTB0009
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 17 $438,000; FY 18 $438,000; FY 19 $438,000; FY 20 $438,000; FY 21 $438,000

Abstract: The New York Traumatic Brain Injury Model System (NY-TBIMS) provides comprehensive interdisciplinary services for individuals with TBI and conducts site-specific and collaborative research with the goal of improving health, functioning, community living, and participation of people with TBI. Project objectives are to: (1) enroll new participants into the TBIMS National Database and follow those already enrolled; (2) conduct a randomized controlled trial examining the efficacy of Online EmReg, an Internet-delivered group intervention to improve post-TBI emotional dysregulation; (3) conduct a multi-center module project to evaluate changes in cognitive functioning five to seven years after TBI and identify risk factors for cognitive decline; and (4) through a program of knowledge translation and dissemination, partner with our consumer stakeholders and organizational partners to ensure widespread dissemination of the results of project research. Products include an EmReg treatment manual for clinicians, consumer-oriented presentations and outreach activities, and professional publications and presentations.
Rusk Rehabilitation Traumatic Brain Injury Model System (RRTBIMS)

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Project Number: 90DPTB0010
Start Date: September 30, 2017
Length: 60 months

Abstract: Over the course of the 5-year cycle, Rusk Rehabilitation will enroll 50 individuals with TBI per year into the TBIMS National Database. For the site-specific project, Rusk Rehabilitation and its numerous clinical, academic, and community partners provide evidence for characterizing TBI as a chronic condition and implement programs in order to improve Quality of Life (QoL) for those living with TBI for more than one year. The goal of the site-specific project is to demonstrate the numerous ways in which TBI affects QoL in individuals with TBI and their caregivers. The objectives are: (1) to determine the long-term medical and psychological issues associated with living with TBI; (2) to understand the facilitators and barriers to managing TBI taking into account diverse experiences of racial/ethnic and cultural backgrounds; and (3) to provide interventions and recommendations to impact the holistic experience of living with a TBI from individual action and community involvement to healthcare collection management. Anticipated outcomes include (1) collecting critical information regarding the multifaceted issues surrounding long-term management of TBI; (2) improved understanding of the coping mechanisms employed by individuals, caregivers, and community members in various populations; and (3) increased community participation during this project by employing a community engaged research approach. The expected products include a toolkit as a result of the site-specific project to disseminate clinical care recommendations as well as culturally-tailored educational materials to individuals, community-based organizations and other relevant stakeholders. The module project is a randomized, crossover, clinical trial designed to determine the therapeutic effects of seated yoga on individuals with chronic TBI. Anticipated outcomes include improved QOL, physical functioning, physiological measures, and cognitive functioning for participants relative to the activity monitoring control group. The expected product is an intervention script and training module for the eight-week seated yoga intervention.
Ohio Regional Traumatic Brain Injury Model System

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Principal Investigator: Jennifer Bogner, PhD; John D. Corrigan, PhD 614/293-3830
Public Contact: Monica Lichi 614/293-3802; Fax: 614/293-8886

Project Number: 90DP0040 (Formerly H133A120086)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 12 $447,500; FY 13 $447,500; FY 14 $447,500; FY 15 $447,500; FY 16
$447,500; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project provides comprehensive, multidisciplinary services for individuals with traumatic brain injury (TBI), and conducts site-specific research examining chronic health conditions related to TBI designed to contribute new protocols for a “disease management” approach. The first site-specific study is a randomized controlled trial that builds on previous studies to determine how Screening and Brief Intervention (SBI) techniques for alcohol misuse can be adapted for persons with moderate and severe TBI. SBI protocols are elaborated by (1) enhancing positive expectations for health and wellness benefits that accrue from reduced alcohol consumption, (2) including “booster sessions” as has been incorporated into SBI protocols used in Emergency Departments, and (3) providing additional accommodations for cognitive deficits. The second study combines data from two studies, thus allowing examination of the contribution of pre-morbid and co-occurring conditions to later decline up to five years following a moderate or severe TBI. Data from almost 350 participants enrolled in both the TBI Model Systems National Dataset and the TBI Practice-Based Evidence Study are combined to allow in-depth medical information on co-morbid conditions to be examined for their effect on mortality and morbidity over the five years following injury. In addition, the TBI Model System disseminates research findings in the region and nationally through seminars, presentations at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Translation Center and Brainline.org.
The Ohio Regional TBI Model System

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Project Number: 90DPTB0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 17 $463,000; FY 18 $463,000; FY 19 $463,000; FY 20 $463,000; FY 21 $463,000

Abstract: The goals of the Ohio Regional Traumatic Brain Injury Model System (ORTBIMS) are to: (1) provide rehabilitation services in a comprehensive and coordinated system of care serving 3.9 million people in 47 Ohio counties; (2) conduct one local and one module research project, each supporting development of an evidence-based approach to proactively managing TBI as a chronic health condition; (3) continue significant contributions to the TBI Model System National Database by recruiting 250 new participants and following the 1,150 enrolled in previous years; (4) disseminate timely and appropriate information for clinical practice, research, and policy to consumers, advocates, practicing professionals, and students in professional training programs; (5) collaborate with other researchers in disability, rehabilitation, and public health through TBI Model Systems Special Interest Groups, engagement with the National Association of State Head Injury Administrators and input to national organizations representing consumers; and (6) provide a management structure that enhances implementation of the project goals.
The Moss Traumatic Brain Injury Model System

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Principal Investigator: Tessa Hart, PhD
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Project Number: 90DP0037 (Formerly H133A120037)
Start Date: October 01, 2012
Length: 60 months

NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 12 $447,500; FY 13 $447,500; FY 14 $447,500; FY 15 $447,500; FY 16 $447,500; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project utilizes a network of local and regional, national, and international collaborations to provide a full continuum of high-quality treatment spanning emergency and acute trauma/neurosurgical care through community re-entry with which to achieve multiple goals in clinical care, research, and dissemination. The project includes two site-specific research projects, both designed to generate new knowledge that leads to improved practices to meet the needs of people with traumatic brain injury (TBI). Project 1 is a randomized controlled trial examining the effects of a novel, theoretically motivated treatment to promote emotional health via increased levels of rewarding activity for persons with post-acute TBI. The treatment combines principles of Behavioral Activation with intervention methods derived from action phase theories of behavior change, and uses SMS (text) messaging to support increased activity in values-driven goal areas. Project 2 develops and performs initial validation studies on an observational pain scale, with the potential to extend effective pain management to the at-risk population of patients with TBI who cannot self-report pain due to impairments in consciousness or communication. Moss Traumatic Brain Injury Model System includes strong components for dissemination and knowledge translation targeted to people with TBI and their families, clinical staff across the continuum of care, and other professional and lay audiences.
The Moss Traumatic Brain Injury Model System

Principal Investigator: Tessa Hart, PhD
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Project Number: 90DPTB0004
Start Date: September 30, 2017
Length: 60 months

NIDILRR Officer: A. Cate Miller, PhD

NIDILRR Funding: FY 17 $459,000; FY 18 $459,000; FY 19 $459,000; FY 20 $459,000; FY 21 $459,000

Abstract: This project conducts new research, disseminates new knowledge to clinicians, researchers, and persons affected by TBI, and provides state-of-the-art clinical care to persons with traumatic brain injury (TBI) in greater Philadelphia and Southern New Jersey. The goal of this project is to create and disseminate new knowledge to improve health, function, and quality of life for people with TBI. Objectives are to: (1) study the effects of an innovative eight-week treatment program to reduce depression and anxiety after TBI; (2) determine the optimal time to repair skull defects caused by emergency surgery to relieve pressure on the brain; and (3) conduct education and training to enhance knowledge of people with brain injury, their families, and professionals. Project outputs include a regional conference for people with TBI and their families; protocols for treating depression, anxiety, anger, and memory disorders after TBI; videotaped training materials for community support providers; and educational materials including professional publications and presentations reporting research results.
North Texas Traumatic Brain Injury Model System

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BIR/Research/Pages/TBIResearch.aspx

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Project Number: 90DPTB0013
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 17 $459,000; FY 18 $459,000; FY 19 $459,000; FY 20 $459,000; FY 21 $459,000

Abstract: The goal of this project is to improve the health and function of individuals with traumatic brain injury (TBI) and their care partners through evidence-based clinical care and innovative research. The objectives are to: (1) provide comprehensive clinical care and rehabilitation to individuals with TBI; (2) assess the long-term outcomes of individuals with TBI; (3) test the efficacy of an evidence-based weight-loss intervention for individuals post TBI (site-specific project); (4) assess the feasibility and efficacy of problem-solving training to reduce the care burden of care partners of individuals with TBI (module project); and (5) develop resources and disseminate findings to stakeholders. Products include usable and replicable interventions for individuals with TBI and their care partners, scientific papers and presentations of intervention study results, stakeholder and student workshops, educational resources on TBI for individuals and care partners, and plain language factsheets disseminated locally and through the Model Systems Knowledge Translation Center.
Texas TBI Model System of TIRR

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forhealthprofessionals/content.aspx?id=1162

Principal Investigator: Mark Sherer, PhD
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Project Number: 90DP0028 (Formerly H133A120020)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 12 $447,500; FY 13 $447,500; FY 14 $447,500; FY 15 $447,500; FY 16 $447,500; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project conducts a program of research, dissemination activities, and clinical care designed to decrease emotional distress and to improve participation outcomes for persons with traumatic brain injury (TBI). Research activities include: (1) contributions to the TBI Model Systems National Database, (2) participation in collaborative module projects, and (3) a local project that is a randomized controlled trial of Acceptance and Commitment Therapy as compared to a devised standard of care intervention to decrease emotional distress and improve participation for persons with TBI. This initial trial will lead to larger multicenter comparative effectiveness trials using this intervention. In addition, the TBI Model System disseminates research findings in the region and nationally through seminars, presentations at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Translation Center.
Texas TBI Model System of TIRR

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Project Number: 90DPTB0016
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 17 $463,000; FY 18 $463,000; FY 19 $463,000; FY 20 $463,000; FY 21 $463,000

Abstract: The Texas TBI Model System of TIRR, in collaboration with other funded centers and consumers (persons with TBI, caregivers, and rehabilitation professionals) conducts rigorous research that improves the health and function, community integration, and employment of persons with TBI, as well as providing effective, accessible dissemination. The goal of the center is to improve chronic health management in persons with TBI. To accomplish this goal, the center is: (1) Conducting a randomized controlled trial of a low cost, mood tracking app plus action recommendations to improve mental health, quality of life, and participation; (2) participating in four collaborative projects and leading a module project to characterize health literacy in persons with TBI and its relationship to health outcomes; (3) contributing at least 35 persons with TBI annually to the TBIMS National Database and collecting follow-up data on previously enrolled participants at 1, 2, 5, 10, 15, 20, 25, and 30 years post-injury; and (4) conducting a comprehensive program of dissemination to consumers and professionals. As a result of these activities, people with TBI and caregivers experience improved understanding of management of long-term health effects after TBI, and rehabilitation professionals use new information to guide treatment of emotional distress and presentation of health information to consumers. Products include fact-sheets on using a mood tracker mobile app to reduce emotional distress after TBI and on application of health management strategies to minimize poor health outcomes, multimedia presentations to improve health literacy for persons with TBI and making health information accessible for persons with TBI, as well as scientific publications and presentations at professional meetings.
Virginia Commonwealth Traumatic Brain Injury Model System

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Principal Investigator: Jeffrey S. Kreutzer, PhD
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Project Number: 90DP0033 (Formerly H133A120031)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 12 $436,200; FY 13 $436,200; FY 14 $436,200; FY 15 $436,200; FY 16 $436,200; FY 17 (No-cost extension through 3/29/2018)

Abstract: This project utilizes rigorous scientific methods to examine the benefits of two interventions. Projects focus on survivors and couples. One study examines a structured, curriculum-based approach to improve survivors’ resilience and adjustment. The second study examines the benefits of an intervention for couples. Although many professionals agree that strengthening caregivers can enhance rehabilitation outcomes, there is little research regarding the benefits of interventions designed specifically to address the needs of couples after injury. In addition to the site-specific trials, the project collects data for the National Database and participates in a collaborative module project. The Virginia Commonwealth Traumatic Brain Injury Model System disseminates research findings in the region and nationally through seminars, presentations at professional and consumer meetings, publishing in professional and consumer journals, and collaboration with the Model Systems Knowledge Translation Center.
Traumatic Brain Injury Model Systems
Virginia

Virginia Commonwealth Traumatic Brain Injury Model System

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Project Number: 90DPTB0005
Start Date: September 20, 2017
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 17 $452,000; FY 18 $452,000; FY 19 $452,000; FY 20 $452,000; FY 21 $452,000

Abstract: This project utilizes rigorous scientific methods to examine a two-arm, randomized controlled trial comparing the benefits of a basic resilience-building intervention with an expanded, patient-centered, resilience intervention following traumatic brain injury. Outcome measures focus on resilience, emotional distress, adjustment, and stress management. The sustainability of treatment benefits is investigated. In addition to the site-specific trial, the Virginia Commonwealth University Traumatic Brain Injury Model System (VCU TBIMS) collects data for the National Database and participates in collaborative module projects. VCU TBIMS researchers maintain a highly active dissemination program in collaboration with the Model Systems Knowledge Translation Center. As in the past, VCU’s dissemination efforts include a high volume of peer-reviewed publications and consumer-oriented outreach. In partnership with Brain Injury Services and the National Resource Center for TBI, the VCU TBIMS recently hosted the 41st TBI rehabilitation conference in Williamsburg, VA. The conference was the first and remains the longest running TBI rehabilitation conference in the world. The conference planning committee continues to include research and researchers from other TBIMS sites in planning upcoming conferences.
Traumatic Brain Injury Model Systems
Washington

University of Washington Traumatic Brain Injury Model System (UWTBIMS)

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Project Number: 90DP0031 (Formerly H133A120028)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 12 $441,000; FY 13 $441,000; FY 14 $441,000; FY 15 $441,000; FY 16 $441,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project provides a multidisciplinary system of rehabilitation within a full continuum of medical care by conducting a high quality research site-specific project on post-traumatic headache, participating in a collaborative research projects with other centers, coordinating with the Model Systems Knowledge Translation Center to extend dissemination, addressing the needs of underserved populations with traumatic brain injury (TBI), involving persons with TBI in center operations and research, contributing new data to the TBI Model System database, and participating actively in all Project Directors’ meetings. The site specific project is a trial of sumatriptan, an FDA-approved treatment for migraine, to treat moderate to severe headache after TBI. Activities include training study participants to maintain a reliable headache diary data to monitor compliance with the complex protocol (necessary to adequately treat headaches), as this may present difficulties for those with cognitive challenges and require caregiver assistance; and testing interactive smart phone and web-based diaries that utilize reminders to determine efficacy and acceptance by subjects and caregivers. A collaborative module studies the effect of phototherapy on sleep after acute TBI. This is a randomized controlled trial of two groups with the hypothesis that treatment using bright white light results in improved sleep and secondarily, in improved cognition and behavior.
University of Washington Traumatic Brain Injury Model System (UWTBIMS)

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Project Number: 90DPTB0008
Start Date: September 30, 2017
Length: 60 months

NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 17 $459,000; FY 18 $459,000; FY 19 $459,000; FY 20 $459,000; FY 21 $459,000

Abstract: The goal of the University of Washington Traumatic Brain Injury Model System is to improve the lives of individuals with traumatic brain injury (TBI). Project activities include: (1) providing a multidisciplinary system of rehabilitation within a full continuum of medical care; (2) contributing to the TBIMS national database with follow-up of more than 1,000 currently-enrolled subjects; (3) conducting a site-specific study of collaborative care versus usual care to reduce the interference of pain, including headache, after TBI; (4) participating in module studies, including the examination of physical activity in the first year after TBI and its relationship to significant functional outcomes; and (5) delivering evidence-based, patient-centered information through a website, newsletter, and partnership with the Model System Knowledge Translation Center (MSKTC). Outcomes include (1) meeting or exceeding benchmarks for enrollment and follow-up on all studies, (2) successful implementation and collaboration on module projects, (3) improving consumer awareness and education on TBI-related topics, including partnering with the Brain Injury Alliance of Washington and MSKTC, and (4) disseminating research findings to other professional and consumer audiences.
Field Initiated Projects (FIPs)
Alabama

Prognostic Indicators for Reading in Pediatric Vision Impairment

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Project Number: 90IF0104
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 15 $199,909; FY 16 $199,985; FY 17 $199,985

Abstract: This longitudinal study aims to answer the following questions: (1) What demographic characteristics of young children with vision impairment contribute to later reading ability? (2) What is the relationship between executive function and reading ability among young children with vision impairment? (3) Is there a relationship between executive function and visual acuity in young children with vision impairment? (4) Does Rapid Automatic Naming predict reading ability in young children with vision impairment as measured by the Woodcock Johnson III® Tests of Achievement? and (5) Are there areas of school readiness of particular concern for young children with vision impairment? There is already work being done to address the above questions in children without vision impairment, however children with vision impairment are systematically excluded from such studies. In order to address these questions in this population, the project has assembled a team consisting of experts in pediatric vision rehabilitation, eye movements, and eye movement recording, as well as developmental psychology. The project assesses domains known to be associated with reading: The Battelle Developmental Inventory, 2nd Edition (development), the Beery VMI (visuomotor integration), RAN (Rapid Automatized Naming), and an Executive Function Battery (working memory, inhibitory control, and attentional shifting). The primary outcome measure is performance on the Basic Reading cluster of the Woodcock-Johnson III Tests of Achievement. Children are evaluated prior to entry into kindergarten and twice annually until the completion of first grade. The study assesses the relationship between reading and the domains listed above to identify factors that are more potent mediators of individual variance in reading ability. By identifying characteristics of children with vision impairment at risk for reading disability or repeating kindergarten or first grade, the project enables educators to appropriately allocate the limited and highly specialized services of teachers of the students with visual impairments. The knowledge gained facilitates utilization of existing interventions or development of new, individual-centric, targeted interventions.
Field Initiated Projects (FIPs)
California

The Disability, Rehabilitation, Engineering Access for Minorities (DREAM)

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Project Number: 90IFST0001
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 16 $199,000; FY 17 $200,000; FY 18 $199,999

Abstract: The goal of this project is to focus the field of spinal cord injury (SCI) research on reducing risk for cardiometabolic diseases. The objective is to provide individuals with traumatic SCI with greater access to exercise. A traumatic SCI is a devastating event with lifelong consequences. Life expectancy after SCI has improved to nearly normal lifespan. However, stroke, cardiopulmonary events, and diabetes are main causes of mortality and morbidity after SCI, due in large part to sedentary behavior. This project has three complementary, multidisciplinary aims: (1) test the efficiency of exercise to improve fitness and reduce disease risk using both new and gold standard biomarkers; (2) innovate a DREAM app that tracks muscle activity and provides feedback to encourage achievement of goals outside of rehabilitation; and (3) assess the impact of exercise intervention on social participation and quality of life. Outcomes for this project include: Relationships between reduced disease risk and improved fitness assessed as a function of exercise; a mobile app using upper limb muscle activity to provide feedback to individuals with disabilities engaged in exercise both in and out of the rehabilitation setting; and documenting how these interventions facilitate attainment of self-determined goals, increased social participation, and quality of life. Achieving these aims will produce new exercise guidelines that improve health, and technology-based solutions to provide greater accessibility outside of the rehabilitation setting.
Field Initiated Projects (FIPs)
Colorado

Intervention to Promote Goal-Directed Behavior in Infants with Down Syndrome

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Project Number: 90IF0096
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 15 $199,430; FY 16 $198,372; FY 17 $199,817

Abstract: This project tests the efficacy of an innovative, parent-delivered reaching intervention to improve goal-directed behavior and functional abilities in infants with Down syndrome (DS), targeting and supporting the development of goal-directed behavior in its earliest forms for infants with DS. The study randomly assigns infants and their parents to two developmentally matched groups. Parents are trained to administer either the four-week intervention or a control condition. Outcome measures include direct observations of object exploration, object grasp planning, object affordances/characteristics detection, and parent reports of functional abilities. Direct observations are measured in weekly intervals while functional abilities are measured at three points: baseline, immediately following intervention, and at the six-month follow-up. Project outcomes directly inform intervention planning recommendations for infants and young children with DS and contribute to the larger effort to improve outcomes in this population.
Development of a Urinary Symptom Measurement Instrument

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Project Number: 90IF0121
Start Date: September 30, 2016
Length: 36 months

NIDILRR Officer: Kenneth D. Wood, PhD

NIDILRR Funding: FY 16 $199,989; FY 17 $199,995; FY 18 $199,990

Abstract: Urinary tract infection (UTI) is the most common bacterial infection worldwide. Neurogenic bladder, a central nervous system problem causing a lack of bladder control often due to spinal cord injury (SCI) and multiple sclerosis (MS), puts people at high risk for UTIs. Diagnosis of UTI is largely dependent on symptoms being present, however not all urinary symptoms are due to an infection. It is unknown which symptoms are more likely to lead to infection, versus those that do not. The result is that most urinary symptoms are treated as if they represent an infection − with antibiotics − which may be overtreatment, leading to side effects and antibiotic resistance. This project advances the understanding of and ability to identify and follow urinary symptoms that may or may not be related to UTI. The goal of this project is to create the first Urinary Symptom Questionnaire (USQ-NBV) specifically targeting people with neurogenic bladder due to SCI and MS who void without using a urinary catheter. The objectives are: (1) to develop and validate the USQ-NBV; (2) to pilot test the predictive validity of the USQ-NBV; and (3) to determine which urinary symptoms are related to UTI. The resulting instrument offers a tool for patients, clinicians, and researchers to track urinary symptoms while generating more specific data guiding diagnostic guidelines for the target population. The project team includes MedStar National Rehabilitation Hospital, MedStar Georgetown University Hospital, United Spinal Association, and consumer experts.
GoCC4All: Using Pervasive Technology to Provide Access to TV to the Deaf-Blind Community

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Project Number: 90IFDV0004
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 17 $199,461; FY 18 $199,892; FY 19 $199,776
Abstract: The goal of the project is to enhance community living and participation for individuals who are deaf-blind by bringing them access to TV information that is widely available to any other citizen. The project develops and tests GoCC4All, a product that uses pervasive technologies to bring television programming, including regular television programming as well as national and local emergency information provided through this media, to users who are deaf-blind through their mobile devices and braille displays. The objectives of the project are to develop a functional product, confirm proof of adoption of the technology among the deaf-blind community, and add to knowledge about technologies that serve the deaf-blind community.
Field Initiated Projects (FIPs)
Georgia

Personalized Medicine for Pressure Ulcer Prevention:
Clinical Measures of Buttocks Deformation

Georgia Tech Research Corporation
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Principal Investigator: Sharon Sonenblum, PhD
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Project Number: 90IF0120
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 16 $199,985; FY 17 $199,897; FY 18 $199,858

Abstract: The Rehabilitation Engineering and Applied Research Laboratory (REAR Lab) identifies the clinical characteristics that are related to biomechanical pressure ulcer (PrU) risk. These are the clinical measurements needed to bring wheelchair seating and PrU prevention into the era of personalized medicine. The goal of this study is to reduce the incidence of sitting-acquired PrUs by providing quantitative information about biomechanical risk that supports personalized interventions. Therefore, the objectives of this study are to: (1) identify differences in seated buttocks tissue deformation that are associated with differences in PrU risk, and (2) to identify clinically measurable, biomechanical risk factors that contribute to seated tissue deformation and to an individual’s level of PrU risk. Anticipated outcomes include: (1) Clinicians will benefit from new information relating clinical measurements to their clients’ individual PrU risk. (2) Wheelchair users will benefit from a more personalized PrU risk assessment and more informed and personalized interventions. This should result in fewer PrUs and increased comfort and satisfaction with wheelchair cushions and seating systems. (3) An improved understanding of the mechanisms of PrU development and the buttocks’ response to loading may also lead to improved cushion design and evaluation. The expected products are: (1) 3D MRI scans and deformation descriptions of seated buttocks of 36 individuals with different levels of PrU risk. (2) Measurements of clinical characteristics of individuals with different levels of risk. (3) Statistical analyses relating the clinical measurements to buttocks tissue deformation and PrU risk.
Environmental Barriers and Facilitators to Assisted Toilet Transfers by People Aging with Disability and their Spousal Caregivers

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Project Number: 90IFRE0005
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 17 $199,925; FY 18 $199,991; FY 19 $199,380

Abstract: This project identifies environmental factors that create barriers and facilitators to caregiver assisted transfers for individuals aging with disability to inform the development of design criteria for dyadic-centered AT/EM toilet transfer interventions. Specific aims are to: (1) describe the overall effectiveness of existing AT/EM toilet transfer interventions for individuals aging with disability and their caregivers by evaluating transfer performance of caregiving dyads using their own AT/EM interventions; (2) observe and delineate categorical differences in unmet needs for environmental supports for care recipient/caregiver dyads with different functional abilities; (3) identify the salient factors of the AT/EM that either act as barriers or facilitators to successful transfer performance based on the different needs and abilities of care recipients and their caregivers; (4) develop design criteria for the subsequent development of effective AT/EM solutions for assisted transfers by individuals aging with disabilities and their spousal caregivers; and (5) develop and execute a knowledge translation plan to disseminate study findings to appropriate stakeholders.
Motivational Interviewing and Physical Activity Change in Parkinson’s Disease

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Project Number: 90IF0093
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 15 $199,941; FY 16 $199,926; FY 17 $199,863

Abstract: This project aims to develop a web-based application for self-monitoring of physical activity for persons with Parkinson’s Disease (PD). The project includes testing the efficacy of motivational interviewing (MI), a patient-centered guiding method for enhancing intrinsic motivation to change, and the web-based self-monitoring application for improving physical activity as the primary outcome, and balance and quality of life as secondary outcomes; and assessing persistent effects of the interventions at nine months (three months post-intervention) in persons with PD. The project begins with focus groups of persons with PD to assist in developing the web-based application for self-monitoring and the other interventions. A clinical trial includes participants recruited from a PD registry at Northwestern University and randomly assigned to one of four intervention groups: education (control intervention); MI intervention only; web-based self-monitoring application only; and both MI + web-based self-monitoring application interventions. Participants are assessed for physical activity, balance, and quality of life at baseline, 3, 6, and 9 months to assess for changes in the outcomes.
Field Initiated Projects (FIPs)
Illinois

Weight Management and Wellness for People with Psychiatric Disabilities

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Project Number: 90IF0100
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 15 $199,998; FY 16 $199,212; FY 17 $199,896

Abstract: This project conducts a randomized controlled trial to test the effectiveness of an intervention called Nutrition and Exercise for Wellness and Recovery (NEW-R) in promoting weight loss, healthy eating, and increased physical activity among individuals with psychiatric disabilities. NEW-R is an eight-week recovery-oriented behavioral intervention. It uses innovative strategies such as peer support and modeling, exercise videos featuring people with psychiatric disabilities, real-world weight management strategies that are inexpensive and easily adopted, and freely available instructor and participant manuals. A total of 225 research participants were recruited and randomly assigned to receive NEW-R or services as usual. Research participants are interviewed at study baseline, 2-months (immediate post-intervention), and 8-months post-baseline to assess weight loss, health and mental health outcomes, and changes in health knowledge. The study has two aims: to finalize the intervention and fidelity assessment procedures, and then, hire and train NEW-R instructors; and to deliver the intervention and gather data to test its effectiveness on participant health and mental health outcomes. The dissemination plan includes podcasts, research briefs, and other knowledge exchange formats to promote the translation of research findings into practice.
Examining Determinants of Negative Attribution Bias in People with Traumatic Brain Injury

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Project Number: 90IF0095
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: William V. Schutz, PhD, MSW, MPH
NIDILRR Funding: FY 15 $199,999; FY 16 $200,000; FY 17 $200,000

Abstract: This project examines factors associated with negative attribution bias in people with traumatic brain injury (TBI), and how this bias differs from healthy controls. Negative attribution bias is the tendency to perceive others’ behaviors as intentional, hostile, and blameworthy, especially when those behaviors are ambiguous or benign. The aims of the study are to: (1) determine group differences for negative attributions (intent, hostility, and blame) and feelings of irritation and anger reported by people with and without TBI for ambiguous behaviors; (2) determine the associations of negative attributions for ambiguous behaviors with cognitive processes and emotional factors; (3) identify regression models that best explain attributions of intent, hostility, and blame in response to ambiguous behaviors; and (4) determine the associations of negative attribution biases with community participation and satisfaction with life. Participants with and without TBI are presented with scenarios that describe characters’ behaviors as benign, ambiguous, or hostile, and result in hypothetically unpleasant outcomes for the participant. Participants rate how irritated and angry they are in response to the situation, and judge the intent, hostility, and blameworthiness of the characters in the scenarios. Trait aggression, anxiety, alexithymia, executive functioning, perspective-taking, and social inference are also evaluated, as well as community participation and satisfaction with life. Study objectives rest on the premise that negative attribution bias will be exacerbated in people with TBI and differ from healthy controls due to frequent cognitive and emotional impairments. The findings from this study are critical to the development of an intervention to reduce negative attribution bias in people with TBI.
Field Initiated Projects (FIPs)
Maryland

Take Charge of Burn Pain:
A Randomized Controlled Trial of a Web-Based Self-Management Intervention to Improve Burn Pain Outcomes

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Project Number: 90IF0068 (Formerly H133G140079)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 14 $198,000; FY 15 $198,000; FY 16 $198,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project uses a randomized control trial to test the efficacy of Take Charge of Burn Recovery – Pain (TCBR-Pain), a web-based self-management intervention. The project goals are to: (1) determine the efficacy of TCBR-Pain in improving pain management efficacy, and reducing pain and pain-related interference in burn survivors; and (2) determine whether TCBR-Pain improves psychological health and participation in life activities for burn survivors with pain. Participants are randomized into a control group or a standard-care plus TCBR-Pain group and are evaluated at baseline, two months, and five months follow-up. The project advances the knowledge about management of burn-related chronic pain, pain interference, and pain-related distress. The project disseminates information utilizing a cloud-based system that allows for nationwide dissemination, facilitates patient-centered care, and improves access for persons with disabilities.
Efficacy of an Interactive Web-Based Home Therapy Program in the Recovery of Arm and Hand Following Stroke: A Randomized Trial

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Project Number: 90IFRE0011
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 17 $199,999; FY 18 $200,000; FY 19 $200,000
Abstract: This project investigates the efficacy and feasibility of using a free, easy-to-use, interactive web-based upper extremity stroke rehabilitation program on individuals with stroke who have recently been discharged from outpatient rehabilitation. The goal is to compare the home use of the web-based stroke rehabilitation program with that of written exercises in a randomized trial. The objectives are to assess (1) motor function immediately before and 6 weeks after intervention and after 20 weeks' follow-up in order to support the efficacy of using this web-based intervention; (2) behavioral changes in motivation and self-efficacy at the same timepoints to understand the relationship between behavioral and motor function changes; (3) perceptions of patients and caregivers of the web-based program to understand feasibility and barriers to home use; and (4) perceptions of therapists to understand feasibility and barriers to clinic use.
Targeting Sedentary Behavior Reduction in Adults with Cerebral Palsy Using a Real-Time Behavioral Intervention

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Project Number: 90IF0102
Start Date: September 30, 2015
Length: 36 months

NIDILRR Officer: William V. Schutz, PhD, MSW, MPH
NIDILRR Funding: FY 15 $200,000; FY 16 $200,000; FY 17 $200,000

Abstract: This project aims to determine the extent of cardiometabolic risk in adults with cerebral palsy (CP), and to reduce sedentary behavior using a novel strategy that will lead to sustainable behavior modification and improved health outcomes. The project comprises three objectives: (1) Compare total sedentary behavior and cardiometabolic risk profiles between adults with CP and matched adult controls; (2) determine the effectiveness of a novel, context-aware wearable monitoring and smartphone-based intervention (iReduceSB) to reduce total sedentary behavior, increase fragmentation of sedentary behavior, and lead to sustainable improvement of behavior change in adults with CP; and (3) determine the effects of reducing total sedentary behavior and increasing fragmentation of sedentary behavior on clinically relevant serum markers of cardiometabolic risk.
The Effect of Gentamicin Intravesical Instillations on Decreasing Urinary Tract Infections in Patients with Neurogenic Bladder After SCI: A Clinical Trial

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Project Number: 90IFRE0002
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 17 $200,000; FY 18 $200,000; FY 19 $200,000

Abstract: This project conducts a randomized clinical trial to test the efficacy of intravesical gentamicin instillations to reduce the incidence of urinary tract infections (UTIs) in persons with spinal cord injury (SCI), improve bladder and bowel health, and assess the effectiveness of this intervention in promoting quality of life (QOL) and community participation. The goal of this project is to produce new scientific information about treating frequent UTIs in persons SCI. The objectives are: (1) to assess the efficacy of gentamicin in reducing UTIs in those with recurrent infections (at least 3 within the past 12 months) as well as other related bladder and bowel complications such as incontinence; and (2) to examine the effect of this treatment on people’s lives by assessing its impact on community participation and QOL.
Treating Cognitive Deficits in Traumatic Spinal Cord Injury (SCI): A Randomized Clinical Trial

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Project Number: 90IF0113
Start Date: September 30, 2016
Length: 36 months

NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 16 $199,994; FY 17 $199,637; FY 18 $199,706

Abstract: The goal of this study is to identify treatments for cognitive deficits experienced by people with spinal cord injuries (SCI). Multiple studies in the SCI population have documented cognitive deficits that adversely impact daily life and benefit from rehabilitation. Published studies note cognitive deficits in persons with SCI in learning and memory (LM) and processing speed (PS), further demonstrated in pilot data collected in previous studies conducted by these researchers. Given that these cognitive deficits have a critical impact on functional outcome after SCI, it is imperative to identify effective treatment for these deficits in an effort to improve everyday functioning and overall quality of life of impacted individuals. The objectives of this study are to: (1) apply a treatment protocol for PS and LM impairments, well-validated in other neurological populations, to individuals with SCI with objectively observable deficits in these areas and document efficacy on standard neuropsychological testing; (2) assess the effectiveness of the interventions in persons with SCI utilizing global measures of everyday life; and (3) evaluate the long-term benefit of treatment. Outcome is measured across two domains. First, researchers administer objective measures of cognitive functioning through a neuropsychological assessment. Second, researchers evaluate treatment efficacy in regard to functioning in everyday life, through an assessment of global functioning. These outcomes are assessed immediately following treatment and six months later. In this way, the project not only identifies the immediate treatment effect, but also the maintenance of treatment effects over time. The expected products are two highly structured, manualized treatment protocols with demonstrated efficacy in treating cognition in persons with SCI.
Improving Quality of Personal Care Assistance Services for People with SCI Through Online Education

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Project Number: 90IF0115
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 16 $198,884; FY 17 $198,893; FY 18 $197,947

Abstract: The goal of this project is to improve the quality of personal care assistance (PCA) services for people with spinal cord injury (SCI) through online education. This project identifies educational needs and develops an online course to help new PCAs - who are typically unfamiliar with the special needs of people with SCI - understand the unique effects of SCI, the types of care needs that people with SCI have, and how the assistance that PCAs provide helps those with SCI live healthy, productive lives in the community. The course is designed to “jump-start” the training process by providing a foundation of knowledge about SCI that will make subsequent hands-on training in bathing, feeding, transfers, etc. more effective and efficient. The web-based curriculum includes a certification process. Discussion guides, worksheets, and a resource list facilitate the application and adaptation of the training to the care of specific individuals with SCI. The course also addresses how to improve communication between people with spinal cord injury and their PCAs.
Interpreting COPD Dyspnea Change:
Sensitivity, Responsive, and Predictive Validity of the DMQ-CAT

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Project Number: 90IF0128
Start Date: October 01, 2016
Length: 12 months

NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 16 $199,987; FY 17 (No-cost extension through 9/29/2018)

Abstract: The aim of this project is to test the relative sensitivity to change, responsiveness, and predictive validity of DMQ-CAT, a comprehensive dyspnea-outcome computer adaptive test (CAT) that measures new anxiety and activity avoidance in adults with chronic obstructive pulmonary disease (COPD). The 71-item DMQ-CAT captures four distinct dyspnea constructs: intensity, anxiety, activity avoidance, and self-efficacy to evaluate outcomes of COPD pharmacologic, preliminary rehabilitation, and cognitive-behavioral therapy. This project expects to: (1) begin to transform how dyspnea is assessed, (2) improve dyspnea symptom management, (3) impact functional status, (4) improve quality of life, (5) facilitate the earlier treatment and prevention of exacerbations, (6) improve COPD prognosis and survival, and (7) improve COPD healthcare utilization. The DMQ-CAT addresses the limitations of other dyspnea scales by using state-of-the-art item banking method techniques to provide a tailored multidimensional dyspnea assessment using only a minimal number of items.
Field Initiated Projects (FIPs)
Oregon

TBITutor: An Intelligent Tutoring System to Improve Educational Outcomes in Youth with TBI

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Project Number: 90IF0073 (Formerly H133G140134)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 14 $199,675; FY 15 $199,869; FY 16 $199,654; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project develops TBITutor, a cloud-based intelligent tutoring system designed to help students achieve their academic goals when they return to educational settings after a traumatic brain injury (TBI). As they return to their homes and communities, many of these students face severe challenges, particularly in the academic arena. The most common TBI-related sequelae related to school performance are memory and executive dysfunction, which often result in a progressive lag in academic achievement. The goal of TBITutor is to provide a learning environment that places minimal demands on the executive functioning system and to therefore allow the learner to allocate all memory and attention resources to the learning activities rather than to managing the learning process. TBITutor can be used at home or in school using the students’ own course materials. It guides students through a sequence of evidence-based learning activities while they are doing their homework or studying for tests. TBITutor provides: (1) effective scaffolding for an optimal learning process; (2) tailored support and guidance as needed based on skill level, cognitive profile, and extent of the impairment; and (3) consistent feedback on the content as well as the learning process. TBITutor has the potential to support adult learners with TBI as well as young students.
Project EF: Executive Function in Infants and Toddlers
Born Low Birth Weight and Preterm

Principal Investigator: Patricia Blasco, PhD
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Project Number: 90IF0084 (Formerly H133G140244)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 14 $200,000; FY 15 $200,000; FY 16 $200,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project examines whether traditional assessment methods that have components of executive functioning (EF) in their structure can discern early indicators of EF in three subgroups of children ages six months to three years: (a) children born low birth weight (LBW) and pre-term at low risk, (b) children born LBW and preterm at high risk, and (c) children born at full-term. The primary goal in Years 1 and 2 is to assess a sample of 100 children born LBW and pre-term and 40 children who were full-term by administering a battery of standardized measures of infant and toddler development involving both caregiver report and individual assessment. In Year 3, the children are assessed on these measures and a measure of EF. In the first phase of Project EF (Years 1 and 2) researchers examine the difference among LBW and pre-term groups (at low and high risk) and the full-term sample on domains of early development (Bayley Scales of Infant Toddler Development III and Dimensions of Mastery Questionnaire (DMQ-17). In the second phase of Project EF (Year 3), researchers examine the relationship between children’s performance on these developmental measures and later performance on a measure of EF: Behavior Rating Inventory of Executive Function: Preschool Version (BRIEF-P), and a performance-based measure of EF, EF Touch, a research protocol to access working memory, inhibition, and cognitive flexibility. Study benefits include determining cognitive and behavioral correlates of EF on a battery of current measures that may assist in identifying EF concerns in very young children. Research findings provide new scientific knowledge and a better understanding of EF skills and deficits in young children who are born LBW and pre-term leading to young children who are vulnerable to EF deficits in need of interventions to experience better school readiness outcomes.
Field Initiated Projects (FIPs)
Pennsylvania

**Dynamic Supported Mobility for Infants and Toddlers with Cerebral Palsy**

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**Project Number:** 90IF0076 (Formerly H133G140166)  
**Start Date:** October 01, 2014  
**Length:** 36 months  
**NIDILRR Officer:** William V. Schutz, PhD, MSW, MPH  
**NIDILRR Funding:** FY 14 $200,000; FY 15 $200,000; FY 16 $200,000; FY 17 (No-cost extension through 9/29/2018)

**Abstract:** The objective of this project is to determine if dynamic supported mobility (DSM) using novel technology leads to greater improvement in motor function than conventional (CONV) physical therapy in infants and toddlers with cerebral palsy (CP). Participants receiving DSM training are given dynamic weight support and therapy focuses on child-directed motor play and exploration in a physically challenging environment designed to encourage motor variability and error experience with minimal assistance or correction from the therapist. CONV therapy involves therapist-directed activities with a focus on the repeated practice of typical movement patterns with assistance and correction from the therapist. The primary outcome measure is gross motor function. Motor outcomes are compared to published percentile scores to determine if the trajectory of predicted motor development has been altered. Secondary outcomes include improvements in physical activity at home, postural control, engagement in daily life, and parent satisfaction and cognition.
Field Initiated Projects (FIPs)
South Carolina

Prevalence of Chronic Disease After Spinal Cord Injury:
A Longitudinal Study

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Project Number: 90IF0070 (Formerly H133G140101)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 14 $199,707; FY 15 $199,823; FY 16 $199,952; FY 17 (No-cost extension through 9/29/2018)

Abstract: The aim of this project is to perform a comprehensive and epidemiologic assessment of the prevalence and risk factors of chronic health conditions (CHC) after spinal cord injury (SCI). This project utilizes a population-based cohort from a state SCI surveillance system registry (SCISSR), lays the foundation for the development of prevention strategies, and provides valuable knowledge needed for the allocation of limited resources. The objectives of this project are: (1) identify the prevalence of CHC’s and the added risk associated with SCI relative to the general population, (2) identify differences in health behaviors compared with the general population, (3) identify risk and protective factors for multiple CHCs, and (4) assess the change in prevalence of a subset of CHC’s over a five-year interval. A community advisory panel convenes to provide stakeholder input from people with SCI. Dissemination activities are geared to both professional and stakeholders through multiple avenues. The ultimate goal of the entire project is to generate new knowledge that may be used in diverse settings and circumstances to promote better outcomes; specifically, the prevention of or early intervention for CHC after SCI.
Risk of Early Mortality After Spinal Cord Injury

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Project Number: 90IF0066 (Formerly H133G140048)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 14 $199,638; FY 15 $199,926; FY 16 $199,596; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project conducts a cohort study of more than 3,000 participants to link risk and protective factors to both all-cause and cause-specific mortality after spinal cord injury (SCI). Data collection includes psychological, socio-environmental, behavioral, and health status. Data analysis: (1) evaluates each set of predictors in relation to mortality, using time dependent covariates; (2) assesses change in predictive variables between two follow-ups in relation to mortality; (3) classifies causes of death in comparison to the general population; and (4) identifies predictors of specific causes of death. The project includes input from stakeholder and professional advisory panels on study design, analyses, and dissemination. A primary focus is the development of recommendations for prevention strategies that target high risk factors for both all cause and specific causes of mortality. Prevention strategies are directed at rehabilitation, public health, policy, and stakeholder audiences. Dissemination includes peer-reviewed publications, presentations at national conferences, and publication in stakeholder journals.
Aging and Spinal Cord Injury: A 45-Year Longitudinal Study

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Project Number: 90IF0112
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 16 $199,247; FY 17 $199,835; FY 18 $199,841

Abstract: Many individuals now live to aging milestones after the onset of spinal cord injury (SCI). Recent longitudinal research suggests a dramatic increase in physician visits and hospitalizations among those reaching 40+ years post-injury, with some declines in life satisfaction and future expectations. The goal of this project is to better understand these changes to support individuals as they face aging-related challenges. This project conducts a 45-year follow-up, the 9th data collection in the SCI Longitudinal Aging Study. This study was initiated in 1973 using a revolving panel longitudinal design with regular follow-ups every four to five years and intermittent addition of new participant cohorts. As of 2013, a total of 768 participants had participated on 3-8 occasions, 50 of whom had been in the study since inception and 54 added in 1984. During this phase, the project assesses outcomes from a projected 538 participants of the 768 who participated in the 40-year follow-up. Researchers identify the natural course of health, participation, need for medical services, life satisfaction, and self-reported problems using an expanded version of the Life Situation Questionnaire. Specific measures have been added related to aging, with more detail and diversity than included in more basic large-scale data sets. Cross-sectional and longitudinal analyses will be performed. This research identifies factors related to unfavorable changes over time by contrasting participants with stable outcomes against those whose outcomes have declined. Two stakeholder panels meet annually throughout the project, assisting with dissemination and knowledge translation, interpretation of findings, recommendations for policy, and development of guidelines for healthy aging after SCI.
Field Initiated Projects (FIPs)
South Carolina

Number, Primary, and Secondary Diagnoses, and Costs of Inpatient Hospitalizations in a Population-Based Cohort of People with Spinal Cord Injury

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Project Number: 90IF0119
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 16 $199,664; FY 17 $199,893; FY 18 $199,455

Abstract: Spinal cord injury (SCI) leads to an elevated risk of costly hospitalizations, yet there is limited understanding of the factors leading to hospitalization, the costs, or the consequences for participation and quality of life. Most research is limited to the first year, self-report data, and clinical rather than population-based participants. The purpose of this project is threefold: (1) identify the number of hospitalizations, primary and secondary diagnoses, and costs among a population-based cohort with SCI; (2) identify psychological, socioenvironmental, and behavioral factors associated with each hospitalization parameter; and (3) identify the relationship of hospitalization to participation and quality of life. This project uses administrative cost data to identify hospitalizations, primary and secondary diagnoses, and costs for all years after SCI onset for individuals identified through the South Carolina SCI Surveillance System Registry from 2000-2014 (3,850 individuals). Uniform billing administrative data is linked to self-report data from a subset of 1,069 participants who participated in a longitudinal study of the first 5 years after SCI onset to identify the predictors of hospitalization. The first set of linked analyses uses the theoretical risk and prevention model. A second set of analyses applies the ICF model from the World Health Organization to investigate relationships with quality of life. A consumer advisory panel meets twice annually throughout the project to help guide the direction of the analyses, interpretation, and recommendations for policy change. They also assist in dissemination and knowledge translation, including the development of self-help parameters to reduce the likelihood of hospitalization.
Project WOWii: Developing and Testing a Web-Based Intervention to Promote Exercise Among Those with Spinal Cord Injury

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Principal Investigator: Katherine Froehlich-Grobe, PhD
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Project Number: 90IF0106
Start Date: March 09, 2016
Length: 36 months

NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 15 $199,873; FY 16 $199,983; FY 17 $199,954

Abstract: This project examines the usability, feasibility, and effectiveness of a technology-based intervention (WOWii) in promoting exercise and improved fitness for those with spinal cord injury (SCI), using community-based participatory research to refine and enhance an existing evidence-based approach. During the formative evaluation phase, the project uses an iterative process to refine and enhance the WOWii web-based exercise program for people with SCI, resulting in an acceptable and usable intervention approach. Feasibility testing examines participants’ engagement with the web-based intervention during a four-week trial, during which participants provide input on the strengths and weaknesses of the program. In the summative evaluation phase, WOWii aims to increase participant’s exercise behavior, fitness, and perceptions over a 16-week intervention and 2-month follow-up (6 months total).
Field Initiated Projects (FIPs)
Texas

Prolonged Exposure Therapy (PE) for Post-Traumatic Stress Disorder (PTSD) in Spinal Cord Injury (SCI): A Randomized Controlled Trial

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Principal Investigator: Mark B. Powers, PhD
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Project Number: 90IFRE0003
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 17 $199,712; FY 18 $199,269; FY 19 $199,492

Abstract: This project uses a randomized controlled trial to evaluate the efficacy of Prolonged Exposure Therapy (PE) on post-traumatic stress disorder (PTSD) symptoms among individuals with spinal cord injury (SCI). The National Spinal Cord Injury Statistical Center estimates 282,000 people in the US live with spinal cord injury (SCI), with approximately 17,000 new cases occurring each year. While there has been tremendous progress in the medical and rehabilitative management of people who have sustained SCI, there has been less innovation to support mental health among SCI patients. Estimates suggest that PTSD affects up to 60% of those with SCI compared to only 7% of the general US population. The most researched and effective treatment for PTSD is PE, where participants receive 12 sessions of therapy over 6 weeks. PE has been tested within survivors of combat, trauma, and disasters, but has not been tested specifically within the SCI community. For this study, participants with SCI receive either PE or treatment as usual and researchers compare improvement in PTSD symptom as well as rates of pain reduction and improvements in sleep, depression, and quality of life.
Readmission and Disability Outcomes Related to Post Acute Care

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Project Number: 90IF0071 (Formerly H133G140127)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 14 $199,321; FY 15 $199,632; FY 16 $199,866; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project aims to determine the factors associated with hospital readmissions from post-acute care settings and create and test predictive models to identify those persons at high risk for re-hospitalization. To this end, this project (1) examines national data from the Centers for Medicare & Medicaid Services (CMS) to determine rates of hospital readmission for diagnostic groups receiving post-acute rehabilitation in the US including stroke, fracture of lower extremities, and joint replacement of the lower extremity; (2) determines patient socio-demographic characteristics, clinical factors, and functional variables associated with hospital readmission across different post-acute care settings; and (3) uses data and information generated from 1 and 2 to create risk profiles and quantitative models to predict hospital readmission for persons across disability groups and post-acute care settings. This project addresses priorities of the Affordable Care Act, assists in validating readmission as a national quality indicator for post-acute care settings, helps reduce health care costs, and helps in establishing guidelines and parameters for emerging bundled payment programs.
The Relations Among Pain, Depression, and Resilience and their Prediction of Life Satisfaction in Men and Women with Spinal Cord Injury

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Project Number: 90IF0099  
Start Date: September 30, 2015  
Length: 36 months

NIDILRR Officer: Theresa San Agustin, MD

NIDILRR Funding: FY 15 $199,931; FY 16 $199,923; FY 17 $199,972

Abstract: This project identifies and evaluates relations among pain, depression, and resilience, and the extent to which they predict life satisfaction in men and women with chronic pain secondary to spinal cord injury (SCI). The study uses a cohort longitudinal design with data collected at four time points (baseline, 4 months, 8 months, and 12 months). The aims are to investigate: (1) the extent to which men and women with SCI differ in the relation of chronic pain and depression to physical, psychological, and social functioning at initial assessment and over time; (2) the extent to which men and women with SCI differ on resilience characteristics at initial assessment and over time; and (3) the extent to which men and women with SCI differ on the relation of resilience characteristics to pain and depression and physical, psychological, and social functioning at initial assessment and over time. A new cohort of 200 men and women with chronic pain secondary to SCI are recruited from community-based, public, and private settings. Data is gathered at each time point using four telephone-administered questionnaires coupled with online self-administered questionnaires that incorporate several standardized instruments for measuring pain, resilience, depression, and functioning (physical and social). Findings from this study have implications for clinical practice in primary medicine and rehabilitation and for public health policy that governs the availability and delivery of health services to people with SCI. Dissemination strategies include articles published in peer-reviewed publication and fact sheets providing information on pain, depression, and resilience in people with SCI. This project is a collaboration of TIRR Memorial Hermann, the University of Montana, and Miami University.
Capnometry-Assisted Breathing Training for COPD:  
A Pilot Randomized Controlled Trial

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**Project Number:** 90SFGE0003  
**Start Date:** September 30, 2017  
**Length:** 12 months  
**NIDILRR Officer:** Theresa San Agustin, MD  
**NIDILRR Funding:** FY 17 $80,000

**Abstract:** This project tests the feasibility and estimates the short-term effects of implementing a randomized controlled trial (RCT) of capnometry-assisted training in chronic obstructive pulmonary disease (COPD) to slow the breath (CATCH) combined with a comprehensive 10-week pulmonary rehabilitation (PR) program. Dyspnea, lung hyperinflation, and rapid breathing - all of which are characteristic of chronic obstructive pulmonary disease (COPD) - are associated with significant disability, physical activity limitations, and anxiety. Breathing training has been shown to alleviate these symptoms in some patients and promote improved functional status and quality of life, but additional evidence is needed for practice guidelines. Capnometry-assisted respiratory training is a new, innovative approach, not previously tested in COPD, that promotes learning and focuses on modulating the perception of dyspnea at the central nervous system level, improving neuromechanical coupling (matching between respiratory effort and the mechanical response of the respiratory system), and improving autonomic nervous system regulation. Using novel technology for biofeedback of slow breathing and mindful breathing, capnometry-guided training, and a smartphone app for home exercises, this trial has the potential to significantly impact and improve rehabilitation outcomes. Project objectives are to: (1) test the feasibility of implementing an RCT of the CATCH intervention combined with PR based on estimates of short-term treatment effects (at 10 weeks) and retention of participants with COPD; and (2) evaluate the acceptability of the CATCH intervention as perceived by participants based on qualitative interviews, CATCH attendance, and adherence to home breathing exercises.
Development of a Wearable Robot for Motor Rehabilitation in Acute Stroke

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Project Number: 90BISB0001
Start Date: September 30, 2016
Length: 24 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 16 $262,819; FY 17 $312,181

Abstract: The goal of this Phase II project is to develop a wearable rehabilitation technology to help patients recover from stroke and regain mobility. Project objectives include: (1) developing an ankle wearable rehabilitation robot to guide and interact with acute stroke survivors; and (2) packaging the rehabilitation software which provides (a) closely-guided motor re-learning based on real-time audiovisual/haptic feedback, (b) intensive combined stretching and active task-related mobility training with progressive postures in an acute stroke rehabilitation setting, and (c) quantitative assessment of improvements.

Outcomes include: (1) Delivering early acute rehabilitation with robot therapy in acute care settings, (2) providing intensive robot-assisted physical therapy for better motor re-learning in the early post-stroke stage and reduce loads to physical therapists in repetitive practice tasks, (3) monitoring impairment and recovery performance, and (4) providing assessment to gain insight into the mechanisms of impairment and neuroplasticity in early post-stroke rehabilitation. The resulting product is a wearable rehabilitation robot with real-time, multi-mode guidance and passive-active movement training to be used in acute stroke rehabilitation allowing for early sensorimotor intervention, and critical acute phase recovery.
Disability Demographics

As stated in NIDILRR’s 2013-2017 Long-Range Plan, valid and reliable demographic data help all agencies and research in the disability field. NIDILRR continues to work with other Federal agencies to meet its statutory mandate to collaborate in producing demographic and statistical data that describe the population of individuals with disabilities. Projects funded in this area generate and disseminate new and current information that can be used by individuals with disabilities, service providers, policy makers, and others working to identify disparities in employment, community living and participation, and health and function.

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Rehabilitation Research and Training Centers (RRTCs)
New Hampshire

Rehabilitation Research and Training Center on Disability Statistics and Demographics (StatsRRTC)

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Public Contact: Penny Gould 603/864-0165; Fax: 603/863-0555

Project Number: 90RT5022 (Formerly H133B130015)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 13 $874,998; FY 14 $875,000; FY 15 $874,999; FY 16 $874,998; FY 17 $874,998

Abstract: The objective of the Rehabilitation Research and Training Center on Disability Statistics and Demographics (StatsRRTC) is to narrow and actively bridge the divide between the producers and end users of disability statistics. In pursuit of this objective, the RRTC conducts 12 research and 15 knowledge translation projects that build upon the work of past StatsRRTC projects. Several of the research projects focus on the collection of disability statistics and narrow the divide by (a) developing recommendations and tools that improve the identification of the population with disabilities and measurement of services, and (b) conducting experiments to test alternative survey methods. Project activities include (a) analyzing existing data to assess progress towards national goals and address information needs about critical programs; (b) providing access to timely and relevant disability statistics through national and state-level Annual Reports on Disability that track key indicators and an Annual Disability Statistics Compendium that allows end users to access even more statistics; (c) providing technical assistance to key stakeholders to produce customized statistical analyses and compilations; (d) developing and maintaining a State/Local Statistics which allows users to create customized reports; (e) providing information and referral services, and technical consultation on collection methods and data analysis; and (f) increasing the capacity of end users to effectively utilize disability statistics through the Annual Report and Compendium Rollout event, online training courses for vocational rehabilitation evaluators, and the Center’s State-of-the-Science conference.
Technology for Access and Function

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

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RERC on Exercise and Recreational Technologies for People with Disabilities

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Project Number: 90REGE0002
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 17 $925,000; FY 18 $925,000; FY 19 $925,000; FY 20 $925,000; FY 21 $925,000

Abstract: This project conducts a set of research and development projects that span across the socio-ecological model from community to clinic to address a multilevel set of barriers to participation in healthful exercise and recreation among adults with physical disabilities. Six areas of research and development include: (1) a precision-based decision support tool to improve quality of exercise and recreation recommendations and outcomes; (2) advancement of a wheelchair accessible active video gaming controller to expand game play among users with physical disabilities; (3) final development of an exercise device that allows single-to-multiple limb loading in engaging virtual exercise environments; (4) a crowdsourcing platform for building accessible community-based exercise and recreation resources; (5) an eHealth tele-exercise platform for increasing exercise among adults with spinal cord injury; and (6) a mixed-methods study examining barriers and facilitators associated with adoption of universal design of fitness equipment standards by manufacturers and fitness facility managers. Training initiatives involve undergraduate and graduate level training in exercise/recreational technologies targeting engineering, exercise science, and rehabilitation science students. Dissemination includes presentations at engineering and rehabilitation conferences, publications in high-impact peer-reviewed journals, press releases, websites, and faculty presentations. Anticipated outcomes include a set of hardware and software products that will improve health, function, and quality of life among people with physical disabilities. A secondary outcome is to ensure that dissemination of these products and tools reach an array of stakeholders, including people with disabilities, caregivers, rehabilitation and exercise science researchers, and rehabilitation and exercise professionals, who can use them in their respective communities and professions.
Rehabilitation Engineering Research Centers (RERCs)
California

Rehabilitation Engineering Research Center: Develop and Evaluate Rehabilitation Technology and Methods for Individuals with Low Vision, Blindness, and Multiple Disabilities

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Project Number: 90RE5024
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 16 $925,000; FY 17 $925,000; FY 18 $925,000; FY 19 $925,000; FY 20 $925,000

Abstract: The goal of the Rehabilitation Engineering Research Center (RERC): Develop and Evaluate Rehabilitation Technology and Methods for Individuals with Low Vision, Blindness, and Multiple Disabilities is to impact a number of current barriers to opportunity faced by individuals who are blind, have low vision, and have multiple disabilities. This RERC addresses specifically: (1) emerging and underserved subpopulations, such as children born as premature infants with cortical visual impairment (CVI), returning veterans, and individuals with visual impairments due to brain injury, and individuals with combined vision and hearing disabilities; (2) access to graphical information by people who are blind or who have severe visual disabilities; (3) improvements in indoor and outdoor navigation; and (4) access by this population to science, technology, engineering, and math (STEM) education and careers. The RERC’s activities to address these issues include: (1) research to lay the groundwork for more informed decisions on rehabilitation materials and strategies for children with CVI and veterans with traumatic brain injury, as well as improved communication for individuals with dual sensory loss; (2) the development of new tools for accessing graphics such as a Tactile Graphics Helper and sonification cues for computer screen readers; (3) development of new tools for accessing devices and appliances with digital displays; (4) development of guidelines for teachers in the use of 3-D printing technology for the benefit of STEM students; (5) development of tools and techniques to enhance access to the Maker Movement by consumers who are blind; and (6) the implementation of a sustainable open source, crowd-sourced video description system for web-based video.
Rehabilitation Engineering Research Centers (RERCs)
Colorado

Rehabilitation Engineering Research Center for Advancing Cognitive Technologies (RERC-ACT)

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Project Number: 90RE5019 (Formerly H133E140054)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 14 $949,999; FY 15 $949,995; FY 16 $949,999; FY 17 $950,000; FY 18 $950,000

Abstract: This project focuses on the research and development of cognitive technologies for individuals with cognitive impairments designed to improve their quality of life, and that of their caregivers. The RERC-ACT focuses on three research and three development projects; educational activities, knowledge translation, and utilization; and continuous quality improvement of the overall center. The Center’s six research and development activities focus on expanding the cognitive technology standards for work, training, dissemination/knowledge utilization, and commercialization by: (R1) performing usability tests with the myriad of technologies used by persons with cognitive disabilities in order to improve individual consumer selection of the ‘right’ technology as well as facilitating improvements in the design and development of existing, emerging, and new technologies for working-age adults with traumatic brain injury; (R2) developing a tablet-based simulator which enables researchers to test, in a very controlled manner, specific user interface features with specific populations; and (R3) conducting an applied clinical trial of the Non-Linear Context-Aware Interactive Prompting Platform (IPP). The clinical trial has three major development components: (D1) providing an easy-to-configure authoring system for nontechnical set-up of the IPP in warehouse environments; (D2) combining workplace business systems monitoring (computerized inventory management/business processes) with navigation and contextualized prompts; and (D3) collecting ongoing data and comparing the prescribed task to actual performance, enabling error detection and correction.
Rehabilitation Engineering Research Centers (RERCs)
District of Columbia

RERC on Improving the Accessibility, Usability, and Performance of Technology for Individuals who are Deaf or Hard of Hearing (DHH-RERC)

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Project Number: 90RE5020 (Formerly H133E140056)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 14 $950,000; FY 15 $950,000; FY 16 $950,000; FY 17 $950,000; FY 18 $950,000

Abstract: This RERC’s mission is to provide consumers who are hard of hearing or Deaf, as well as their families and clinicians, with the knowledge and tools necessary: (1) to take control of their communication and hearing technologies, adapt those technologies to their needs in real-world environments, and achieve greater autonomy in their technology use; and (2) to derive full benefit of the shift from special-purpose devices to increasingly powerful and interconnected consumer electronics. The RERC aims to narrow the gaps between the potential for new technologies to improve the lives of individuals who are hard of hearing or Deaf and their ability to exploit this potential. The center carries out three research and three development and training projects, as follows. R1 investigates how a previously successful face-to-face, clinical program of aural rehabilitation for cochlear implant users can be transferred to a telerehabilitation model, in which services are delivered in the home to previously underserved populations with limited access to clinical facilities using the interactive platform for telehealth and collaborative applications developed by the RERC on Telerehabilitation. R2 investigates how consumers with hearing loss can customize their own cochlear implant mapping using a consumer-driven system to control the programming of the device and personally explore a range of programming parameters to determine if this type of user-driven customization can maximize device benefit. R3 investigates new clinical tools to address a critical gap in fitting hearing devices to very young, prelingual children with hearing loss. D1 develops a framework for a consumer-centric, technology-focused train-the-trainer program, which develops skilled consumer trainers to provide improved quantity and quality of technology training to other consumers. D2 develops field tools, implemented through the integration of hearing devices and smartphones, for monitoring listeners’ perceptions, environmental context information, and hearing device configuration during real-world listening situations, so that factors that interfere with the ability of consumers to use or benefit from hearing devices can be identified. D3 develops interactive learning environments where consumers can explore virtual, yet realistic, listening situations, learn how to optimize the use of their hearing technology, and then transfer the knowledge and skills they have acquired to similar situations encountered in the real-world.
Rehabilitation Engineering Research Center on Technologies to Support Successful Aging with Disability (RERC TechSAge)

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Project Number: 90RE5016 (Formerly H133E130037)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 13 $924,999; FY 14 $924,994; FY 15 $924,992; FY 16 $924,998; FY 17 $924,994

Abstract: The RERC TechSAge conducts programs of advanced rehabilitation engineering and technical research and development (R&D) to increase knowledge about, availability of, and access to effective, universally-designed technologies that enable people to sustain independence, maintain health, safely engage in basic activities of daily living at home and the community, and participate in society as they age with disability. The RERC conducts nine R&D projects. Research projects include: R1. User Needs. This project uses a multi-faceted approach to provide converging evidence to support development of integrated technology that meets the needs of older adults with disabilities. Specifically, it develops a taxonomy of everyday support needs, assesses user needs for home-based activities, and creates an integrated dataset to predict task performance and technology need; R2. Effects of Age-Related Hearing Loss. This project investigates the ancillary impact of age-acquired hearing impairment on the use of mobility-related assistive technology (AT) and outdoor mobility among visually-impaired older adults to identify impacts on AT use, mobility, and community participation, resulting in design and practice guidelines; R3. Telewellness Technologies. This project identifies the requirements of telepresence technology interventions to compensate for activity limitations and participation restrictions among older adults with disabilities through an understanding of telerobot acceptance by the target population, determining the effectiveness of telerobot exercise interventions for enhancing self-efficacy and social connectedness, and assessing the usefulness and ease-of-use of a telerobot. Development projects include: D1. App Development. This project develops mobile applications to support successful aging by older adults with a disability. Three apps are planned: cognitive training to prevent functional decline, route planning to promote community mobility, and gait analysis to predict activity limitations; D2. Smart Bathroom. This project develops a system of smart bathroom technologies and fixtures, such as grab bars and adjustable toilets, that adapt to user’s needs and functional abilities based on an analysis of gait, balance, posture, grip strength, and other factors; D3. Mobile Manipulator Robot. This project develops an open-source code, open hardware robotic system that performs common actions with its hand (e.g., tool use) and is capable of adapting to changes in a user’s abilities and preferences to provide better assistance. Project activities result in universally-designed interventions that support successful aging with disability.
Rehabilitation Engineering Research Centers (RERCs)
Georgia

Rehabilitation Engineering Research Center for Wireless Inclusive Technologies

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Project Number: 90RE5025
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 16 $924,994; FY 17 $924,967; FY 18 $924,986; FY 19 $924,949; FY 20 $924,966

Abstract: Project goals include: (1) creating and promoting inclusive wireless technologies that improve the ability of individuals with disabilities to independently perform activities of their choice now, and in a fully-engaged and all-inclusive future; and (2) working with industry, government, and disability stakeholders to raise awareness and champion adoption of accessible solutions for wirelessly connected technologies. Outcomes include: (1) consumers with disabilities directly contributing to the development of wireless devices and services, (2) increasing in social connectedness of individuals with disabilities (including those with intellectual and development disabilities) across varied environments, (3) incorporating universal design elements to guide cultural and social design of current and future wirelessly-connected devices and sensors, and (4) adopting regulatory policies that increase accessible emergency alerts over multiple platforms. Results include consumers with disabilities in product development; the adoption of inclusive wireless products in wearables, apps, auditory devices; publications; knowledge translation; technology transfer; and outreach to stakeholders. The Wireless RERC is a collaboration of the Georgia Institute of Technology in partnership with the Shepherd Center, Georgia State University, the University of Texas, Arlington, and other stakeholders.
Rehabilitation Engineering Research Centers (RERCs)
Illinois

Machines Assisting Recovery from Stroke and Spinal Cord Injury for Reintegration into Society (MARS3)

Rehabilitation Institute of Chicago
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Project Number: 90RE5010 (Formerly H133E120010)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 12 $949,613; FY 13 $949,754; FY 14 $949,782; FY 15 $949,717; FY 16 $949,800; FY 17 (No-cost extension through 9/29/2018)

Abstract: This center is designed to evaluate the utility of robotic devices for providing rehabilitation therapy after neural injury. Research activities focus substantially on recovery from stroke because individuals with stroke are by far the largest user group requiring intensive rehabilitation and assistance. However, this center also pilots new applications in spinal cord injury, cerebral palsy, traumatic brain injury, and aging. Seven research and development projects center on the use of robots for restoration of function and return to society: D1: Development of expertise in lower-extremity exoskeleton use; D2: A body-machine interface for promoting motor recovery while controlling assistive devices; D3: Wheelchair-based robotic upper extremity exercise and power-assisted propulsion; D4: Wearable aid for fall prevention; R1: Robotic mobility activity center in a fitness facility for people with disabilities; R2: Virtual environment for hand home therapy following stroke; and R3: Community-ready upper extremity interactive rehabilitation. Additionally, three cross-cutting core facilities assist all projects: (1) avatar communications with users; (2) statistical design; and (3) technology transfer. This Center is an international collaboration with the Rehabilitation Institute of Chicago, University of Illinois at Chicago, the University of California at Irvine, Northwestern University, the Illinois Institute of Technology, and Delft University of Technology in the Netherlands.
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Single Motor Unit Laboratory
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Principal Investigator: W. Zev Rymer, MD, PhD 312/239-3919
Public Contact: Linda Lovell, Grants Manager 312/238-6197

Project Number: 90RE5013 (Formerly H133E130019)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 13 $924,937; FY 14 $924,906; FY 15 $924,805; FY 16 $924,726; FY 17 $924,719

Abstract: The Shirley Ryan AbilityLab together with its partners, Northwestern University (NU), Emory University, Carnegie Mellon University, University of Colorado at Boulder, and Ekso Bionics design and implement a program of research and development centered on establishing a rational basis for quantifying the appropriate time distribution for use of robotic and computer-based interventions in rehabilitation therapy. The center also investigates how therapists interact with robotic devices when delivering therapy. Seven areas of research and development include: D1-R1 mixed-reality therapy for restoration of arm function in stroke survivors, D2-R2 development of computer-based algorithms for restoration of speech after stroke, D3-R3 effect of stretching of ankle muscles on locomotion in stroke survivors, and D4 how to train people with a spinal cord injury to use a robotic exoskeleton. Training for the center includes an advanced Education and Training project for undergraduate engineers dedicated to the design of simple devices for rehabilitation as part of NU’s highly successful initiative in engineering design education. Dissemination includes presentations at engineering and rehabilitation conferences, publications in high-impact peer reviewed journals, press releases, websites, and faculty presentations.
Rehabilitation Engineering Research Centers (RERCs)
Illinois

Technologies to Evaluate and Advance Mobility and Manipulation (TEAMM) Rehabilitation Engineering Research Center

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Principal Investigator: Todd Kuiken, MD, PhD; Levi Hargrove, PhD; Arun Jayaraman, PhD; Konrad Kording, PhD; Christian Poellabauer, PhD; W. Zev Rymer, MD, PhD 312/238-1315
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Project Number: 90RE5014 (Formerly H133E130020)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 13 $924,939; FY 14 $924,997; FY 15 $924,972; FY 16 $924,931; FY 17 $924,953

Abstract: This RERC develops technologies to evaluate and advance mobility and manipulation for people with movement disabilities and includes a total of six projects: three combined development/research projects, two research projects, and one development project. Two projects are focused on upper limb amputees: the Voluntary Opening and Voluntary Closing Terminal Device (VOVC) Project and the Partial-hand Control Project. The VOVC Project is a clinical trial of an innovative new terminal device that enables two types of grasp that traditionally require two separate devices. The Partial-hand Control Project develops a pattern recognition–based control system for motorized fingers and evaluates this technology in a clinical trial. The Ekso Project evaluates use of a powered exoskeleton device to improve gait and mobility therapy in people following severe stroke. The Social Mobility Project develops and evaluates a new research tool that uses a cell phone application (app) to monitor a person’s mobility at home and anywhere in the community. The app identifies the mobility mode (i.e. walking, wheelchair, car, etc.) and assesses social interactions by analyzing where people go. While focusing on people with stroke, one of the largest populations with disability, this app can be applied to virtually any population with mobility-limiting disability. The Manual Standing Wheelchair (MSW) Project develops and evaluates a wheelchair that enables users to be mobile in a sitting or standing position utilizing an ergonomically efficient lever drive. The MSW Project focuses on a large array of wheelchair users, including those with spinal cord injury, spina bifida, and multiple sclerosis. Finally, the Powered Leg Project uses state-of-the-art-technology to create a lightweight powered leg system targeted for older or smaller persons with a lower limb amputation.
Rehabilitation Engineering Research Centers (RERCs)
Maryland

Rehabilitation Engineering Research Center on
Universal Interface and Information Technology Access

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Project Number: 90RE5027
Start Date: September 30, 2016
Length: 24 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 16 $925,000; FY 17 $925,000
Abstract: This RERC is focused on accessibility of information and communication technologies, for persons across disability types and socio-economic levels. Accessibility issues addressed by this RERC stem from the interaction of four trends in information technology: (1) technology is increasingly required for all aspects of life (education, employment, health, safety, transportation, community participation, home management); (2) accessibility solutions do not exist for many groups – especially people with non-“mainstream” disabilities; (3) solutions that exist are often unaffordable; and (4) the number of different technology platforms, operating systems, and technology types that an individual must be able to use is increasing faster than assistive technology (AT) vendors can address. The RERC builds on and coordinates with the ongoing work of an international consortium (“Raising the Floor”) engaged in development of an underlying inclusive infrastructure that can greatly simplify accessibility and reduce costs for users and developers. This Global Public Inclusive Infrastructure (GPII) is designed to make assistive technologies and other access solutions available for many more users, much more efficiently and cost-effectively. (Both the consortium and the GPII concept were originated in the predecessor RERC.) The RERC’s research and development activities include: (1) Continuing development of the GPII concept – evolving it to address the changing technology landscape and the growing understanding of its role based on discussions with accessibility and mainstream stakeholders; (2) Moving the GPII from concept, papers, and laboratory prototypes, through to field implementations to test the efficacy and viability of the concept with real-world conditions, users, and limitations/realities; specifically: (a) Development and testing of a package for deploying and applying the GPII in public libraries of all sizes, with a focus on providing libraries with cost-effective ways of serving users with a wider range of abilities – including those with cognitive, memory, and digital-literacy related barriers such as elders and first-time users; (b) Development and testing of a decision support tool based on the GPII Unified Listing, that provides users and clinicians with a new capability for tracking and selecting ever-changing solutions for users – including not only comprehensive information on assistive technologies, but also...
not-previously-available information on the access features that are built into mainstream technologies; (3) Facilitating and promoting access built directly into mainstream ICT products through technology transfer programs and research support for industry standards groups and governmental agencies working on accessibility standards.
Technology Increasing Knowledge: Technology Optimizing Choice (TIKTOC) Rehabilitation Engineering Research Center (RERC)

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Project Number: 90RE5012 (Formerly H133E130014)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 13 $923,442; FY 14 $924,560; FY 15 $924,502; FY 16 $920,402; FY 17 $922,220

Abstract: This project develops and evaluates innovative rehabilitation strategies, techniques, and interventions to enhance health, participation, and employment outcomes among adolescents and young adults with physical, cognitive, and neurodevelopmental disabilities. Center projects include two research studies: R1: An exploratory study to identify the primary cognitive and motivational variables that impact self-management ability, and behaviors among adolescents and young adults with neurodevelopmental disabilities; and R2: A randomized clinical trial of a serious game developed to enhance self-management ability among adolescents and young adults with spinal cord dysfunction. The Center has four development activities: D1: The development of an effective system of data collection, analysis, and display tools to assist healthcare teams who support individuals with disabilities to prioritize, address, measure, and track success in achieving personally optimal levels of health and participation; D2: The development of a dynamic scheduling system based on state-of-the-art artificial intelligence (AI) techniques that augments human cognition to support the management of health and participation of young adults with disabilities; D3: The development of a cloud-based mobile system for dynamic, personalized self-management plans, allowing continuous coordination among the adolescent or young adult with a physical disability, clinical staff, and caregiver networks, and providing each with different capabilities for viewing, updating, acting on, and reporting progress on the shared plans and related medical information; and D4: The development of a visual, interactive, AI-enhanced intervention that uses reinforcement learning to target health management behaviors among transition age adolescents and young adults with neurodevelopmental disabilities. This project is an interdisciplinary collaboration of clinicians and researchers from the School of Medicine, the College of Engineering, the College of Pharmacy, and the School of Information within the University of Michigan.
Rehabilitation Engineering Research Centers (RERCs)
New Jersey

Rehabilitation Engineering Research Center on Wearable Robots for Independent Living

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Principal Investigator: Richard A. Foulds, PhD
Public Contact: 973/596-3335

Project Number: 90RE5021
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 15 $924,577; FY 16 $924,776; FY 17 $924,818; FY 18 $924,858; FY 19 $924,558

Abstract: This project conducts research and development activities focused on wearable robots for independent mobility and manipulation. This RERC is a joint effort of the New Jersey Institute of Technology (NJIT) and the Kessler Research Foundation comprising three research and two comprehensive development projects, plus a portfolio of training activities. Two of the research projects employ three commercially available, lower extremity exoskeletons: One explores the potential of simultaneous spinal cord stimulation to improve exoskeleton use by individuals with spinal cord injury; the second studies the possible improvement in gait after stroke caused by using exoskeletons early in the rehabilitation process. The third project studies the benefit of home-based robotic rehabilitation of the upper extremities in persons who have had a stroke, employing the new upper extremity exoskeleton being developed by the NJIT. One development project explores the application of robotic admittance control as means of allowing users of a lower extremity exoskeleton to have complete control over the movement of their legs. The users make walking-like movements with their hands (or fingers) which are sensed and used to control the movement of the exoskeleton legs. Haptic feedback of the leg movement, conveyed to the hands, provides essential feedback to the user. The project also explores the ability of additional powered degrees of freedom to allow a combination of autonomous and user initiated balance. The second development project extends the NJIT-developed upper extremity orthosis to meet the needs of children with muscular dystrophy and people of all ages with incomplete tetraplegia due to SCI. Admittance control is used as it offers a superior way to counterbalance gravity and the mass of objects to be lifted, thus letting the exoskeleton respond reliably and accurately to limited residual muscle forces. Training activities include a new continuing education (2-3 day) course for clinicians and physicians on wearable robotic applications and a new graduate course for engineering students on the design of wearable robots. Material from the RERC is included in the Kessler Post-Doctoral and Rehabilitation Residency curricula as well as to NJIT’s existing graduate courses on biorobotics, neuromuscular engineering, and neurorehabilitation. Additional training includes a new graduate certificate to be given after the completion of four graduate courses, as well as the infusion of wearable robot experience into masters theses, undergraduate capstone design projects, and mentoring of pre-college students.
Rehabilitation Engineering Research Centers (RERCs)
New York

RERC on Universal Design and the Built Environment

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Project Number: 90RE5022
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 15 $924,992; FY 16 $924,993; FY 17 $924,996; FY 18 $924,998; FY 19 $924,995

Abstract: The RERC on Universal Design and the Built Environment uses a Knowledge-To-Action Model to advance accessibility and universal design (UD) in the four domains of the built environment: (1) housing, (2) commercial and public buildings, (3) community infrastructure, and (4) transportation. The RERC activities address key needs for knowledge and demonstrate the value of evidence-based practice through improved building regulations and adoption of voluntary UD standards. Strategically important research, development, training, and dissemination activities integrate accessibility and UD principles with the generally accepted models, methods, and metrics in the building and product development industries. Short, intermediate, and long-term outcomes improve physical access, health, and social participation for people with disabilities while also being beneficial for the broader population of users of the built environment. Project R1 conducts evaluations of buildings and facilities in which UD features have been incorporated to assess their effectiveness in practice, strengthen the business case for UD, and provide evidence to support increased adoption of UD. Project R2 conducts human factors research on prevention of slips and falls, use of wayfinding apps, and cost-effective methods to evaluate UD products during the design process. Project DV1 develops software tools to improve the implementation of accessibility and UD standards, including an interface for UD certification. Project DV2 engages nine industry partners to create exemplar UD products and environments. Training activities increase knowledge and capacity about accessibility and UD for a wide range of stakeholders, including individuals with disabilities and their advocates. The RERC offers continuing education for design professionals and service providers through conferences, online modules, and collaborations with partners already serving these audiences. Interdisciplinary graduate education opportunities build the expertise of the next generation of researchers and practitioners. To reach a broad audience, dissemination activities include a wide array of print and electronic media, all accessible from a web portal. Outreach includes participation in international, national, and local networks and events.

NIDILRR Program Directory FY 2017 - Technology for Access and Function
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Rehabilitation Engineering Research Centers (RERCs)
North Carolina

LiveWell - The Information and Communication Technology Rehabilitation Engineering Research Center for Community Living, Health, and Function

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Principal Investigator: Frank DeRuyter, PhD; Mike Jones, PhD 919/684-6271 (DeRuyter); 404/350-7595 (Jones)
Public Contact: John Morris, PhD 404/367-1348; Fax: 919/684-8298

Project Number: 90RE5023
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 15 $924,872; FY 16 $924,764; FY 17 $924,978; FY 18 $924,954; FY 19 $924,899

Abstract: The primary goals of the Information and Communication Technology (ICT) Rehabilitation Engineering Research Center for Community Living, Health, and Function (LiveWell-RERC) are to: (1) promote ICT access to existing and emerging technologies for all people regardless of ability, and (2) develop and validate ICT applications to improve the capacity for independent living and community participation. To accomplish these goals this project includes three research and three development projects. Each project examines important aspects of ICT access. Discovery of User Needs and Preferences for Information and Communication Technologies identifies and confirms users’ needs and access issues related to ICT use, and establishes priorities for potential ICT development independent of technology platforms or form factors. Factors Affecting Acceptance of ICT – People with Disabilities and Caregivers discovers and reports on barriers and opportunities to accessibility and use of wearable, home monitoring and automation technology. Improving Safety and Activity Independence in the Home/Community following TBI is designed to improve safety, increase activity and participation, lessen family burden, and improve life quality through use of self-report measurement paired with technology-based environmental feedback that informs on ability, realistic “next step” goals, treatment, and progress. Development activities include: (1) Technology/Policy Watch and Emerging Issues for ICT Access, to identify mainstream scientific and technology developments that can impact ICT access, policies, guidelines, and standards; (2) Tech Factory – Meeting User Needs by Developing ICT & Software, is comprised of two complementary efforts to respond rapidly to new mainstream ICT development that can be leveraged to meet the needs of people with disabilities; and (3) Use of Behavioral Informatics to Support Safety and Activity Independence in the Home and Community, builds a virtual coach to complement or
replaces the hands-on support and assistance provided by a life coach or family member. Finally, training and dissemination activities promote the adoption of new knowledge into practice. This includes student capacity building, as well as consumer and industry engagement to develop and maintain tools and channels for communicating information on accessible ICT produced by the LiveWell-RERC. The LiveWell-RERC is a partnership between Duke University, the Shepherd Center, and Northeastern University. Additional collaborators include the AGE-WELL National Center of Excellence and University of Toronto in Canada; The Center on Knowledge Translation for Technology Transfer (KT4TT); Side by Side Brain Injury Clubhouse; and commercial partners ilumivu, Samsung, and Verizon.
Rehabilitation Engineering Research Centers (RERCs)
Pennsylvania

Rehabilitation Engineering Research Center on Physical Access and Transportation

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Principal Investigator: Aaron Steinfeld, PhD
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Project Number: 90RE5011 (Formerly H133E130004)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 13 $923,878; FY 14 $924,054; FY 15 $922,383; FY 16 $923,440; FY 17 $923,446

Abstract: The RERC on Physical Access and Transportation empowers consumers, manufacturers, and service providers in the design and evaluation of accessible transportation equipment, information services, and physical environments. Project activities build upon previous work to focus on enabling technology and universal design to support independent and efficient multi-modal travel in daily life, including its significant role in employment and social participation. Research and development activities provide new tools, research findings, guidelines, and products that advance the field of transportation and “last mile” (e.g., the portion of a trip from public transportation to the rider’s final destination) issues. Research Project 1 focuses on understanding real-time trip information and community dialog as methods for empowering accessible travel. Research Project 2 expands the evidence base for boarding and disembarking policies, practices, and products with an in-depth examination of vehicle ramp and interior design in large transit vehicles. Research Project 3 studies para-transit usage and the usability of the “last mile.” Development Project 1 leverages existing technologies to implement software systems to help riders during multi-modal trips. Development Project 2 partners with bus manufacturers, service providers, and transit agencies to produce standards and regulations, reference designs, and vehicle interior concepts ready for commercialization. This project’s training activities increase understanding and build capacity for accessible transportation and pedestrian rights-of-way for a wide range of stakeholders through an online continuing education program, multi-disciplinary research and development experiences for university students, and advanced graduate students. Dissemination outputs include traditional refereed and trade publications; an extensive website with downloadable information products and design tools; and outreach activities with professional, business, and standards development organizations. Finally, a State-of-the-Science conference brings together all stakeholder groups to envision how future transportation systems can support independent transit use and incorporate universal design as a guiding philosophy.
Rehabilitation Engineering Research Center (RERC):
From Cloud to Smartphone – Accessible and Empowering ICT

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Project Number: 90RE5018 (Formerly H133E140039)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 14 $949,413; FY 15 $949,361; FY 16 $947,365; FY 17 $949,360; FY 18 $949,301

Abstract: The goal of this RERC is to mitigate accessibility barriers to information and communication technology (ICT) for persons with disabilities (PwDs) with functional and device limitations, provide affordable access to ICT for underserved populations, and develop innovative ICT to improve health and function, social participation, and employment among PwDs. The theme of “From Cloud to Smartphone: Empowering and Accessible ICT” guides the Center’s research and development activities which address cognitive and vocational rehabilitation, communication technology assessment and training, tele-rehabilitation infrastructure, and prevention and management of secondary conditions through six projects: (1) Cloud Accessibility WebAnywhere, (2) Accessible TeleWellness, (3) Accessible Mobile Vocational Coaching, (4) Speech and Language Teletherapy to Rural Underserved Areas, (5) Adaptive Accessible mHealth Transcoding, (5) Longitudinal Accessibility of Web 2.0, and (6) Privacy and Security for PwDs. Center collaborators include the University of Pittsburgh School of Health and Rehabilitation Sciences, the Computer Sciences Human-Computer Interaction Institute at Carnegie-Mellon University, and Physical Medicine and Rehabilitation at the DePaul School of Hearing and Speech.
Improving Health and Function Through Use of Performance Standards in Wheelchair Selection

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Project Number: 90REGE0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 17 $924,732; FY 18 $924,633; FY 19 $924,551; FY 20 $924,978; FY 21 $924,916

Abstract: This center investigates performance-based selection as a rehabilitation strategy that uses results from standards testing to inform the process of selecting appropriate wheelchair products for people with mobility disabilities, matching appropriate and quality products to meet user needs. The center develops, evaluates, and implements performance standards for cushion tissue integrity management, cushion durability, wheelchair durability, and wheelchair propulsion efficiency. These performance standards establish test methods and requirements for devices. The goal of the RERC is to improve wheelchair services through an evidence-based approach using a performance-based product selection strategy. The specific objectives are to: (1) Develop and validate a test method for seat cushion load-bearing performance; (2) improve a test method for seat cushion performance stability with use; (3) develop and validate a test method for wheelchair rolling resistance; (4) develop and validate a test method for wheelchair caster durability; (5) research and disseminate product performance using these methods; and (6) research clinical relevance by evaluating equivalency of product performance and relating standards outcomes to clinical and real-world outcomes.
Rehabilitation Engineering Research Centers (RERCs)  
Pennsylvania

Rehabilitation Engineering Research Center on Augmentative and Alternative Communication (The RERC on AAC)

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**Project Number:** 90RE5017 (Formerly H133E140026)  
**Start Date:** October 01, 2014  
**Length:** 60 months  
**NIDILRR Officer:** Stephen Bauer, PhD  
**NIDILRR Funding:** FY 14 $948,188; FY 15 $949,461; FY 16 $949,224; FY 17 $949,976; FY 18 $949,600

**Abstract:** This project conducts rigorous evidence-based research for designing effective augmentative and alternative communication (AAC) technologies and interventions, develops and evaluates innovative AAC engineering solutions driven by consumer needs, and provides comprehensive training and dissemination to ensure that all individuals, including those with severe disabilities, have access to effective AAC to enhance the communication of individuals with complex communication needs (CCN). The Center’s research and development activities (R & D) are organized around three themes: (1) improving access to technologies for individuals with CCN who have severe motor impairments by investigating and developing new access techniques (e.g., brain control interfaces and multimodal access); (2) developing language support technologies to enhance communication for those with significant language/cognitive limitations (e.g., technologies that facilitate the transition to literacy, provide contextually relevant smart prediction, and support video visual scene displays to enhance participation in school, work, and community routines); and (3) improving the AAC human-computer interface to reduce cognitive processing demands and enhance communication. Additionally, the Center brings together a team of rehabilitation engineers and scientists to deliver targeted training and dissemination to build greater capacity and maximize the effective translation of R & D for real-world use.
Disability and Rehabilitation Research Projects (DRRPs)  
Pennsylvania

Disability and Rehabilitation Research Project on  
Inclusive Cloud and Web Computing

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Project Number: 90DP0061 (Formerly H133A130057)  
Start Date: October 01, 2013  
Length: 60 months  
NIDILRR Officer: Stephen Bauer, PhD  
NIDILRR Funding: FY 13 $748,126; FY 14 $748,192; FY 15 $748,208; FY 16 $748,455; FY 17 $748,957

Abstract: This project researches and develops methods to enable software providers to easily and rapidly implement inclusive user experiences so that consumers are empowered to fully participate in cloud and web systems. The project is guided by four main principles: (1) rapid utilization, (2) cloud services, (3) universal design, and (4) a focus on users with low vision and cognitive disabilities. Research and development activities are built upon cutting-edge efforts in computer science, human-computer interaction, and machine learning. The research projects are focused on forming a better understanding of how end users want and should interact with and utilize enabling software components. Key areas of research include crowd-sourced assistance, adaptive user interfaces, and authentication. The development projects are focused on implementing prototypes and moving them rapidly towards deployment and eventual commercialization. They are designed to draw from the research projects and ensure rapid transition of new knowledge through a variety of utilization pathways.
Self-Management Assistance Through Technology (SMART) -
Virtual Coaches for Wheelchair Users

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Project Number: 90DP0056 (Formerly H133A130025)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 13 $473,772; FY 14 $474,735; FY 15 $474,724; FY 16 $474,590; FY 17 $474,685

Abstract: This project aims to improve health and functional outcomes of wheelchair users by increasing their knowledge of appropriate wheelchair use and their role in the wheelchair service delivery process, and providing supportive technologies to assist them in leading a healthy lifestyle through the development and testing of two virtual coaches. The Wheelchair/Seating Usage Coach is a suite of interactive mobile apps and portable sensing devices that teach safe and effective use of a wheelchair (e.g., wheelchair fit, propulsion techniques, wheelchair maintenance, and use of seat functions), and assists wheelchair users in navigating the service delivery process. The Lifestyle Coach is a suite of interactive mobile apps and portable sensing devices that assist wheelchair users to self-monitor and manage their weight and physical activity. The United Spinal Association and peer support groups in the Pittsburgh area and other regions assist in the development and testing of these virtual coaches. The project expects to commercialize the portable sensing devices and disseminate the mobile apps through app stores, partner organizations, professionals pursuing continuing education credits, professional conferences, and social media. The coaching tools can be incorporated into a community-based program that teaches self-management skills applied to wheelchair use and healthy lifestyle for wheelchair users.
Disability and Rehabilitation Research Projects (DRRPs)
Pennsylvania

DRRP on Robotics and Automation for Inclusive Transportation

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Project Number: 90DPGE0003
Start Date: September 30, 2017
Length: 60 months

NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 17 $499,896; FY 18 $499,986; FY 19 $499,910; FY 20 $499,902; FY 21 $499,876

Abstract: This project researches and develops seamless transportation assistance from cloud-based autonomy and shared robots located in and around transportation hubs. The goal of this project is to enable more independent travel within the community by people with disabilities through universal design, coordinated research, and precursor projects already underway. The objectives are to: (1) identify methods for acquiring and applying knowledge about traveler routines to support seamless changes in travel, (2) determine appropriate intervention methods for preemptively addressing barriers along a traveler’s trip, (3) develop scalable methods for rich map information during user and robot navigation, and (4) develop cloud-based autonomy and shared hub robots that can provide assistance during daily travel. Through these objectives, the project aims to improve effective and seamless travel within the community; generate new knowledge on when and how to provide assistance to travelers with disabilities; develop new, reusable, open source travel assistance technologies; and expand capacity through new technology and training of new experts in the field.
Prosody and Voice Characteristics of Children with Cochlear Implants

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Project Number: 90IF0042 (Formerly H133G120272)
Start Date: October 01, 2012
Length: 36 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 12 $199,967; FY 13 $199,498; FY 14 $198,256; FY 15 (No-cost extension through 9/29/2016); FY 16 (No-cost extension through 5/31/2017); FY 17 (No-cost extension through 5/31/2018)

Abstract: This project examines the prosodic and voice characteristics of 40 children with cochlear implants (CIs) in two groups – a 4-5 year old group and a 7-8 year old group. For comparison, matched groups of hearing children are also studied. In addition to examining how prosodic and voice characteristics differ between younger and older children with CIs, this work permits identification of those characteristics that differ from those of hearing children and that persist despite experience with the implant. This project also examines the relative contribution of prosodic and voice attributes to overall speech intelligibility in CI children, analyzing the co-occurrence of prosodic and voice issues with measures of other features such as vocabulary and articulation that can influence spoken language communication. Finally, the project explores selected acoustic factors in the CI children’s productions to explain the acoustic and production bases for their prosody and voice difficulties.
**Field Initiated Projects (FIPs)**

Georgia

**ALIGN v.2.0: Identification and Quantification of Real-Time Barriers to Community Mobility**

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**Project Number:** 90IF0123  
**Start Date:** September 30, 2016  
**Length:** 36 months  
**NIDILRR Officer:** Brian Bard  
**NIDILRR Funding:** FY 16 $199,940; FY 17 $199,963; FY 18 $199,962

**Abstract:** This project builds upon the Application for Locational Intelligence and Geospatial Navigation (ALIGN) prototype developed and pilot tested as part of the RERC on Technologies for Successful Aging with Disability. This project: (1) identifies and validates key real-time factors (i.e., pedestrian volumes and timing of traffic of signals); (2) refines the database structure and data acquisition processes; (3) applies a weighting system to real-world factors to generate route mobility scores; (4) develops an enhanced routing algorithm; (5) develops the backend capability to collect actual use data to inform continual refinement; (6) refines and tests usability of the interface; (7) demonstrates feasibility through real-world utility testing; and (8) develops a management, marketing, and distribution strategy. Project outcomes include a proof-of-concept prototype ALIGN v.2.0 with routing algorithms that enable the application to be customized with location-specific data enhancing the mobility of people with mobility disabilities for any geographic area.
Improving Electronic Written Communication in Persons with Aphasia: A Clinical Trial

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Project Number: 90IFRE0007
Start Date: September 30, 2017
Length: 36 months

NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 17 $199,783; FY 18 $199,646; FY 19 $199,494

Abstract: The goal of this project is to evaluate the extent to which a novel treatment (T-WRITE) improves written language function and the use of text messaging for people with aphasia, who often have difficulty with writing and may struggle to use electronic communication that connects people to one another. The specific objective of this randomized clinical trial is to compare T-WRITE to ORLA+WTG, a similar treatment that targets written expression using handwriting, and to evaluate whether there are subsequent positive effects on the participant’s social connectedness and ultimately health-related quality of life. T-WRITE involves choral reading and repeated writing of sentences via texting. Participants work intensively and independently at home on a laptop computer. A virtual therapist directs the participant to practice copying and independently writing phrases and short sentences using the typing feature on a cellular phone.
Field Initiated Projects (FIPs)
Michigan

Investigating Performance Indicators in Accessible and Inclusive Public Transportation

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Project Number: 90IF0094
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 15 $199,954; FY 16 $199,544; FY 17 $198,227
Abstract: This project aims to determine factors in public transit vehicle design and operations that impact user performance (accessibility, safety, and usability) and users’ perceptions and mode preference (fixed-route bus, complementary paratransit, demand response), and in turn affect transit system performance. Two research studies are conducted to accomplish the project objectives. The first study involves a quantitative analysis of data obtained from a local transit agency combining operations (fixed-route, paratransit, and demand-response) and passenger information over a two-year period within a defined geographical area to determine dependencies between transit system performance and the performance (accessibility, safety, and usability) of users with mobility disabilities. The analysis uses datasets routinely gathered by transit agencies, including automated vehicle location, in-vehicle video surveillance records, archived demographic and trip information of paratransit service riders, and passenger surveys. The second study engages individuals with diverse mobility disabilities (including users of wheeled mobility devices, ambulation aids, and individuals that are blind or visually impaired) in a field study yielding kinematic, physiological, and self-reported contextual data to model relationships between physical, psychosocial, and environmental factors at the individual level. Individuals with disabilities, community partners, and transportation service providers play a key role in the project as consultants, Advisory Board members, and study participants - contributing their expertise and first-person perspectives to this project. Dissemination activities focus on translating project findings into outputs and formats that are tailored to key stakeholder groups; including traditional refereed and trade publications for researchers; downloadable information products on a community partner’s website tailored to transportation service providers, individuals with disabilities, and their advocates; and collaborative outreach activities with community partners.
Field Initiated Projects (FIPs)
Michigan

Real World Testing of a Brain-Computer Interface to Operate a Commercial Augmentative and Alternative Communication System

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Project Number: 90IFDV0002
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 17 $199,994; FY 18 $200,000; FY 19 $199,998

Abstract: For the most vulnerable individuals who cannot otherwise access augmentative and alternative communication (AAC) devices, access through brain-computer interfaces (BCIs) offers the opportunity to obtain AAC’s vital quality-of-life benefits. However, little evidence exists on the features, clinical services, and resources needed to effectively deliver an AAC-BCI. The University of Michigan has partnered with the University of Pittsburgh, the Prentke Romich Company (PRC), and the ICAN Talk Clinic, as well as patients and caregivers, to meet this need. The objectives are to: (1) test an AAC-BCI prototype that advances the effectiveness of current BCI communication, (2) improve the procedures and tools for comprehensive assessment to provide clinical evidence to support AAC-BCI funding, and (3) improve in-home training and treatment necessary for successful daily communication using an AAC-BCI. Anticipated outcomes include: (1) greater AAC access options for stakeholders (individuals, families, and practitioners); (2) improved tools for practitioners to compare access methods and recommend an AAC-BCI; (3) improved AAC-BCI in-home training resources for stakeholders; (4) improved clinical evidence for practitioners to support treatment decisions; and (5) available outcome data to advocate for billing codes and funding of AAC-BCI. The expected products are an AAC-BCI prototype incorporating a commercial high-efficiency AAC device, dry electrode technology, assessment protocols, in-home training materials, and a language sample repository for data sharing.
Visual Gaze and Validity of Cognitive Evaluations

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Project Number: 90IF0092
Start Date: September 30, 2015
Length: 36 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 15 $195,489; FY 16 $192,631; FY 17 $193,956

Abstract: This project aims to enhance diagnostic accuracy in identification of traumatic brain injury (TBI), using a novel application of eye-tracking technology during standard cognitive testing, based on the hypothesis that persons with verified TBI and persons who feign TBI each show distinct oculomotor patterns during cognitive evaluation. The primary target population is adults referred for assessment of TBI-related cognitive impairment. The study employs a known-groups design that comprises four groups: adults with moderate to severe TBI, adults with mild TBI, healthy adults instructed to put forth full effort, and healthy adults coached to simulate TBI. These groups are tested using adapted standard cognitive tests, including tests of malingering, to include eye tracking. Principal dependent variables relate to classification accuracies. Principal predictors are traditional scores from the tests plus indices of oculomotor response (e.g., distribution of attention in areas of interest, fixation patterns and time, pupil dilation, and blinks) combined with performance indices (e.g., correct/incorrect responses). The project is innovative in that no prior research has systematically investigated visual gaze combined with elements of decisional process applied clinically to distinguish cognitive impairment and dissimulation.
Field Initiated Projects (FIPs)
Michigan

Effect of Guidance Surfaces on Travelers with Vision and Mobility Impairments

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Project Number: 90IF0127
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 16 $587,055; FY 17 (This project was fully funded in the first year); FY 18 (This project was fully funded in the first year)

Abstract: This project focuses on international standards for materials and installation of tactile guidance surfaces for crosswalks with the goal of improved safety and guidance for pedestrians with visual disabilities. The project includes a review of international standards and use of surfaces for guiding people who are blind to crosswalks and helping them align, and collects data on the most promising materials and installation methods. With increasingly complicated modern intersections, people who are blind have more trouble finding crosswalks, aligning to cross, and crossing a street in a straight line. In the US, there is no standard for material or installation for tactile guidance surfaces to help people who are blind to locate a crosswalk or align correctly. International standards and pilot data suggest some surface treatments that might improve safety without creating barriers for people with mobility impairments. This project collects data with people with mobility and visual impairments to determine what materials and installation pose the least problem for them. The project then assesses the best materials and installation from this phase with people who are blind to see which offers the best information for finding crosswalks and aligning to cross a street. The project team combines expertise from a research university, experienced professionals in the field of blindness and mobility, and a nationally recognized civil engineering firm. In addition to data from people with mobility and visual impairments, project outputs include a guidance document that can be used by cities and municipalities to standardize their approach to using tactile guidance surfaces for people who are blind.
Field Initiated Projects (FIPs)
New Hampshire

**WorkingWell: Developing a Mobile Employment Support Tool for Individuals with Psychiatric Disabilities**

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workingwell-developing-a-mobile-employment-support-tool

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**Project Number:** 90IF0069 (Formerly H133G140089)
**Start Date:** October 01, 2014
**Length:** 36 months

**NIDILRR Officer:** Shelley Reeves

**NIDILRR Funding:** FY 14 $199,619; FY 15 $199,149; FY 16 $199,779; FY 17 (No-cost extension through 9/29/2018)

**Abstract:** This project develops and tests WorkingWell, an innovative, easy-to-access, self-directed, and individualized mobile employment support tool (smartphone “app”) for individuals with psychiatric disabilities, available when and where the user needs it. WorkingWell targets autonomy-supportive constructs derived from self-determination theory, and builds on previous research and the individual placement and support (IPS) model of supported employment to help people succeed at work. This project aims to: (1) develop the information architecture, functionality, technical specifications, and general design for the WorkingWell prototype via iterative, user-centered design including focus groups of users and employment specialists, and expert review; (2) develop the fully functional WorkingWell prototype using state-of-the-art processes informed by iterative, formative testing of the usability, accessibility, and acceptability of prototype components; and (3) test the acceptance and feasibility of WorkingWell through a one-week feasibility trial and a two-month pre- and post-test demonstration field test with individuals receiving IPS supported employment, usage metrics, and post-implementation feedback interviews with a sample of users and employment specialists. The goal is to create a validated application that can be easily installed onto a mobile phone to facilitate wide-scale and far-reaching dissemination of IPS and follow-up support for people with severe psychiatric disabilities.
**Development of a Virtual Reality Spatial Retraining Therapy to Improve Neglect in Stroke Survivors**

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**Project Number:** 90IFDV0001  
**Start Date:** September 30, 2017  
**Length:** 36 months  
**NIDILRR Officer:** Stephen Bauer, PhD  
**NIDILRR Funding:** FY 17 $200,000; FY 18 $200,000; FY 19 $200,000

**Abstract:** This project develops the Virtual Reality Spatial Retraining Therapy (VR-SRT) System to address spatial neglect (SN) in people who have experienced a stroke. SN is the most common spatial deficit after stroke and a major hidden disability after brain injury. The project uses agile software development and user-centered design to deliver a VR-SRT System that is affordable and accessible in various healthcare settings, from clinics and hospitals to patients’ homes. Project objectives are to: (1) design and develop exemplar treatment tasks that target bottom-up and top-down treatment approaches for SN; (2) extend and enhance the features of the exemplar treatment tasks, thereby maximizing therapy engagement and user satisfaction; (3) expand the software to optimize treatment control and management for therapists and to amplify data extraction capabilities for researchers; and (4) evaluate the latest prototype and finalize the VR-SRT System by establishing preliminary feasibility and efficacy.
Patient-Specific In-Shoe Orthoses for Knee OA Prescribed Using Weight Bearing MRI

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Project Number: 90IF0077 (Formerly H133G140183)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 14 $199,878; FY 15 $199,983; FY 16 $199,994; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project refines the process for prescribing in-shoe footwear modifications, leveraging in particular the weight-bearing MRI technology developed under a previous NIDILRR field initiated project Improved Weight Bearing Evaluation of Knee Osteoarthritis. This project consists of two phases: (1) investigation of the immediate effect of incremental lateral in-shoe wedging on both static and dynamic descriptors of lower extremity biomechanics, as assessed using weight bearing MRI and gait analysis; and (2) a short term interventional trial in which the clinical effect of patient-specific in-shoe wedging is compared against the performance of a neutral (un-wedged) orthotic. Functional mobility tests and questionnaire reporting are utilized to evaluate the clinical effect on osteoarthritis-related pain and disability.
Audio-Tactile Web Accessibility with Haptic Gloves

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Project Number: 90IF0117
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 16 $200,000; FY 17 $200,000; FY 18 $200,000

Abstract: This project conducts research aimed at improving the utility of web access for people who are blind or have low-vision. The goal of this project is to better understand how the effectiveness of non-visual web browsing may be improved with tactile interfaces in general and haptic gloves in particular. Project objectives include: (1) designing audio-tactile interfaces for general browsing, text entry and editing, and dynamic interaction with web interfaces; and (2) developing a haptic glove with finger tracking and tactile feedback, and input functionalities enabling research activities. Outcomes include: (1) to design and implement software for novel haptic interfaces for web browsing, (2) to understand tactile behaviors and strategies employed by people who are blind and those with low-vision, (3) to provide insight into how dynamic haptic feedback can be used to improve computer interaction, (4) to provide diverse educational outcomes for university students and people affected by vision loss, (5) to create FeelX – a working audio-tactile system capable of providing haptic feedback, and (6) to enhance the web browsing productivity of people who are blind or have low-vision leading to improved access to education and employability. This project is a partnership between the Web Accessibility Lab at Stony Brook University and Lighthouse-Guild.
Field Initiated Projects (FIPs)
Ohio

Gaining Real-Life Skills Over the Web (GROW)

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Project Number: 90IFDV0003
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 17 $199,320; FY 18 $199,486; FY 19 $198,794

Abstract: This project develops and evaluates an online learning environment of web-based intervention modules designed to promote family and child coping and adjustment (GROW: Gaining Real-life Skills Over the Web) based on a comprehensive needs assessment of children aged 0 to 36 months with traumatic brain injury (TBI) and their families. The incidence of TBI peaks between the ages 0 to 4 years, yet there are no evidenced-based interventions to facilitate neurocognitive development and socio-emotional functioning of children injured during this critical development period. To address the unmet need of caregivers of infants and toddlers with TBI, the project uses a three-phase, three-year development process to generate proof of concept and initial proof of product. Phase 1 involves a comprehensive needs assessment that includes quantitative assessment of family and child needs, qualitative assessment through focus groups and interviews of families, feedback from family and professional advisory boards, and consultation with professionals implementing interventions with similar populations (e.g., families of children with very low birth weight). During Phase 2, the project develops the content and manual for the intervention modules, designs the online learning environment, and conducts intensive, iterative usability testing. Phase 3 involves a pilot of the GROW program with 20 families to evaluate its usability, acceptability, and qualitative and quantitative impact on stakeholder identified outcomes.
Field Initiated Projects (FIPs)
Tennessee

Toe Joint Articulation in Passive and Powered Prostheses for Enhancement of Walking and Long-Term Health

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Project Number: 90IFRE0001
Start Date: September 30, 2017
Length: 36 months
NIDILRR Officer: William V. Schutz, PhD, MSW, MPH
NIDILRR Funding: FY 17 $199,100; FY 18 $199,298; FY 19 $199,949

Abstract: The goal of this project is to improve the design of prosthetic feet to restore biological toe function in a way that aids individuals with limb loss as they navigate various slopes, uneven terrain, and daily obstacles. The project includes a systematic empirical study of toe joint stiffness in both passive and powered prosthetic feet to generate new data that characterize the functional role of the toes during various locomotor activities. This research advances the fundamental understanding of foot function during legged locomotion, and has the potential to spur transformative prosthetic advances that improve the mobility of lower limb prosthetic users while reducing device costs.
Energy Management System for Battery Powered Mobility Devices Based on Wireless Power Transfer Concept to Promote Community Living and Participation

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Project Number: 90IF0116
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 16 $199,903; FY 17 $199,232; FY 18 $199,942

Abstract: The goal of this project is to create a state-of-the-art, hands-free solution that targets persons with severe disabilities struggling for independence and frustrated by the limited functionality of their powered mobility device. The solution is the creation of novel hardware and software components that lead to a comprehensive management solution for recharging the batteries of powered mobility devices based on the emerging wireless power transfer (WPT) charging technology. This project is divided into three sections, each with its own objective. Section I’s objective is to understand the needs of users by utilizing human-in-the-loop design principles to conduct usability tests and final testbed integration and validation. The objective of Section II is to develop new WPT charging infrastructure. Finally, the objective of Section III is a software and hardware platform for adaptive, reconfigurable EMS and user interface.
Field Initiated Projects (FIPs)
Wisconsin

Image Categorization Expert System to Facilitate Creation of Accessible Education Materials

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Project Number: 90IF0114
Start Date: September 30, 2016
Length: 36 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 16 $197,179; FY 17 $199,632; FY 18 $199,298

Abstract: The goal of this project is to enhance the process of producing accessible descriptions for textbook images for students with print disabilities. Graphical representations of information are widely used in education for science, technology, engineering, and mathematics. These graphics pose a particular challenge for users who have print disabilities, defined as persons who cannot effectively read print because of visual, physical, perceptual, developmental, cognitive, or learning impairments. Creating accessible instructional materials for students with print disabilities is essential to promote better educational, and consequently, better employment outcomes for this population in an increasingly technologically-oriented world. This project develops a set of open source software tools to improve current workflows in the authoring of image descriptions for scanned textbooks. The project evaluates the effectiveness of the developed tools both in terms of the efficiency of image description volunteers, and the accuracy and perceived quality of the produced descriptions.
Field Initiated Projects (FIPs)
Wisconsin

Development of a Multi-Faceted Software Evaluation for Home Reintegration: There’s an App for That?

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Project Number: 90IF0083 (Formerly H133G140222)
Start Date: October 01, 2014
Length: 36 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 14 $200,000; FY 15 $200,000; FY 16 $200,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project develops a technology-based assessment and documentation system for home evaluation of individuals with disabilities returning home from institutional settings. The complexity of home evaluation requires the home evaluation expert to detail and integrate the myriad factors that affect a person’s ability to live independently. Currently, evaluators rely on pen-and-paper assessments and time-consuming tools that limit the number of evaluations that can be conducted. The aim of this project is to modernize this process with HESTIA, an in-depth, multi-faceted assessment to identify problems in the home environment that hamper a person’s ability to successfully live as independently as possible. HESTIA incorporates advances in handheld computing such as smart technology data collection through computer-based question branching, Bayesian-like predictive models, and cloud knowledgebase access to help a practitioner collect and integrate large amounts of complex data. HESTIA embeds intelligent measurement tools such as smart sensors that interpret distances for satisfactory door widths and meters that determine light and sound levels in the home. The tools are based on prototype mobile apps that use the sensors indigenous to hand-held devices available on the market. Three data-collection modules measure a person’s body structure and function, home environment accessibility, and performance in day-to-day activities. HESTIA combines the data, creating integrated reports to facilitate the home evaluation team’s identification of customized goals and select specific home interventions. Project activities include content development for HESTIA, development of three data collection and integrative report modules, and preliminary product validation.
Assistive Device to Improve Object Recognition and Reading

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Project Number: 90BISA0004
Start Date: September 30, 2017
Length: 6 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 17 $99,500

Abstract: The goal of this project is to create an affordable system for optimizing the use of assistive devices (tablets) to improve reading and object recognition performance for individuals with visual impairments. The objectives are: (1) to select a suitable assistive device that can be paired with Aeon’s existing Digital Light Ophthalmoscope (DLO-LV) vision research retinal camera which maps the position of stimuli relative to the user’s retinal position and gaze to indicate areas of abnormal function; (2) measure baseline reading and object recognition performance using both devices; (3) measure performance of words and objects that are corrupted by noise using both devices; (4) develop and implement software-based image manipulations, e.g. magnification, contrast, and motion/flicker; and (5) measure reading and recognition performance of enhanced words and objects corrupted by noise using both devices.
T3 Platform: The Next Generation Tactile Tablet

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Project Number: 90BISA0006
Start Date: September 30, 2017
Length: 6 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 17 $74,617

Abstract: This project develops the T3 Platform, a system for creating, distributing, and displaying interactive, audio-tactile maps, graphs, games, and braille lessons. Built on the successful but outdated Talking Tactile Tablet (TTT) paradigm, this new approach makes some images accessible to those who can’t see well enough to use standard print graphics. T3 Platform includes four components: T3 Tablet, T3 Cloud, T3 Trainer, and T3 Embosser. With T3 Platform, users place raised line and textured overlay sheets on a large Android tablet computer, and then tap and swipe with hands and fingers to trigger spoken descriptions and explanations of each element of the tactile image. As each new overlay sheet is placed on the tablet, its ID number is scanned from a sticker adhered to the back, and an app running on the tablet calls up data files that associate regions of the tactile image with pre-recorded audio or synthetic speech. This innovation eliminates the requirement that the user press three ID bars as each new overlay is put in place, creating a smoother, faster sheet change sequence, and eliminating miss-identifications that were the biggest source of frustration for users of the TTT.
Universal Crosswalk Diagrams for Better Confidence and Safety in Pedestrians Who Are Blind

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Project Number: 90BISA0003
Start Date: September 30, 2017
Length: 6 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 17 $74,331

Abstract: This project evaluates the effectiveness of Universal Crosswalk Diagrams (UCD), a new kind of street sign to aid pedestrians who are blind or have low vision. These small signs are mounted directly above existing Accessible Pedestrian Signals (APS), the pole-mounted buttons at street corners that pedestrians press to request information about the current status of the Walk/Don’t Walk indicator. Each sign shows a raised-line diagram of the street about to be crossed, with tactile symbols for You Are Here, vehicles, medians, turn lanes, etc. A thick dotted line indicates the direction of travel to cross the street. The pedestrian can examine the diagrams before crossing to determine the distance to the far corner and to preview the route. As an additional feature, each sign includes an embedded Bluetooth transmitter with a unique identifier code, enabling the pedestrian’s smartphone to provide an accessible description of the street crossing in speech or Braille when in close proximity to one of these signs. Phase 1 research and development includes prototyping UCDs for two intersections in San Francisco, culminating in a usability study comparing inferences about intersection layout made by eight users with visual disabilities, with and without use of the proposed signs.
Assistive Technology Enabling Communication

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Project Number: 90BISA0005
Start Date: September 30, 2017
Length: 6 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 17 $100,000

Abstract: This project furthers development of an effective early-stage assistive communication device for patients with Amyotrophic Lateral Sclerosis (ALS). The wearable assistive communication device uses electromyography (EMG) signals to empower users with ALS and other neuromuscular disabilities to control household devices (e.g. computers) and communicate within their environment. Increasing the capability for interaction between the ALS patient and caregivers and clinical team members enables a dynamic, multidisciplinary care environment. This in turn thoroughly addresses the changing needs of an ALS patient. Specifically, this project measures the ability to reliably capture surface electromyography signals from users with neuromuscular disabilities, determines best practices for storing such data, and measures user acceptability of the device. The data provides physicians with the opportunity to track patient EMG signals over time and to gain a deeper understanding of the changes in muscular ability. Additionally, the human research study acquires a more relevant data set as the study group incorporates participants with and without neuromuscular disabilities. Neurologists will provide insight into the best representation of this EMG and muscular tracking data as well. This ensures the patient data is accurately represented and easily accessible to clinical representatives.
Blind and Low Vision Indoor Guidance Using Personal Routes

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Project Number: 90BISA0008
Start Date: September 30, 2017
Length: 6 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 17 $100,000

Abstract: This project develops a collaborative, smartphone-based navigation system for travelers who are blind or have low vision that will guide them through complex or unfamiliar environments by providing customized walking instructions tailored to users with visual disabilities. Travelers may select their desired destination from a searchable library of routes, and then receive step-by-step narrative walking directions delivered via an accessible mobile application that guides them to their destination. The key innovation in this project is the development of a collaborative route creation and planning feature enabling the community of users with visual disabilities to collect, share, and maintain walking instructions. This approach enables the application’s users to create and share narrative routes optimized for users who have visual disabilities, and allows users to share routes for those locales they regard as most important.
An Affordable Home Assistive Walker Device Using Spacesuit Pants to Support Body Weight

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Principal Investigator: John Hauck
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Project Number: 90BISA0010
Start Date: September 30, 2017
Length: 6 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 17 $99,790

Abstract: The goal of this project is to demonstrate feasibility of an assistive home-use walker that would provide people with mobility disabilities much greater functional capability to stand and walk. The prototype walker is compact and portable, and can support the user while shifting body weight. One key objective in this Phase I activity is to design, build, and laboratory test a prototype device. A second key objective is to clinically test the prototype at North Memorial Medical Center. User feedback and laboratory findings inform future study and product development.
Small Business Innovation Research (SBIR), Phase I
New York

Development and Evaluation of a Simulated Prototype to Dynamically Adjust Ambient Environments to Promote Affective Regulation in Individuals with Autism Spectrum Disorder

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Principal Investigator: David Malott
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Project Number: 90BISA0007
Start Date: September 30, 2017
Length: 6 months
NIDILRR Officer: William V. Schutz, PhD, MSW, MPH
NIDILRR Funding: FY 17 $100,000

Abstract: The goal of the Phase I proof-of-concept project is to determine if affective and physiological regulation in individuals with autism spectrum disorders (ASD) can be promoted through dynamic adjustments in the environment. This goal will be addressed through the execution of two objectives: (1) development of an Internet of Things (IoT) prototype digital interface; and (2) evaluation of environment adjustments on affective and physiological regulation in individuals with ASD. The goal of this system is to provide greater independence and productivity at home, school, and work to significantly enhance quality living for the growing population of individuals with ASD and reduce caregiver burden.
A Socket-Suspension Monitoring System for Lower Limb Amputees with Roll-on Liners

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Principal Investigator: Ming Liu
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Project Number: 90BI0034
Start Date: September 30, 2016
Length: 6 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 16 $75,000; FY 17 (No-cost extension through 4/30/2018)

Abstract: The focus of this project is to develop a low-cost, wearable, easy to use, continuous socket/suspension monitoring system (SSMS) that tracks the relative displacement between the amputees’ residual limb and their socket or pistoning through the use of magnetic sensors. To do this, the project (1) designs and constructs the SSMS and demonstrates its capability through a bench top experiment; (2) identifies mounting locations of the SSMS to ensure that the SSMS generates reliable information about pistoning based on experimental data collected from below knee amputees; and (3) compares measurements from the SSMS and a clinical pistoning measurement approach to validate the capacity for the SSMS to monitor pistoning. The information collected from this system: (1) assists amputees in the management of their residual limb; (2) enables clinicians and prosthetists to track the performance of the socket’s suspension and make prompt clinical decisions; and (3) permits insurance companies to gather quantifiable and reliable evidence to identify prosthetic components and procedures that could reduce long-term health care costs.
The Bimodal Ankle: Development and Engineering Validation of a Hydraulic Actuator

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Principal Investigator: Matthew Wernke, PhD
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Project Number: 90BISA0001
Start Date: September 30, 2017
Length: 6 months
NIDILRR Officer: William V. Schutz, PhD, MSW, MPH
NIDILRR Funding: FY 17 $99,925

Abstract: This project designs, fabricates, and completes engineering verification of a hydraulic actuator for a novel prosthetic ankle-foot system. The goal of this project is to improve balance and balance confidence of persons with lower extremity amputations by developing a prosthetic ankle that has biomimetic modes for walking and standing. This bimodal ankle provides flexibility for walking mobility and rigidity for standing stability. The objectives are to: (1) Develop (design and fabricate) a hydraulic actuator that allows movement for walking and restricts movement for standing; and (2) to perform engineering verification of the actuator assembly.
Development of PathDetect: Algorithms that Utilize Smartphone Sensor Data to Detect Adverse Pathway Conditions

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Principal Investigator: Eric Sinagra
Public Contact: 412/651-4180

Project Number: 90BISA0002
Start Date: September 30, 2017
Length: 6 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 17 $100,000

Abstract: This project develops PathDetect, a smartphone app with algorithms that passively characterize adverse pathway conditions (APCs) as a wheelchair user traverses pedestrian pathways. As cities work to improve sidewalks and pedestrian walkways, accurate sidewalk assessments can provide important data to address APCs which can have a significant impact on older adults and individuals who use wheelchairs. The aims of this project are to: (1) Develop an obstacle course that simulates APCs that are compliant and non-compliant with accessibility guidelines published by the US Access Board; (2) develop and evaluate classifiers using a support vector machine and supervised machine learning algorithms to detect APCs from smartphone data collected while using a wheelchair; (3) conduct a “roundtable” discussion with wheelchair users to collect important user feedback about the PathDetect tool; and (4) develop and characterize a custom smartphone app that collects sensor data and geo-locates APCs.
Small Business Innovation Research (SBIR), Phase I
South Carolina

Proximity-Based Fire Alert Notifications for Hearing Impaired

KnewTek
123 Janeway
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Principal Investigator: Thomas Riley

Project Number: 90BISA0009
Start Date: September 30, 2017
Length: 6 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 17 $100,000

Abstract: This project develops smoke detector hardware and an associated smartphone application which, upon detection of an environmental threat (e.g., a fire), automatically pushes alert notifications directly to individuals who are Deaf or hard of hearing via a cellular telephone or smart device application. The alert notifications are transmitted to telephones or smart devices within proximity of the smoke detector/fire alarm. The goals of this project are to determine technical and commercial feasibility of the proposed system. Specific objectives are: (1) to develop the software code necessary to deliver proximity-based alert notifications; (2) to develop a product model with at least basic functionality; and (3) to conduct product testing and commercial viability screening. This technology has the potential to provide life-saving communication of a fire emergency to individuals who are Deaf or hard of hearing and for determining the location of user within a building during a fire emergency.
Accessible Environmental Information Application for Individuals with Visual Impairments

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Principal Investigator: Paul Ponchillia
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Project Number: 90BISB0003
Start Date: September 30, 2016
Length: 24 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 16 $287,140; FY 17 $287,830
Abstract: This project is developing a scalable Accessible Environmental Information Application (AEI) with seamless outdoor to indoor navigation and a unified beacon database for people with visual disabilities. This application provides indoor orientation information to assist in navigating indoor public spaces including malls, airports, conference venues, and baseball stadiums. This project is expanding existing outdoor navigation systems with this AEI that provides orientation and location information indoors where GPS is unavailable. The objectives of this project are to: (1) evaluate the leading indoor navigation techniques to assess synergistic technological capabilities; (2) continue development of the AEI application to incorporate Phase I feedback and refine interface; (3) incorporate additional third party beacon databases; (4) create an open source beacon sharing standard and database; (5) analyze the success of the developed application in real world situations; and (6) complete project summaries and reporting.
Embedded Access to Signing of Science Terms and Definitions

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Principal Investigator: Edward Sims
Public Contact: 321/710-4841

Project Number: 90BISB0004
Start Date: September 30, 2016
Length: 24 months
NIDILRR Officer: William V. Schutz, PhD, MSW, MPH
NIDILRR Funding: FY 16 $287,170; FY 17 $286,867

Abstract: This project develops, deploys, and evaluates Embedded Access to Signing of Science Terms and Definitions (EAS): a client-server software system that delivers American Sign Language (ASL) and Signed English (SE) language support to Deaf and hard-of-hearing (Deaf/HH) students accessing any Web page that includes science, math, or healthcare information. The goal of this project is make scientific and technical Web content accessible to Deaf/HH students and adults in their own first language as well as in English, such that they may understand, perform independent research, and make informed decisions based on information available on any Web site of interest, even though the grade level of the content may exceed their English language skills. The objectives are: (1) to increase the science vocabulary and understanding of Deaf middle and high school students, their educators, and interpreters, (2) to more fully engage the students in science and in STEM and healthcare careers, and (3) to prepare Deaf/HH students and adults to make informed decisions based on scientific understanding. The long-term anticipated outcomes include: (1) improved Deaf/HH student engagement, performance, and career opportunities in STEM subjects, (2) improved teacher and interpreter knowledge of scientific terms and their signs, and (3) enhanced capability of Deaf/HH persons to make informed decisions about healthcare, environment, and daily living. The expected products are (1) a cloud-based, extensible lexicon/repository of at least 6,000 signs and definitions for science, math, and healthcare terms, in English, ASL, and SE; and (2) Web browser extensions and mobile apps that automatically highlight any word in any Web page for which signs and signed definitions are included in the lexicon, which, upon clicking, will render signed animations of the terms and definitions. These products will be commercialized for use by individuals, groups of users, and organizations serving the Deaf/HH population.
Touch-Responsive Models for Universal Access to Smithsonian Museums Exhibits

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Principal Investigator: Steven Landau
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Project Number: 90BISB0008
Start Date: September 30, 2017
Length: 24 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 17 $272,956; FY 18 $274,404

Abstract: This project develops new methods for fabricating replicas of museum artifacts and other 3D objects that describe themselves when touched, so that museums can create exhibits that are accessible to everyone, including visitors with visual impairments. Phase I demonstrated how ordinary capacitive touchscreens could be repurposed as sensors for determining locations of finger touches on 3D surfaces and objects that have been hand painted with a carbon-rich conductive coating. Phase II improves on these methods by showing how both conductive (graphene) filament, and transparent insulating filament, can be loaded into a standard, dual extruder 3D printer, to create light transmissive, inherently touch-responsive objects in one step, obviating the need for hand painting. The new translucent models can be illuminated from below by the touch screen, allowing dynamic lighting effects and visual feedback when models or parts of models are touched.
Small Business Innovation Research (SBIR), Phase II
Massachusetts

SoundFit Ultrasonic Optimization for Lower Body Prosthetics

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Principal Investigator: Michael White, PhD
Public Contact: 303/317-6566

Project Number: 90BISB0007
Start Date: September 30, 2017
Length: 24 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 17 $287,494; FY 18 $287,494

Abstract: This project develops an ultrasonic fitment tool to improve prosthetics performance for persons with lower-extremity amputations. The goal of this project is to develop a new clinical instrument used in the socket fitting process to optimize the performance of a lower-body prosthetic system and thereby improve mobility, activity, exercise, and quality of life for over 2 million American amputees. The ultrasonic device, called “SoundFit” uses low-cost, line-of-sight ultrasound transducers and a novel signal reconstruction and visualization system to elucidate the residual degrees-of-freedom of the bone inside a patient’s residual limb as socket fit modifications are made. This data represents a critical knowledge gap, and current practices are non-quantitative, difficult to train and reproduce, and vary widely between prosthetist shops. The specific objectives of the Phase II program are: (1) research and refine the electronics hardware and software system demonstrated in Phase I; (2) create novel wavelet signal processing algorithms to improve performance in challenging residual limb tissue; (3) perform clinical efficacy testing demonstrating the value of the technology; and (4) develop all testing and documentation necessary for FDA 510(k) submission.
Small Business Innovation Research (SBIR), Phase II  
Massachusetts  

Therapeutic Intermittent Compression Socket  

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todd.farrell@liberatingtech.com  
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Principal Investigator: Todd Farrell, PhD  
Public Contact: 508/893-6363; Fax: 508/893-9966  

Project Number: 90BI0020  
Start Date: September 30, 2015  
Length: 24 months  
NIDILRR Officer: Thomas Corfman  
NIDILRR Funding: FY 15 $283,031; FY 16 $291,900; FY 17 (No-cost extension through 9/28/2018)  
Abstract: The purpose of this project is to develop a device that provides rapid intermittent compression to the residual limb of amputees that do not have good blood flow in their limbs. During Phase II, the project develops an actuator that: (1) mimics the pressures and rise times of currently available pneumatic intermittent compression systems, (2) produces a compression profile that has been shown to be clinically effective, (3) can be fit to residual limbs with different shapes and sizes, (4) can be easily incorporated into prosthetic socket, and (5) has had its efficacy demonstrated on human subjects. The device is portable to provide the user with therapy throughout the day, which frees the user from being confined to a chair for up to six hours each day in order to receive the prescribed amount of therapy. The goal of the device is to reduce the number of ulcers that form, help those ulcers that do form to heal, and ultimately reduce the number of reamputation surgeries that need to occur by increasing blood flow in the limb.
Small Business Innovation Research (SBIR), Phase II  
Minnesota

Wheelchair Optimal Route Planning for Public Urban and Indoor Spaces

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info@innovativedesignlabs.com 
www.innovativedesignlabs.com/projects.html

Principal Investigator: John Condon  
Public Contact: 612/567-8554; Fax: 763/463-4817

Project Number: 90BI0002 (Formerly H133S140099)  
Start Date: October 01, 2014  
Length: 24 months  
NIDILRR Officer: Brian Bard  
NIDILRR Funding: FY 14 $273,041; FY 15 $301,745; FY 16 (No-cost extension through 9/29/2017); FY 17 (No-cost extension through 1/29/2018)

Abstract: This project creates an easy-to-use navigation and route-planning aid system for wheelchair users to optimize wheelchair-specific paths through complex urban landscapes and indoor environments. Since the Americans with Disabilities Act Accessibility Guidelines were established in 1990, the ability of wheelchair users to navigate public spaces has greatly improved. However, there are still many areas in which modification for accessibility was not “readily achievable,” and therefore, may not be conducive to wheelchair travel. The system under Phase II development tracks the location of wheelchair users in indoor locations and provides wheelchair specific mobility guidance using a crowd-sources model of data collection. The system is comprised of navigation electronics attached to the wheelchair, and a software application to provide a wheelchair user with a graphical, intuitive interface for cloud-based online routing tools. This system improves access and independence for people with limited mobility and allows wheelchair users freedom of movement between public and commercial buildings safely and efficiently.
Small Business Innovation Research (SBIR), Phase II
Minnesota

Improving Hearing Aid Satisfaction Through Remote Feedback and Settings Adjustments

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Principal Investigator: John Condon
Public Contact: 612/251-6560

Project Number: 90BISB0006
Start Date: September 30, 2017
Length: 24 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 17 $259,594; FY 18 $314,395

Abstract: This project develops a system that improves communication between a patient and their audiologist, simplify the fitting and tuning process by allowing patients to remotely record their hearing aid (HA) experience via a smartphone application. Currently, only 28.5% of individuals who could benefit from a HA actually wears one. The goal of this project is to improve patient satisfaction with their HA, with the aim to increase and prolong continued use. The objectives are: (1) Develop a smartphone application and wireless interface to low-level HA functionality; (2) develop a cloud-based back-end system with a web-based audiologist interface; and (3) evaluate system with end users through a human trial.
Indoor Navigation Aid for Individuals with Visual Impairments in Unfamiliar Spaces

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Principal Investigator: Philip R. Schaefer
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Project Number: 90BISB0005
Start Date: September 30, 2017
Length: 24 months
NIDILRR Officer: Joseph A. DePhillips
NIDILRR Funding: FY 17 $275,599; FY 18 $299,288

Abstract: This project develops a technology solution to address the indoor navigation needs experienced by people with visual disabilities. This technology has several advantages over other wayfinding approaches such as GPS, in that it requires no infrastructure in indoor spaces nor does it require maps to be created prior to navigation. Thus, it is applicable to any unfamiliar indoor or outdoor space. The Phase II project includes building upon the Phase I proof-of-concept device to develop an improved, miniaturized hardware device; implementing a fully-functional smartphone app; iteratively conducting periodic pilot studies as the technology progresses; and finally conducting in-clinic and take-home studies in which potential end users use the device in their everyday lives. The project proves the functionality and user-acceptance of this product for improved indoor navigation, giving insights into the degree to which it enhances quality of life of users with visual disabilities.
Physiologically Compatible Hemodialysis Through Advanced Dialysate Regeneration

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taku@chemica.com
www.chemica.com/medicaldevices.htm

Principal Investigator: Takuji Tsukamoto, PhD
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Project Number: 90BISB0002
Start Date: September 30, 2016
Length: 24 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 16 $322,222; FY 17 $252,492

Abstract: This project develops an advanced, portable hemodialysis regeneration system that significantly enhances the quality of life of end-stage renal disease (ESRD) patients. ESRD impairs physiological systems and functions, and is associated with disability, high morbidity, and mortality. Hemodialysis is prescribed for the majority of individuals in the final stages of renal failure. Minimizing the loss of nutrients and improving dialysis delivery (length, frequency, and location) enables individuals with ESRD to feel better, have more energy, work more, and engage in activities in their communities. Project investigators use surface chemistry and material science techniques to develop an advanced dialysate regeneration system able to remove a broad spectrum of uremic toxins while minimizing the loss of nutrients such as amino acids, vitamins, and essential ions. Technical objectives include: (1) performing scale-up production of the components of the advanced dialysate regeneration system (DRS-2); (2) designing and constructing the prototype module (cartridge) to house the DRS-2; (3) proving the safety and efficacy of the DRS-2 in vitro; (4) performing overall efficacy and quality tests of the DRS-2 using spent dialysate; and (5) evaluating and summarizing Phase II processes and results.
For NIDILRR, knowledge translation (KT) encompasses the multidimensional, active process of ensuring that new knowledge gained through the course of research ultimately improves the lives of people with disabilities and furthers their participation in society. KT involves not only knowledge validation, dissemination, and utilization but also the transfer of technology, particularly products and devices, from the research and development setting to the commercial marketplace to make possible widespread utilization of the products or devices. NIDILRR funds a number of KT projects focusing on different content areas, not only to assist NIDILRR grantees in their knowledge translation efforts through technical assistance, training, and other activities, but also to generate new knowledge and understanding of KT in the context of disability, independent living, and rehabilitation.
Model Systems Knowledge Translation Center (MSKTC)

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www.facebook.com/pages/Traumatic-Brain-Injury-Model-Systems/159630024063887
www.facebook.com/pages/Burn-Injury-Model-Systems/155712024448908
twitter.com/sci_ms, twitter.com/tbi_ms, twitter.com/burn_ms

Principal Investigator:  Steven Garfinkel, PhD; N. Lynn Gerber, MD 919/918-2306; 703/993-1940
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Project Number:  90DP0082
Start Date:  September 30, 2016
Length:  60 months
NIDILRR Officer:  Pimjai Sudsawad, ScD
NIDILRR Funding:  FY 16 $791,998; FY 17 $791,950; FY 18 $791,950; FY 19 $791,950; FY 20 $791,950

Abstract:  The Model Systems Knowledge Translation Center (MSKTC) advances a knowledge translation (KT) paradigm among Model System grantees to ensure that spinal cord injury (SCI), traumatic brain injury (TBI), and burn injury (Burn) research is relevant and accessible to people with disabilities and their families; researchers; practitioners, and clinicians; and policy makers and advocates. The goals of this project are to enhance understanding of SCI, TBI, and Burn rehabilitation research; increase awareness and use of SCI, TBI, and Burn Model Systems research findings by appropriate stakeholders; centralize SCI, TBI, and Burn Model Systems resources for effective and uniform provision of training, technical assistance, and dissemination; and increase capacity of Model System grantees to engage in KT activities. MSKTC designs and implements KT activities to accomplish the following objectives: conduct research on effective KT methods to increase awareness and use of Model Systems research; develop research-based, user-friendly products grounded in KT science; conduct KT training and technical assistance activities to increase KT capacities of Model System grantees; disseminate MSKTC resources to all potential stakeholders; and implement utilization activities to promote stakeholders’ awareness and use of Model Systems research for informed decision making. The overarching outcome of MSKTC is to improve the lives and services for people with SCI, TBI, and Burn. MSKTC generates research-based information resources for all stakeholders and makes them available on the MSKTC website. This project is a partnership of the American Institutes for Research (AIR), Inova Health System, George Mason University, University of Alabama at Birmingham, and American Association of People with Disabilities.
TEST - Translating Evidence to Support Transitions: Improving Outcomes of Youth in Transition with Psychiatric Disabilities by Use and Adoption of Best Practice Transition Planning

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Project Number: 90DP0080
Start Date: September 30, 2015
Length: 60 months

NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 15 $149,707; FY 16 $149,248; FY 17 $149,789; FY 18 $149,936; FY 19 $149,877

Abstract: The goal of this project is to increase use and adoption of best practices in planning the transition of high school students to postsecondary employment and/or school enrollment; specifically, students with emotional behavioral disturbance (EBD) receiving special education services. This includes transition planning with the ultimate goal to improve postsecondary outcomes for this population through knowledge translation, testing, and dissemination of NIDILRR-funded research findings. The project develops materials, procedures, and guides for implementing three research-informed best practices in high school transition planning: (1) written goals for a concentration of career and technical coursework during high school, (2) student-led transition planning efforts, and (3) representation of adult-serving disability agencies and colleges on transition teams. The TEST project is guided by the National Implementation Research Network Stage-Based Implementation Framework and has five project objectives that correspond to this framework: (1) Developing research-informed materials and procedures for use by transition planning teams that are tailored to youth with EBD in close coordination with end-users and a stakeholder team; (2) pilot-testing resulting TEST procedures and materials in one school district with an implementation stakeholder team, finalizing TEST procedures and materials; (3) providing TEST implementation support and technical assistance to transition teams in one state and developing a TEST implementation guide; (4) presenting TEST best practices and the implementation guide at a national capacity building institute for high school special education transition planning teams; and (5) widely disseminating TEST materials. Project outcomes include the development of guides and curricula for practicing and implementing best practices in transition planning for students with EBD and the wide-scale adoption and use of TEST practices, improving employment and education outcomes for students with EBD. This project is led by the University of Massachusetts Medical School’s Transitions Research and Training Center and the Systems and Psychosocial Advances Research Center. This project also benefits from assemblage of prominent organizations and individuals with expertise in adoption and use of best practices for transition support for students with disabilities, knowledge translation, research on transition, and local transition efforts.
Disability and Rehabilitation Research Projects (DRRPs)
New York

Center on Knowledge Translation for Technology Transfer

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Project Number: 90DP0054 (Formerly H133A130014)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 13 $924,512; FY 14 $924,511; FY 15 $924,511; FY 16 $924,564; FY 17 $924,559

Abstract: The objective of this project is to study and apply the theory and practice of knowledge translation (KT) to the knowledge outputs of NIDILRR technology grantees. Goals of this project are to increase the rate of successful technology transfer (TT) of rehabilitation projects by NIDILRR grantees to the marketplace and into engineering standards, increase understanding among rehabilitation engineers and disability researchers in development of TT processes and practices that lead to successful TT, and increase capacity of NIDILRR grantees to plan and engage in TT activities. Research Project 1, Grantee Evidence of TT Practices, uses case-based examples from grantees in technology innovation processes to demonstrate how their actions and decisions affect TT outputs and outcomes. Research Project 2, Profile of Industry TT Receptivity and Capacity, optimizes the likelihood of accomplishing TT by evaluating industry opportunities and constraints. Development Project 1, Generate Three Need to Knowledge (NtK) Model Variants, utilizes planning and charting processes across three non-commercial output categories (standards and protocols, freeware, and instruments and tools) to increase capacity in TT and expand the original NtK Model for commercial products. Development Project 2, Collaborative Commercialization, utilizes partnerships between NIDILRR grantees and corporations to bring new or improved commercial products to the marketplace through two utilization activities: (1) Delivering Practice-Level TT Training, and (2) Demonstrating Program-Level NtK Model Uptake by External Agencies. These activities increase grantees’ ability to plan, implement, and manage TT capacity by teaching how to accommodate best practices within personnel, time, and resource constraints while demonstrating the use of the NtK Model by other government and advisory agencies. KT4TT operates at the School of Public Health and Health Professions, University at Buffalo (SUNY), in partnership with Western New York Independent Living Inc., and a team of international consulting experts.
Disability and Rehabilitation Research Projects (DRRPs)
Pennsylvania

Translating Transfer Training and Wheelchair Maintenance into Practice

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Principal Investigator: Michael L. Boninger, MD; Lynn Worobey, PhD; Cindy Cai, PhD
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Project Number: 90DP0078
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 15 $150,000; FY 16 $150,000; FY 17 $150,000; FY 18 $150,000; FY 19 $150,000

Abstract: This project focuses on the knowledge translation of transfer training and wheelchair maintenance into practice in order to improve transfers and wheelchair maintenance leading to decreased pain and increased independence for individuals with mobility disabilities. The multi-institution, consumer-focused team: (1) Develops and continually refines high-quality training products to translate wheelchair transfer and maintenance research to wheelchair users, their support systems, and clinicians; (2) integrates stakeholder feedback throughout all stages of material development; (3) creates self-assessment versions of the transfer assessment instrument and wheelchair maintenance training questionnaire as educational tools to enable wheelchair users to track progress and identify areas requiring further training; (4) disseminates and promotes utilization of materials to wheelchair users and their support systems including clinicians providing their care, nationally, and internationally; and (5) evaluates utilization of materials through focus groups, social media, satisfaction surveys, self-assessments, and population changes in reported pain and wheelchair breakdown. The University of Pittsburgh Model Center on Spinal Cord Injury is partnering with American Institutes for Research (AIR) and is joined by the United Spinal Association and the Spina Bifida Association to bring connections to the target audience and enable stakeholder participation.
Disability and Rehabilitation Research Projects (DRRPs)
Texas

Center on Knowledge Translation for Disability and Rehabilitation Research

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Project Number: 90DP0027 (Formerly H133A120012)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 12 $750,000; FY 13 $750,000; FY 14 $750,000; FY 15 $750,000; FY 16 $750,000; FY 17 (No-cost extension through 2/28/2018)

Abstract: This project serves as a primary knowledge translation (KT) resource for NIDILRR-funded researchers, developers, and KT brokers, addressing the need for access to and skills in implementing best practices; undertaking systematic reviews and other high-quality syntheses of research; and translating research findings and using them to make critical decisions. To address these needs, the Center provides an array of training, dissemination, utilization, and technical assistance activities, including: supports for the production of high quality systematic reviews and research syntheses, including long-term, individualized technical assistance; tools and training to assist in extracting data, assessing quality, and using evidence from systematic reviews in identifying research gaps and formulating research questions; training and assistance to help NIDILRR grantees meet the challenges of evidence standards; training and assistance addressing KT planning, including use of planning templates and tools; supports for NIDILRR grantees in the development of evidence-based knowledge products; establishment of a Consumer Review Panel to provide guidance in ensuring that knowledge products and KT strategies are relevant and accessible to knowledge users; ready access to an array of KT strategies, with information about evidence of their effectiveness, and support for their use among NIDILRR grantees; facilitation of collaborative work and information-sharing among NIDILRR grantees, through working groups and communities of practice; for knowledge users, awareness of and ready access to evidence-based knowledge through accessible web-based resources and social media; tools for knowledge users that facilitate the assessment of quality of systematic reviews and research syntheses, and the identification and utilization of high quality research evidence; and strategies to help NIDILRR grantees engage knowledge users in all phases of KT, from seeking and creating knowledge through its application.

NIDILRR Program Directory FY 2017 - Knowledge Translation
6-7
Center on Knowledge Translation for Employment Research

American Institutes for Research (AIR)
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Principal Investigator: Kathleen M. Murphy, PhD 512/391-6541
Public Contact: Tracy Bauman 800/266-1832; Fax: 512/476-2286

Project Number: 90DP0077
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 15 $500,000; FY 16 $500,000; FY 17 $500,000; FY 18 $500,000; FY 19 $500,000

Abstract: The Center on Knowledge Translation for Employment Research has as its purpose: (1) to identify findings related to improving employment outcomes among individuals with disabilities that NIDILRR-funded researchers and other entities have produced, with a focus on the high-needs populations of adults with autism, and transition-aged youth and young adults with disabilities; (2) to determine what needs for research-based information are most pressing for stakeholders, such as individuals with disabilities and their families, vocational rehabilitation practitioners, the business community, and policymakers; and (3) to investigate and test knowledge translation strategies that can increase these stakeholders’ appropriate use of identified research findings that meet their reported needs. To address those purposes, this project (1) reviews NIDILRR-funded and other findings to identify how to meet stakeholders’ pressing information needs related to improving employment outcomes for specific populations of individuals with disabilities with especially high needs; (2) conducts research studies to test ways of helping target audiences to access and use the research-based practices identified (i.e., testing knowledge translation strategies); (3) develops research-based informational resources related to stakeholders’ informational needs and to NIDILRR researchers’ capacity to plan and implement KT activities and measure their outcomes; (4) widely disseminates project findings; (5) provides technical assistance to researchers to support their utilization of project resources regarding the incorporation of effective knowledge translation strategies into their research, development, and dissemination activities; (6) promotes collaboration among NIDILRR-funded researchers working in the employment field, and between these researchers and their stakeholder audiences that can benefit from use of their research findings.
Disability and Rehabilitation Research Projects (DRRPs)
Texas

AIR’s Center on Knowledge Translation for Disability and Rehabilitation

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Principal Investigator: Kathleen M. Murphy, PhD 512/391-6541
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Project Number: 90DPKT0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 17 $750,000; FY 18 $750,000; FY 19 $750,000; FY 20 $750,000; FY 21 $750,000

Abstract: This project promotes the use of high-quality disability, independent living, and rehabilitation (DILR) research that is relevant to intended audiences’ needs by serving as the main knowledge translation (KT) resource for other NIDILRR grantees, including NIDILRR grantees that serve as KT centers. Project goals are to: (1) add new knowledge in the area of KT, (2) support the KT endeavors of NIDILRR grantees, and (3) promote the use of NIDILRR-funded work that is relevant to the needs of intended audiences including other researchers, people with disabilities, their families, consumer organizations, policymakers, and other NIDILRR audiences. The objectives are to: (1) facilitate use of DILR research, (2) build NIDILRR grantees’ KT capacity, and (3) integrate DILR perspectives into systematic reviews and research synthesis (SR/RS). Outcomes include increased use of DILR research to inform decision making by individuals with disabilities, their family members, as well as a broad array of other stakeholders, increased use of KT practices among NIDILRR grantees, and integration of DILR research perspectives into domestic and international bodies that produce systematic reviews. Center products include trainings, technical assistance, and tools to support grantees’ KT practices and on conducting SR/RS using appropriate standards, guidelines, and methods; a responsive website with many related resources, including a Database of KT Strategies, Registry of Systematic Reviews, and Info Briefs synthesizing KT and SR/RS literature; annual KT conferences and workshops on policymaker outreach and social media; KT Casebooks and conference panels to showcase grantees’ KT practices; and direct involvement with the new Campbell Collaboration Disability Coordinating Group.
Disability and Rehabilitation Research Projects (DRRPs)
Washington

Translating Evidence About Traumatic Brain Injury to Practice
Within Washington State Department of Corrections

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Principal Investigator: Mark Harniss, PhD; Kurt Johnson, PhD
Public Contact: 206/685-0289; Fax: 206/543-4779

Project Number: 90DP0079
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 15 $150,000; FY 16 $150,000; FY 17 $150,000; FY 18 $150,000; FY 19 $150,000

Abstract: This project focuses on translating evidence about traumatic brain injury (TBI) into practice within the Washington State Department of Corrections (DOC). The goal is to improve interactions with offenders with TBI by helping front line staff understand what TBI is; how offenders might be affected by TBI; what they could do that would help in day-to-day management of problems faced by offenders with TBI (e.g., memory, communication, mood, impulsivity); how TBI might affect engagement in treatment programs; how TBI affects compliance with DOC rules and regulations; and how TBI might affect transition from corrections to community living. The goal is to affect change at two levels in the DOC by increasing awareness and knowledge about TBI system-wide, and developing and piloting intensive knowledge translation (KT) activities with front line staff who work with specific target populations (e.g., veterans, women, or individuals with disabilities) in order to translate knowledge into practice. These activities can then be generalized to other correctional facilities within the DOC. In order to achieve these goals, the project identifies and prioritizes research-based products on TBI from current and completed NIDILRR-funded projects that are most relevant for the DOC. Factsheets and evidence-based materials developed by previous NIDILRR-funded grants serve as starting points for integrating research-based evidence into practices within corrections. The project assesses the current level of TBI knowledge and programming within the DOC to identify knowledge gaps and potential barriers and facilitators to the use and adoption of NIDILRR-sponsored TBI evidence in DOC. Finally, the project develops and implements a comprehensive KT plan, including system-wide strategies and an intensive pilot intervention, as well as evaluating the effectiveness of knowledge translation strategies and overall processes, and providing a summary of findings for recommendations of informed practice within DOC and the broader criminal justice community.
Burn Injury Model Systems
Washington

National Data and Statistical Center for the Burn Model Systems

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Principal Investigator: Dagmar Amtmann, PhD; Kurt Johnson, PhD 206/543-
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Project Number: 90DP0053 (Formerly H133A130004)
Start Date: April 12, 2013
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 13 $350,000; FY 14 $350,000; FY 15 $350,000; FY 16 $350,000; FY 17 $350,000

Abstract: The purpose of the National Data and Statistical Center for the Burn Model Systems (BMS Data Center) is to (a) maintain and enhance a longitudinal database following individuals with burn injury, (b) support research on health outcomes in burn injury conducted by both researchers in the NIDILRR Burn Model Systems Centers (BMS Centers) and external to the BMS Centers, and (c) provide annual reports to the public. The project enhances the technological foundation of the BMS Database by adding more sophisticated reporting features; enhances the capacity of BMS Data Centers to collect high quality data on individuals with burn injury from all racial and ethnic backgrounds through training and technical assistance; improves the capacity of researchers within and outside of the BMS Centers to engage in research and statistical analysis of the longitudinal database through technical assistance and direct participation in research, statistical analysis, and writing; collaborates with other NIDILRR-funded data centers in spinal cord injury and traumatic brain injury and with national organizations that collect large datasets on burn injury, such as the American Burn Association’s National Burn Repository, to increase efficiency and reduce redundant effort; and improves the quality of information provided to the public through better reports and the development of consumer-friendly materials. The primary outcome across all five years of the project is the development of significant research evidence about the effects of burn injury on the lives of burn survivors through the maintenance and enhancement of a robust, high quality, longitudinal database; and through training and technical assistance to those who use it.
National Spinal Cord Injury Statistical Center

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Principal Investigator: Yuying Chen, MD, PhD 205/934-3320
Public Contact: Phil Klebine 205/934-3283; Fax: 205/975-4691

Project Number: 90DP0083
Start Date: September 30, 2016
Length: 60 months

NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 16 $662,500; FY 17 $662,500; FY 18 $662,500; FY 19 $662,500; FY 20 $662,500

Abstract: National Spinal Cord Injury Statistical Center (NSCISC) provides resources and services that support the Spinal Cord Injury Model Systems (SCIMS) Program and Database, with the goals of ensuring high-quality data in the Database and promoting rigorous SCIMS research and collaboration. Project activities are conducted with several target groups in mind: individuals with spinal cord injury (SCI), SCIMS Centers, and individuals who intend to access/use the Database for SCI information or research. The objectives include: (1) maintenance of the SCIMS Database through a secure web-based data management system; (2) assurance that high-quality data is collected from participants of all races/ethnicities through standard operating procedures, certification of Data Collectors, data quality monitoring, SCIMS Center site visits, cultural diversity needs assessment, training, and technical assistance; (3) improved accessibility and utilization of the SCIMS Database through implementation of a comprehensive public access plan, as well as through collaborative research, internship, award, workshops, information resources, and individual consultation and technical assistance; and (4) continuity of the SCIMS Database through subcontracts and centralized data collection for continued collection of follow-up data from defunded Centers. Outcomes for this center include improved representativeness of Database participants to the SCI population at large, increased quantity and quality of Database research and collaboration, established standards on culturally appropriate SCI research, and advanced knowledge in SCI outcomes. Products from this center include a web-based system that provides a secure environment and user-friendly features for data management and reporting; website-provided informational tools for searching SCI statistics and resources for researchers; annual statistics reports and consumer-friendly infographics; as well as research presentations and publications.
Abstract: The Traumatic Brain Injury Model Systems (TBIMS) National Data and Statistical Center (NDSC) at Craig Hospital maintains the TBIMS National Database (NDB) increasing the rigor and efficiency of scientific efforts to longitudinally assess the experience of individuals with TBI. The center creates a sustainable data preservation program; provides ready access to TBIMS data and expertise in advanced analytics for TBIMS data collectors, researchers, and NDB users; and enhances the TBIMS support infrastructure by ensuring data security, validity, and storage. The NDSC is organized into functional groups: (1) a data core focusing on state-of-the-art data management technology, improved data quality, and culturally competent research; (2) a statistical/methodological core focusing on training and consultation to improve the rigor of longitudinal research; and (3) a collaborative core focusing on joint research with federal and non-federal partners to maximize NDB use. Project goals include: (1) improving data quality metrics, (2) closing the racial/ethnic gap in NDB recruitment and retention, (3) maintaining exceptional customer satisfaction in regular surveys, (4) increasing use of the NDB by TBIMS and outside researchers, (5) increasing the number and methodological rigor of peer reviewed articles using the NDB, and (6) successfully completing modules and collaborative studies using NDSC data management services. The NDSC products include a customizable data capture that works on any device using any browser, a certification process for Form II interviewing, advanced statistical training, and a public use version of the NDB that can be queried.
Abstract: The purpose of the Americans with Disabilities Act (ADA) Network Knowledge Translation Center (ADA Network-KTC) is to ensure that information and products developed and identified through the ten ADA Regional Centers are of high quality, based on the best available research evidence, and are deployed effectively to multiple key stakeholders; and to develop processes and technology to facilitate highly collaborative and efficient progress toward accomplishing these goals. Stakeholders include: employers, researchers, educators, policy makers, staff of state and local government agencies, individuals with disabilities, family members, and project staff in the ADA Regional Centers and other related federal and privately-funded organizations. To achieve this purpose the ADA Network-KTC has four project goals. Goal 1: Optimize the efficiency and impact of the ADA National Network’s training, technical assistance, and information dissemination by: (1) maintaining and further developing the ADA National Network’s website and ADA Document Portal, (2) developing an online system to enable the ADA Regional Centers to share training and technical assistance materials, (3) facilitating joint development of ADA products by the ADA Regional Centers to maximize resources and avoid duplication, and (4) organizing and providing logistical and financial support for annual meetings of the ADA Regional Centers. Goal 2: Increase the use of available ADA-related research findings to inform behavior, practices, or policies that improve equal access in society for individuals with disabilities by: (1) identifying topics of importance to ADA stakeholders in collaboration with the ADA Regional Centers and other key informants, and by conducting systematic reviews of the evidence; (2) identifying topics for future research (knowledge gaps) to help individuals understand their rights and responsibilities under ADA; and (3) synthesizing information from systematic reviews, research publications, and expert consensus to develop stakeholder materials. Goal 3: Increase awareness and utilization of ADA-related research findings by appropriate ADA stakeholder groups by: (1) collaborating with the ADA Regional Centers on developing individual KT plans that support a national KT implementation plan for the ADA Nation-
al Network, and (2) coordinating and hosting one ADA research conference in year 5. Goal 4: Improve understanding of ADA stakeholders’ need for and receipt of ADA Network Services over time, including services to address emerging issues related to compliance with ADA requirements by: (1) operating and maintaining the outcome measurement system; (2) collaborating with NIDILRR and the ADA Regional Centers to improve usability and accessibility; (3) developing a data sharing plan to facilitate program improvement and research; (4) monitoring data quality, and providing training and technical assistance on use of the database, and (5) development and implementation of a system for measuring and tracking outcomes of the ADA National Network.
NIDILRR Contracts
Maryland

National Rehabilitation Information Center (NARIC)

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Project Number: GS-06F-0726Z
Start Date: September 28, 2015
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 15 $1,583,388; FY 16 $1,948,101; FY 17 $1,868,203; FY 18 $1,922,781; FY 19 $1,977,360
Abstract: The National Rehabilitation Information Center (NARIC) maintains a research library of more than 65,000 documents and responds to a wide range of information requests, providing facts and referral, database searches, and document delivery. Through telephone and online information referral, NARIC disseminates information gathered from NIDILRR-funded projects, other federal programs, and from journals, periodicals, newsletters, and multimedia. NARIC maintains REHABDATA, a bibliographic database on rehabilitation and disability issues, both in-house and online. Users are served in English and Spanish by telephone, mail, electronic communications, or in person. Current tasks include expanding the collection with international research, including data originally collected by the Center for International Rehabilitation Research Information and Exchange (CIRRIE); acquisition of digital media; maintaining and expanding a digital archive of original research documents; and knowledge translation activities in support of NIDILRR’s mission including citation analysis, long term project tracking, and promotion of NIDILRR-sponsored research. NARIC also prepares and publishes the annual NIDILRR Program Directory, available in database format from NARIC’s web site, and several regular publications highlighting NIDILRR research.
**NIDILRR Contracts**  
Virginia

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**AbleData**

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**Project Number:** ED-OSE-13-C-0064  
**Start Date:** October 01, 2013  
**Length:** 60 months  
**NIDILRR Officer:** Pimjai Sudsawad, ScD  
**NIDILRR Funding:** FY 13 $687,578; FY 14 $661,730; FY 15 $681,106; FY 16 $701,060; FY 17 $722,564

**Abstract:** AbleData provides objective information on assistive technology and rehabilitation equipment available from domestic and international sources to consumers, organizations, professionals, and caregivers within the United States. This project maintains and expands the AbleData database of assistive technology, develops information and referral services that are responsive to the special technology product needs of consumers and professionals, and provides 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 40,000 commercially produced and custom-made assistive devices. All of the project’s resources are available free of charge on its website. Requests for information are answered via telephone, mail, electronic communications, or in person.
ADA National Network Projects

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, NIDILRR has funded a network of grantees to provide information, training, and technical assistance to businesses and agencies with duties and responsibilities under the ADA, as well as to conduct ADA-related research. The current program includes ten regional centers, one collaborative research center, and one ADA knowledge translation center.

Contents

ADA National Network ........................................................................................................................3
New England ADA National Network Regional Center - Region I

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Project Number: 90DP0087
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 16 $1,000,000; FY 17 $1,000,000; FY 18 $1,000,000; FY 19 $1,000,000; FY 20 $1,000,000

Abstract: The New England ADA Regional Center meets the increasingly complex challenges of providing outreach, training, technical assistance, information dissemination, and capacity building of the ADA core services. Project activities include an extensive training and information agenda with products designed for ease of use and maximum impact, and tailored to meet the needs and preferences of people with rights and responsibilities under the ADA. Services include information and training for individual, business, and government needs at the local, regional, and national levels. To address ADA knowledge and implementation gaps, the Center has established new research partnerships and two research priorities: (1) to collaborate with statisticians to generate nuanced state-level data of emerging and projected reasons for disability, and (2) a randomized digital survey of regional municipalities to assess barriers to non-compliance in collaboration with the MIT Department of Urban Studies and Planning. This research seeks to identify the emerging and projected profile of people with rights under the ADA at the state level, understand the factors that impede municipalities from implementing the ADA, and identify an intervention or an innovative approach that can facilitate implementation of the ADA at the municipal level. Center outputs include state-wide data sets that tell the story of disability today and in the coming years, a set of new digital and interactive information tools including the Title II Action Guide, and distance learning web courses, as well as information tools developed in response to the municipal survey.

To increase capacity building among priority audiences, two new initiatives focus attention on accessibility for an aging population and those with behavioral health and substance use issues. New England is home to the three US states with the oldest average populations – Maine, Vermont, and New Hampshire. Under the ADA, the rights of aging populations everywhere are covered by the broad protections of the American Disabilities Act, as are those in recovery from substance use. Those rights are not widely understood among the public, nor in some cases among public officials or businesses. A mission of the New England ADA Regional Center is, through every action, to refresh an understanding of the ADA in New England for the 21st century as a tool for more inclusive society. This center serves Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, and Connecticut.
ADA National Network
Region II - NJ, NY, PR, and VI

Northeast ADA National Network Regional Center - Region II

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Project Number: 90DP0088
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 16 $1,112,165; FY 17 $1,112,165; FY 18 $1,112,165; FY 19 $1,112,165; FY 20 $1,112,165

Abstract: The goal of the Northeast ADA Regional Center is to educate and empower the diverse range of ADA stakeholders throughout the region to increase their knowledge of the ADA, to make better decisions regarding disability inclusiveness, and to implement the ADA in their own lives, workplaces, businesses, and communities. The center provides high-quality services that are relevant and responsive to the needs of individuals and organizations who have rights and responsibilities under the ADA. While this project serves all ADA stakeholders, the project focuses on three groups identified as high need: (1) healthcare professionals, (2) small employers including state and local government’s Title I functions, and (3) facility access professionals. Outcomes include: Improved ADA stakeholders’ understanding of their rights and responsibilities under the ADA; identification of barriers to ADA compliance and development of innovative approaches to address these barriers; continuous improvement of the understanding of ADA stakeholders’ needs for and use of Center services; systematic enhancement of efficiency and effectiveness of Center services; and increasing the implementation of the ADA across the diverse stakeholders throughout the region. To ensure achievement of these outcomes, the Center engages in an array of activities in three core areas: (1) Stakeholder engagement activities through ADA services, (2) measurement and tracking, and (3) research. The Center’s research project, which focuses on implementation of the ADA in small local businesses, cuts across all of the supporting objectives, and builds upon and shapes activities in the other two core areas. This intervention research is designed to identify barriers and carriers to ADA implementation, and test innovative approaches for eliminating these barriers within small business organizations. These activities have been designed to ensure direct engagement with ADA stakeholders through different modalities and at different levels of intensity. These activities include outreach, information dissemination, technical assistance, training, and capacity building. The Center’s measurement and tracking activities include evaluation, needs assessment, and collaboration with local, regional, and national partners. This center serves New York, New Jersey, Puerto Rico, and the US Virgin Islands.
Mid-Atlantic ADA National Network Regional Center - Region III

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Principal Investigator: Laura Owens, PhD
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Project Number: 90DP0089
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 16 $1,112,165; FY 17 $1,112,165; FY 18 $1,112,165; FY 19 $1,112,165; FY 20 $1,112,165

Abstract: The Mid-Atlantic ADA Regional Center identifies and disseminates the effective practices of individuals and entities which promote improved integration of individuals with disabilities into all areas of community life. The center has three areas of focus: Training, technical assistance, and information dissemination on all titles of the ADA, with a sharpened focus on educating individuals with disabilities about their rights; capacity building and outreach through local networks; and research in areas where barriers still occur for individuals with disabilities. The Mid-Atlantic ADA Center implements an operational plan of specific objectives and tasks associated with each of the following major project goals: (1) Improve the understanding and interpretation of the rights and responsibilities under the ADA for both individuals and entities, by expanding existing Mid-Atlantic ADA Center Networks, the hospitality initiative, and relationships with individuals with disabilities, the aging population, and organizations that represent these stakeholders; (2) identify barriers to compliance with the ADA and develop innovative strategies to eliminate such barriers through research activities focusing on the needs of state and local governments and individuals with disabilities; (3) identify emerging issues and develop innovative strategies to address ADA compliance issues experienced by individuals with disabilities who are aging and youth with disabilities by strengthening the working relationships with Centers for Independent Living, Vocational Rehabilitation, Area Agencies on Aging, and Aging and Disability Resource Centers; and (4) enhance the efficiency and effectiveness of the ADA Network Services by building the capacity of the Mid-Atlantic ADA Networks to serve Region III through training, technical, assistance, and information dissemination. Specific and detailed training, dissemination, and technical assistance activities to pursue these goals are augmented by carefully designed activities to study and validate best practices and policies through a comprehensive quantitative/qualitative research design as well as by direct cooperation with the ADA Knowledge Translation (KT) Center, other Regional ADA Centers, and other NIDILRR-funded research centers to identify areas of research need and to participate in mutual research projects. This center serves Pennsylvania, Delaware, Maryland, Virginia, West Virginia, and the District of Columbia.
Southeast ADA National Network Regional Center - Region IV

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Project Number: 90DP0019 (Formerly H133A110021)
Start Date: October 01, 2011
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 11 $1,241,643; FY 12 $1,242,940; FY 13 $1,244,127; FY 14 $1,242,860; FY 15 $1,243,316; FY 16 (No-cost extension through 9/29/2017); FY 17 (No-cost extension through 3/31/2018)

Abstract: The Southeast ADA Center Consortium consists of over 100 organizations and entities across 8 states representing all Americans with Disabilities Act (ADA) stakeholders, including people with disabilities, businesses, state and local government agencies, service providers, vocational rehabilitation agencies, and others. The Southeast ADA Regional Center: (1) facilitates implementation of and compliance with the ADA through training, technical assistance, and broad dissemination of accurate, timely information; (2) conducts outreach to a diverse audience of stakeholders; (3) builds the ADA knowledge and implementation capacity of the state and local affiliates; and (4) advances the social, civic, and economic participation of people with disabilities through targeted outreach, knowledge translation, and capacity building in the region. The Center improves understanding by ADA stakeholders of their rights and responsibilities under the ADA and related laws, and improves knowledge about evidence-based best practices for advancing civil rights and increasing disability equality using a Knowledge-to-Action-based framework for knowledge translation that incorporates outreach, training, dissemination, technical assistance, and capacity-building to the next level and ensures behavioral and practice-oriented changes by ADA stakeholders. A comprehensive plan of continuous quality improvement and evaluation tracks these mid-term outcomes to demonstrate change across the region.
ADA National Network
Region IV - AL, FL, GA, KY, MS, NC, SC, and TN

Southeast ADA National Network Regional Center - Region IV

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Project Number: 90DP0090
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 16 $1,246,000; FY 17 $1,246,000; FY 18 $1,246,000; FY 19 $1,246,000; FY 20 $1,246,000

Abstract: The goals of the Southeast ADA Regional Center are to (1) promote voluntary compliance, effective implementation, and transcendence of the ADA; (2) increase ADA understanding and awareness; (3) encourage meaningful partnerships among government, business, and disability communities to facilitate effective ADA implementation; and (4) conduct leading-edge research to reduce and eliminate barriers to employment and economic self-sufficiency, so as to increase civic and social participation of Americans with disabilities. Project objectives include: (1) expanding the Center’s provision of technical assistance, training, and dissemination of ADA information; (2) identifying structural, program, and technological barriers to ADA compliance by using the Center’s innovative participatory action research (PAR) model to increase access to financial institutions and related services; (3) using new data collection to identify and respond to stakeholder’s needs for services and supports from the Center and the ADA National Network; and (4) enhancing the efficiency and effectiveness of ADA Network Services by building on regional and national leadership, collaboration, and record of success. The Center’s core outcomes and deliverables include: (1) Expansion of training initiatives: furthering growth of ADA Trainer Network-Southeast in collaboration with partners, development of a new web course on all ADA Titles for access to financial institutions, WADA ADA Live!, Tax Access with community non-profit partners, and continued improvement of online courses; (2) development and expansion of ADA materials: targeted outreach and development of materials to meet the diverse needs of multicultural groups, including individuals who speak Spanish and the aging community, continuation of ADA Anniversary Tool Kit, legal briefs and alerts current with ADA developments, enhancement of project’s accessible website and social media outreach; (3) continued provision of highest quality technical assistance: advice through the toll-free number, email, social media, and website forms; development of new web-
site portals for stakeholders; (4) implementation of PAR research model: evaluate and increase access to financial institutions; develop a Financial Inclusion Scale (FIS) to be widely shared at regional and national levels; and (5) improved access to services of the ADA National Network: enhanced collaboration with regional ADA Centers, ADA Knowledge Translation Center, NIDILRR, and Administration on Community Living to increase outreach to all targeted stakeholders and rigorously evaluate effectiveness of services. The Center is a project of the Burton Blatt Institute (BBI) at Syracuse University (SU) in partnership with various organizations including: Affiliate Leadership Network of 8 State Affiliates and their network of 52 local affiliates; training partnership with Southeast Center Director’s Association that includes majority of Centers for Independent Living (CILs) in the Southeast; Aging and Disability Advisory Group; Multi-Cultural Outreach Collaboration with Morehouse College, Urban Leagues in Atlanta, and Louisville and Lexington, Kentucky, and Mississippi Valley State University; Bluegrass ADA Employment Consortium; Association of People Supporting Employment First (APSE); and Financial Research Advisory Group. This center serves Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.
Abstract: The Great Lakes ADA Regional Center promotes awareness and compliance with the Americans with Disabilities Act (ADA). Project goals and objectives center on the provision of high quality, timely, and accurate technical assistance, training, and material dissemination to identified target audiences. The Great Lakes ADA Regional Center provides responsive and proactive services utilizing a comprehensive service delivery model. The technical assistance, training, and information needs of the individuals and their families, employers, business, government, educational entities, design professionals, and employment programs serving veterans with disabilities are part of an ongoing needs assessment, and programs and activities are tailored accordingly. Project activities and goals include: (1) operation of a toll-free number and use of current and emerging technologies for information and referral; (2) enhancement of the Center’s existing regional network of individuals and organizations who can provide on-site consultation, technical assistance, and training as needed; (3) conducting and sponsoring training events and activities at the local, state, and regional level focused on raising awareness of the ADA; (4) development and dissemination of technical assistance and training products and tools that are evidence based; (5) identification and dissemination of best practices related to the recruitment, hiring, and retention of qualified individuals with disabilities by employers and employment training programs; (6) promotion of the acquisition and utilization of accessible information technology by employers, business, government, and educational institutions; and (7) utilization of existing and emerging technology to promote the exchange of information including websites, listservs, e-newsletters, mobile applications, social media, multi-faceted distance learning strategies and techniques, self-paced learning, and web-based assessment tools. Through partnerships and collaboration at the local, state, regional, and national level, the Center maximizes resources ensuring that a high quality and quantity of activity occurs. This center serves Illinois, Indiana, Minnesota, Ohio, and Wisconsin.
Southwest ADA National Network Regional Center - Region VI

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Project Number: 90DP0092
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 16 $1,111,021; FY 17 $1,112,002; FY 18 $1,111,275; FY 19 $1,111,601; FY 20 $1,111,445

Abstract: The goal of the Southwest ADA Regional Center (SWADA) is to maximize the full inclusion and integration of individuals with disabilities so they can fully participate in their communities through the ADA. SWADA serves federal Region VI and conducts activities to address barriers for people with disabilities in employment, access to state and local government programs and services, and access to places of public accommodations. SWADA provides several services to benefit individuals and entities with rights and responsibilities under the ADA (ADA stakeholders): high impact training with experienced, qualified, and well-trained trainers; dissemination of information about the ADA utilizing methods ranging from print mail to the latest popular social media tools and networking websites to reach the broadest audiences; timely, relevant, accurate technical assistance that responds to the needs of the requesting individuals and entities; innovative research into access barriers experienced by people with disabilities and improving the capacity of entities to serve them; and collaboration with affiliates and the ADA Network Services to efficiently deliver these services nationwide. SWADA improves the knowledge of stakeholders on their rights and responsibilities under the ADA and improves the capacity of service providers to provide ADA trainings, technical assistance, and dissemination to their consumers. ADA stakeholders utilize the knowledge and capacity to address barriers and improve access for people with disabilities. SWADA Center products include: Training modules for businesses, health care providers, and corrections; trainings to various targeted entities; webinars on emerging legal and disability issues; publications; protocol for referring cancer survivors to vocational rehabilitation or ADA National Network services; and best practices for removing barriers to service animal users. This center serves Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.
Great Plains ADA National Network Regional Center - Region VII

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Project Number: 90DP0093
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 16 $1,000,000; FY 17 $1,000,000; FY 18 $1,000,000; FY 19 $1,000,000; FY 20 $1,000,000

Abstract: The Great Plains ADA Regional Center continues to expand services as the ADA National Network Regional Center for federal Region VII, serving Kansas, Iowa, Missouri, and Nebraska. The mission of the Center is to ensure the full opportunity for participation of persons with disabilities and their families in all facets of American life by providing professional-quality services to Americans with Disabilities Act (ADA) stakeholders. Target populations include all entities and individuals with disability-related issues that have rights and responsibilities under the ADA. The Great Plains ADA Regional Center: (1) implements a sustained program of outreach, training, technical assistance, information dissemination, and capacity building (collectively ADA Network Services); (2) provides information to ADA stakeholders on both longstanding ADA requirements as well as the ADA Amendments Act, the 2010 Standards for Accessible Design, and subsequent judicial/regulatory changes; (3) identifies best practices through collaborative initiatives addressing emerging critical issues such as Olmstead implementation, emergency preparedness, and the professionalization of ADA Coordinators; (4) sponsors the National ADA Symposium, which offers a comprehensive matrix of training opportunities presented by nationally recognized authorities and experts in their fields; and (5) partners with the ADA Network Knowledge Translation Center and other ADA Regional Centers to develop, provide, and distribute ADA training and technical assistance materials and other informational products and services. Through a collaborative structure of partnerships with local, regional, and national organizations, the Center provides core service delivery of ADA knowledge to the stakeholders of Region VII.
Rocky Mountain ADA National Network Regional Center - Region VIII

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**Project Number:** 90DP0094
**Start Date:** September 30, 2016
**Length:** 60 months

**NIDILRR Officer:** Pimjai Sudsawad, ScD

**NIDILRR Funding:** FY 16 $1,000,000; FY 17 $1,000,000; FY 18 $1,000,000; FY 19 $1,000,000; FY 20 $1,000,000

**Abstract:** The Rocky Mountain ADA Regional Center provides information, guidance, and training on the Americans with Disabilities Act (ADA) tailored to meet the needs of individuals and organizations in Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. The Center presents a comprehensive program of training, dissemination, and technical assistance activities designed to move toward full implementation of the ADA throughout the region. The Center continues its program of technical assistance based on the concept of mass customization to address the specific needs of stakeholders across the region. The training program takes advantage of technology and customized curricula to ensure maximum impact of training activities. Dissemination efforts provide tailored materials that offer actionable information for the specific needs of stakeholders. The Center also has an extensive plan of evaluation and ongoing regional needs assessment research to maximize the efficiency and effectiveness of the ADA Network services.
ADA National Network
Region IX - AZ, CA, HI, NV, and the Pacific Basin

Pacific ADA National Network Regional Center - Region IX

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Project Number: 90DP0081
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 16 $1,246,000; FY 17 $1,246,000; FY 18 $1,246,000; FY 19 $1,246,000; FY 20 $1,246,000

Abstract: The Pacific ADA Regional Center implements an integrated, multi-dimensional initiative that facilitates enhanced awareness, understanding, compliance, and implementation of the Americans with Disabilities Act (ADA) in all states and territories within the region. The program places special emphasis on collaborations by expanding the existing Pacific Region ADA Network of affiliate and local community organizations to maximize meeting the grassroots-level needs of ADA stakeholders (such as employers, businesses, state and local governments, and individuals with disabilities), as well as the development of resources in the emerging areas of accessible information technology and emergency preparedness. Pacific ADA Center goals include: (1) improving understanding regarding rights and responsibilities and implementation of the ADA, the ADA Amendments Act of 2008 (ADAAA), and corresponding regulations for Title I from the US Equal Employment Opportunity Commission, the regulations for Title II and III of the ADA published by the US Department of Justice in 2010, as well as emerging compliance issues in information technologies and emergency preparedness, and continuing developments in ADA case law, policy, and implementation through comprehensive training, dissemination, and technical assistance activities to individuals with rights and responsibilities under the ADA; (2) improving understanding of ADA stakeholders’ needs for, and receipt of, Region IX services over time through data entry and analysis of Center activities in conjunction with the ADA National Network made up of the ADA Knowledge Translation (KT) Center and other ADA Regional Centers; and (3) enhancing the efficiency and effectiveness of ADA information dissemination, awareness, and referral activities by establishing effective, coordinated, local, regional, and national resource networks, including by partnering with the ADA KT Center and other regional ADA Centers to develop, implement, and evaluate materials, products, trainings, and services that are useful to ADA stakeholders. The Pacific ADA Center conducts a comprehensive evaluation that monitors the quality, scope, and effectiveness of
all Center programs and activities, including a quantitative evaluation program that tracks programmatic outputs related to Center services, and a qualitative evaluation program designed to assess the impacts and outcomes of its work. This center serves Arizona, California, Hawaii, Nevada, and the protectorates in the Pacific Basin.
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Project Number: 90DP0095
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 16 $1,000,000; FY 17 $1,000,000; FY 18 $1,000,000; FY 19 $1,000,000; FY 20 $1,000,000

Abstract: The Northwest ADA Regional Center (NWADA) provides a sustained program of outreach, training, technical assistance, capacity building, information dissemination, and research services and activities. The goals and objectives of this project are: (1) to improve understanding by ADA stakeholders of their rights and responsibilities under the ADA, including addressing established ADA requirements and more recent legislative and regulatory changes, as well as emerging areas of focus; (2) to identify barriers to compliance with the ADA, and to develop and implement innovative approaches for eliminating these barriers; (3) to improve understanding of the ADA stakeholders’ need for and receipt of ADA Network services over time, including services which address emerging issues related to compliance with ADA requirements; and (4) to enhance efficiency and effectiveness of ADA Network Services and delivery. Project research focuses on understanding and addressing health care access issues while engaging a broad representation of recipient and provider health care groups across the states served by the NWADA. This center serves Alaska, Idaho, Oregon, and Washington.
ADA National Network  
Texas

ADA Participation Action Research Consortium

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Project Number: 90DP0026 (Formerly H133A120008)  
Start Date: October 01, 2012  
Length: 60 months  
NIDILRR Officer: Pimjai Sudsawad, ScD  
NIDILRR Funding: FY 12 $613,091; FY 13 $614,007; FY 14 $613,688; FY 15 $613,828; FY 16 $613,651; FY 17 (No-cost extension through 9/29/2018)

Abstract: This project examines what factors are influencing societal participation of citizens with disabilities within and at community and regional levels. The project conducts multiregional strategic gap analyses across three primary participation areas mandated by the ADA: community living, community participation, and work/economic. This includes mining of existing large population and community datasets to inform the benchmarking of key participation disparities and promising practices at state, regional, and community levels also includes collecting new individual data with people who are trying to move out of nursing homes and institutions into the community post-ADA and Olmstead Decision to add their participation experiences and issues, voices that have not been represented in existing ADA and participation research. As a second aim, this consortium of ADA Regional Centers and a network of disability and ADA stakeholders utilizes a participatory Strategic Gap Analysis process to (1) identify key indicators of high priority and high feasibility to collect in communities, (2) create a Community Participation Action Toolkit (CPAT) for assessing these indicators within communities, (3) pilot test this Toolkit within 18 communities across 6 collaborating ADA Center regions, (4) analyze results and translate back to communities in the form of benchmarking reports, and (5) create a toolkit of resources to accompany CPAT for both ADA Centers and community stakeholders to plan initiatives in their communities to reduce disparities and increase full participation. The aim is to create a tool and a systematic process for assessing community participation at the community level that could be shared with communities via the ADA Center collaboration, and formally linked to ADA Center information resources and technical assistance, as well as future participatory research initiatives.
ADA National Network
Texas

Americans with Disabilities Act Participation Action Research Consortium (ADA PARC): Advancing Participation Equity for People with Disabilities

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Project Number: 90DPAD0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 17 $500,000; FY 18 $500,000; FY 19 $500,000; FY 20 $500,000; FY 21 $500,000

Abstract: The ADA Participation Action Research Consortium (ADA PARC) builds and expands upon previous collaborative research which explored how to measure and document participation disparities experienced by people with disabilities. This iteration of the ADA PARC includes expansion of ADA National Network participation from seven to ten regional ADA centers, as well as the ADA Knowledge Translation Center (ADAKT). Activities include creation of an immediate access platform where stakeholders can query participation disparities across thousands of cities such as access to least restrictive community living with supports (CL); levels of community participation and civic engagement and access to resources to participate in communities (CP); and economic, work, and financial equity and resource access. The system generates GIS visual maps, accessible tables, and scorecards to show disparities across levels (national, state, city, community), including comparisons of people with and without disabilities, retroactive trends, and future need projections. The system also links users to ADA and ADA KT Center knowledge translation resources that highlight promising practices, case studies, and information resources to strategize participation disparities. ADA PARC datasets include addition of newly available indicators of civic engagement and financial equity and robust participation disparity/opportunity scorecards and reports across states and cities. ADA PARC activities also include participatory action community town halls to share findings and more effectively target disparities action planning. The consortium also models rigorous disparities analyses with existing and newly identified datasets, examining disparities at community levels in resources and funding related to accessible and affordable housing, transportation, and financial and economic equity.
A stated objective of NIDILRR’s long-range plan is to provide for the training of emerging talent and leadership in research and development. To that end, NIDILRR builds the Nation’s capacity to conduct research and development activities that make positive contributions to the lives of individuals with disabilities across the domains of employment, community living and participation, and health and function. Activities funded in this area include fellowship and advanced rehabilitation research training programs where emerging talent and leadership in research and engineering are developed. These activities include opportunities for individuals with disabilities as well as individuals from minority backgrounds.

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Rehabilitation Research and Training Centers (RRTCs)  
Oklahoma

Langston University Rehabilitation Research and Training Center on  
Research and Capacity Building for Minority Entities

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Project Number: 90RT5024 (Formerly H133B130023)  
Start Date: October 01, 2013  
Length: 60 months  
NIDILRR Officer: Shelley Reeves  
NIDILRR Funding: FY 13 $875,000; FY 14 $875,000; FY 15 $875,000; FY 16 $875,000; FY 17 $875,000

Abstract: This project engages minority entities (MEs) to generate new knowledge leading to improved outcomes for persons from traditionally underserved racial and ethnic populations and communities and to enhance research capacity and infrastructure at minority-serving institutions. The project works with six MEs to address research infrastructure challenges and enhance the research skills of their individual faculty scholars and students. The following themes are addressed through five major studies and numerous capacity-building activities: (1) describe and evaluate an emerging research team mentorship model across six different MEs; (2) examine factors that contribute to disability and rehabilitation research leaders’ career development and success to increase the number of talented researchers available to mentor ME junior investigators; (3) forecast the impact of new US citizen and legal permanent resident populations and trends on state vocational rehabilitation agencies’ (SVRAs) systems capacity to serve immigrants of color with disabilities; (4) describe SVRAs and Veterans Affairs co-service strategies aimed at placing veterans of color with disabilities into employment; (5) examine ME faculty scholars’ personal/intrinsic factors and extrinsic rewards that motivate them to conduct disability and rehabilitation research; and (6) pilot-test an emerging research capacity-building and infrastructure model across six different MEs. This project is developing and implementing a partnership plan that ensures that all activities are predominantly focused on research capacity and infrastructure building. The project plans a state-of-the science conference in the fourth year to discuss the research topics identified and devotes attention to demonstrating how findings are translated to practical applications in research, service initiatives, and policy development for persons of color with disabilities and ME research capacity-building efforts.
Barriers and Unmet Needs for Reproductive Health Care Experienced by Women with Early Onset Mobility Impairments

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Project Number: 90SF0018
Start Date: September 30, 2016
Length: 12 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 16 $80,000; FY 17 (No-cost extension through 2/28/2018)

Abstract: This project utilizes a qualitative study to explore the experiences of women with early onset mobility impairments with reproductive health care, their unmet needs and the impact that inadequate care may have on their health and function, life choices, and role participation. Nearly 25 years after passage of the Americans with Disabilities Act (ADA), people with disabilities still face substantial barriers to adequate and appropriate health care. Women with mobility impairments report that many practices are inaccessible to them and that providers too often see them as asexual, failing to address their needs for preventative screening and discouraging their desire to become pregnant and raise children. Providers’ failure to address their reproductive health care needs can adversely affect women with mobility impairments throughout the life span. This project uses interviews with approximately 32 women with early onset mobility impairments to explore these issues as they affect women throughout the life span.
Fellowships (Distinguished)
New Jersey

Family-Clinician Collaboration to Improve Neglect and Rehabilitation Outcome After Stroke

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Project Number: 90SFGE0001
Start Date: September 30, 2017
Length: 12 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 17 $80,000

Abstract: This project uses qualitative and quantitative methods to assess the effectiveness of a Family-Clinician Collaboration (FCC) intervention to address special neglect following stroke. Spatial neglect (SN) results from damage of the attention network in the brain and is a major hidden disability after stroke. SN symptoms and adverse consequences may continue to impact people’s lives years post stroke. Approximately 50% of stroke survivors in the inpatient rehabilitation facility (IRF) setting have SN, especially in patients with unilateral brain damage. SN impedes rehabilitation outcome, prolongs hospitalization, slows functional improvement, lowers the home return rate, and increases risks of safety concerns and risks of stress and burden among family caregivers. To address this problem and improve patients and family members’ well-being, the FCC facilitates the amelioration of the SN syndrome, improves functional outcome, empowers family members as a care partner during inpatient rehabilitation, reduces caregiver stress, and increases the home return rate at IRF discharge. The FCC intervention includes: (1) frequent and effective family-clinician communications; (2) setting patient-specific, attainable goals through a three-way communication among patients, family members, and clinicians while addressing patients’ evolving health and function status with frequent reviews of the goals and care plan; (3) educating family members about the concept of SN using concrete examples, and helping family members obtain SN-specific caregiving skills and management strategies that family members can perform with their loved ones; and (4) using a treatment log to encourage structured family-mediated SN treatments outside the regular therapy sessions.
Development of a Pneumatic Power Assist Wheelchair (PneuPAW)

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Principal Investigator: Hongwu Wang, PhD
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Project Number: 90SF0019
Start Date: September 30, 2016
Length: 12 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 16 $80,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: The goal of this project is to develop a novel pneumatically powered pushrim activated power assist wheelchair (PneuPAW) and investigate its compliance with ANSI/RESNA wheelchair standards, and usability via focus group study. Independent mobility is critically important for many aspects of life. Whether performing activities of daily living, attending school, or sustaining a vocation, mobility limitations can have a significant negative impact on the ability to succeed and quality of life. The wheelchair is one of, if not the most, common and effective assistive device available for people with significant mobility impairments. Pushrim-activated power-assist wheelchairs (PAPAWs) are alternatives to manual and electric powered wheelchairs for individuals with spinal cord injury or dysfunction who are at risk for complications such as upper limb injury and fatigue when using a manual wheelchair. The PneuPAW in production is expected to cost less than the current commercial devices (e.g., e-Motion and Xtender) due to the simplified design without batteries and electronics. The PneuPAW will have a market advantage over current PAPAWs due to its lighter weight, improved versatility, and equivalent or better performance. The new technology could stimulate innovation and results in lighter weight, more reliable, and environmentally-friendly power assist wheelchairs. The outcomes of this research offer a helpful and medically necessary alternative that can prevent upper limb disorders common to long-term manual wheelchair propulsion and promote or maintain health and improve mobility. PneuPAW requires less effort to propel, especially in environments such as inclines, uneven terrain, and carpeted surfaces as compared to manual wheelchairs. When compared to standard power wheelchairs, PneuPAW is lighter and easier to transport which could make it possible for individual with disabilities go to work since lack of transportation is reported as one of the barriers for employment of people with disabilities. By demonstrating feasibility and utility of PneuPAW, this project may result in an entirely new type of drive system for wheelchair technology that has weight and usability advantages over electric systems.
Fellowships (Merit)
Florida

Vagal Nerve Stimulation to Address the Autonomic and Inflammatory State After Chronic Spinal Cord Injury

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Project Number: 90SFGE0006
Start Date: September 30, 2017
Length: 12 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 17 $70,000

Abstract: This project addresses dysfunction in the autonomic nervous and immune systems, a serious medical complication sustained by a large segment of the spinal cord injury population that has, thus far, evaded effective treatment. This interrelated dysfunction can exacerbate persistent inflammation sourced from secondary conditions (e.g., urinary and pulmonary tract infections), and likely contributes to the elevated cardiovascular disease observed in this population. Moreover, autonomic dysfunction can lead to autonomic dysreflexia (AD), a serious, and potentially life threatening medical complication that occurs in persons with injuries at or above the sixth thoracic vertebra. This project examines neuromodulation of the autonomic nervous system, evaluating the use of vagal nerve stimulation (VNS) to modulate autonomic and inflammatory responses after injury. This novel use of VNS could improve health outcomes and quality of life after SCI without the risks and side effects imposed by current treatment.
Patient-Centered Pressure Ulcer Outcome Preferences: 
A Mixed-Methods Study

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Project Number: 90SFGE0002
Start Date: September 30, 2017
Length: 12 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 17 $70,000

Abstract: New or worsening of pressure ulcers (PUs) has been recognized as a quality measure in nursing homes by the Centers of Medicare and Medicaid Services; because inadequate interventions may place older adults at risk to develop skin injury. Optimal PU prevention and management utilizes an interdisciplinary approach by engaging the patients and caregivers early in the process. Many best practices have been developed to prevent and manage the occurrence of PUs, but it is unknown if older adults and their caregivers have the knowledge to implement these practices. The first phase of this mixed methods study aims to examine patient characteristics (e.g., socio-demographic, clinical comorbidities) and PU interventions (ulcer and skin treatments) among older adults with new or worsened PUs vs. no new or worsened ulcers in skilled nursing facilities (SNFs) using the MDS 3.0 dataset. The second phase aims to understand the older adult and caregiver knowledge of PU risk factors, preventive strategies, and resource needs and barriers to manage PUs in skilled nursing facilities.
Promoting Community-Based Physical Activity Early Post-Stroke: An Adaptation of the 14-Weeks to a Healthier You Program

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Project Number: 90SF0010
Start Date: September 30, 2015
Length: 12 months

NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 15 $70,000; FY 16 (No-cost extension through 9/29/2017); FY 17 (No-cost extension through 9/29/2018)

Abstract: This project develops a patient-centered program that promotes the maintenance of healthy levels of community-based physical activity immediately after discharge from acute rehabilitation following stroke. Although mortality due to stroke is decreasing, stroke continues to be a leading cause of serious long-term disability. Stroke commonly causes mobility disabilities that impair daily physical activity and, in turn, physical inactivity is associated with a greater risk for stroke recurrence and the development of cardiovascular comorbidities. While rehabilitation can reduce disability caused by stroke, functional recovery is often halted once rehabilitation services stop. Hence, a particularly critical period is that which immediately follows rehabilitation discharge, in which individuals post-stroke must engage in sustained physical activity and long-term healthy behaviors in order to continue with their functional recovery and prevent stroke-related comorbidities. The specific aims of this project are to: (1) identify post-stroke facilitators and barriers to community-based physical activity by means of questionnaires and focus groups and (2) adapt the physical activity program, “14-Weeks to a Healthier You”, to enhance its patient-centeredness and address the needs of individuals post-stroke. The resulting stroke-adapted physical activity program could be used as a resource to bridge the end of rehabilitation with community-based physical activity.
In Vivo Three-Dimensional Changes in Muscle Geometry and Architecture After Stroke

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Principal Investigator: Jongsang Son, PhD
Public Contact: 312/375-2172

Project Number: 90SFGE0005
Start Date: September 30, 2017
Length: 12 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 17 $70,000

Abstract: This project addresses a substantial knowledge gap in the understanding of neural and muscular mechanisms of muscle weakness after stroke by investigating evidence regarding how muscle architectural changes could contribute to muscle weakness in stroke survivors, and suggesting clinical implications for the development of rehabilitation strategies. Despite substantial rehabilitation efforts, most stroke survivors still experience severe motor impairments, especially muscle weakness. This is one of the most common motor impairments after stroke, resulting limited activities of daily living, including walking. To address these issues, this project identifies the changes in muscle architecture in both impaired and less impaired medial gastrocnemius (MG) muscles, and uses 3D reconstruction of the MG muscles to evaluate how the altered architectures contribute to changes in 3D muscle shape during submaximal isometric contraction. This project also investigates muscle architectural constraints by determining the relationship between gear ratio (i.e., variable to characterize dynamic changes in fascicle shortening and rotation) and muscle material properties (i.e., shear wave velocity).
Fellowships (Merit)
New Jersey

Self-Generation of Prospective Memory in TBI

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Principal Investigator: Erica Weber
Public Contact: 617/645-3678

Project Number: 90SF0015
Start Date: September 30, 2016
Length: 12 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 16 $70,000; FY 17 (No-cost extension through 9/29/2018)
Abstract: This project evaluates the efficacy of self-generation to improve prospective memory (PM) in individuals with traumatic brain injury (TBI). PM is the ability to remember to perform an intended action at a specific point in the future (e.g., remembering to take prescribed medications on time). There is presently a lack of empirically-validated, theory-driven techniques to remediate PM deficits in TBI. One novel and potentially impactful approach to improving PM is self-generation, a process by which the individual must produce the material to be remembered. This project uses two approaches of increasing ecological validity (i.e., laboratory-based and naturalistic PM paradigms; translational “bench-to-bedside” approach). Additionally, this study explores relationships of self-generation PM benefit with relevant participant characteristics (e.g., neurocognitive performance, demographics, TBI severity) to clarify how and for whom this mechanism is most effective. These study aims are evaluated in 40 individuals with history of moderate-to-severe TBI, in the context of a larger neuropsychology and functional test battery. Results from this study are expected to directly inform future development of cognitive rehabilitation protocols in this population that will enhance daily functioning in those with disabilities.
Processing Speed Deficits in Multiple Sclerosis: Exploring the Complex Sensorial Cognitive Motor Interaction

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Principal Investigator: Silvana Lopes Costa, PhD
Public Contact: 973/204-1342

Project Number: 90SF0012
Start Date: September 30, 2015
Length: 12 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 15 $70,000; FY 16 (No-cost extension through 6/30/2017); FY 17 (No-cost extension through 6/30/2018)

Abstract: This project examines the impact of sensorial, cognitive, and motor impairments on information processing speed (IPS) in individuals with multiple sclerosis (MS). Despite the prevalence and impact of sensorial, cognitive, and motor impairments in MS, the interactions between the three and their impact on IPS is poorly understood. This is critical given that in order to process information one needs to execute a series of basic processing steps that can be individually vulnerable to brain pathology. This project: (1) assesses the integrity of each of three functions (sensorial, cognitive, and motor) essential to process information efficiently (both accurately and temporally); examines the interaction between sensorial speed (temporal dynamics of visual processing), cognitive speed (attention, learning, and working memory), and motor speed (ocular-motor function and speech rate) on the execution of cognitive tasks often used in clinical and research settings as MS cognitive diagnostic tests (e.g. Symbol Digit Modalities Test); and tests the impact of deficits in these three information processing speed processes (sensorial, cognitive, and motor speed) on quality of life. The goal is to provide researchers and clinicians with more fine-graded diagnostic instruments that will most effectively identify IPS deficits in MS, with the potential to be extended to other neurological disorders. In addition, the results of this study will allow researchers to focus rehabilitation efforts on the source of the deficit.
Motivational Influences on Cognitive Fatigue in Individuals with Traumatic Brain Injury

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Principal Investigator: Ekaterina Dobryakova, PhD
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Project Number: 90SF0009
Start Date: September 30, 2015
Length: 12 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 15 $70,000; FY 16 (No-cost extension through 9/29/2017); FY 17 (No-cost extension through 9/29/2018)

Abstract: This goal of this project is to identify whether motivation is a factor that impacts cognitive fatigue in individuals with traumatic brain injury (TBI) and if it can lead to the development of effective interventions that reduce cognitive fatigue and improve the quality of life in those with TBI. It has been suggested that cognitive fatigue is due to a disruption of the functioning of the fronto-striatal network, leading to an effort-reward imbalance. The striatum and the ventromedial prefrontal cortex play a vital role in effort calculation and reward valuation. This study investigates whether rewards associated with performing a task can modulate the expression of cognitive fatigue in individuals with TBI. Participants with and without TBI undergo functional MRI while performing a task that includes a reward and a no reward condition. During the reward condition, participants have a chance to receive a monetary reward, but not during the no reward condition, with fatigue ratings acquired at intervals during the scan. The study also examines functional and structural connectivity of the network to assess whether fatigue levels are related to the strength of functional and/or structural connectivity. Results are used to develop an intervention that involves self-motivation as a tool to cope with cognitive fatigue.
A Cultural Family Intervention After Brain Injury (CFIaBI) for African Americans

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Principal Investigator: Kelli Williams Gary, PhD
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Project Number: 90SF0014
Start Date: September 30, 2016
Length: 12 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 16 $70,000; FY 17 (No-cost extension through 9/29/2018)

Abstract: The goal of this study is to quantitively identify and qualitatively describe barriers and facilitators that are culturally-based and that interfere with and enhance community integration (CI) and emotional well-being after a traumatic brain injury (TBI), resulting in the development of a cultural community-based TBI intervention for African-American families. Theoretical concepts from the Socio-Economic Model and input from a community advisory board provide the skeletal framework for development of the intervention. The project conducts mixed methods studies to determine content for a cultural family intervention that improves CI for African-Americans with TBI while also increasing emotional well-being for their caregivers, resulting in improved quality of life for both groups. Twelve African-American family dyads of individuals with TBI and their caregivers provide salient information for topic areas and input on content. Once developed, the intervention is tested for feasibility and effectiveness.
Fellowships (Merit)
Washington

After Early Intervention: Young People’s Vocational Trajectories Following Discharge from Specialized Early Psychosis Services

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Principal Investigator: Genevra Jones, PhD
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Project Number: 90SFGE0004
Start Date: September 30, 2017
Length: 12 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 17 $70,000

Abstract: This project is a mixed method study of the experiences and vocational trajectories of young adult consumers discharged from specialized community-based early intervention in psychosis (EIP) services. The goal of this project is to improve the longer-term vocational outcomes of young adults with first episode psychosis through increased understanding of their experiences in the early years following EIP program discharge. The objectives are to: (1) characterize young people’s vocational trajectories following discharge; (2) explore the relationship between these outcomes and past EIP service utilization, background risk factors, and participant characteristics at EIP service entry; and (3) solicit young people’s own views on supports and/or interventions that would assist with vocational achievement. Anticipated outcomes are a better understanding of what happens to young adult consumers following discharge from EIP services, with a focus on vocational functioning; and actionable insights into barriers and needs and possible interventions and support that would address these barriers/needs.
**Advanced Rehabilitation Research Training Projects (ARRTs)**

**California**

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**Advanced Rehabilitation Research Training in Neuromuscular and Neurodevelopmental Disorders**

Regents of the University of California at Davis  
Department of Physical Medicine and Rehabilitation  
One Shields Avenue  
Davis, CA 95616-5270  
www.ucdmc.ucdavis.edu/pmr/education/fellowship.html

**Principal Investigator:** Craig M. McDonald, MD 916/734-2923  
**Public Contact:** Patricia Settje, Education Coordinator 916/734-5292; Fax: 916/34-7838

**Project Number:** 90AR5030  
**Start Date:** September 30, 2016  
**Length:** 60 months  
**NIDILRR Officer:** Theresa San Agustin, MD  
**NIDILRR Funding:** FY 16 $150,000; FY 17 $150,000; FY 18 $150,000; FY 19 $150,000; FY 20 $150,000

**Abstract:** The Advanced Rehabilitation Research Training at UC Davis (ARRT) provides core research methodology training, advanced research training, research experience, mentorship, and career development support for clinicians, allied health professionals, and post-doctoral students committed to developing productive careers in rehabilitation research. The aim of the ARRT is to produce rigorously-trained, extramurally-competitive, and scientifically-productive independent investigators or physician-scientists who improve the health outcomes, participation, and quality of life of individuals with disabilities. Over the course of five years, this ARRT trains 10 postdoctoral or physician trainees in a two-year comprehensive program to develop specialized and multidisciplinary research skills. The focus of the research training is a mentored period of hypothesis-driven clinical research in areas related to the rehabilitation of individuals with neuromuscular diseases or neurodevelopmental disorders. The training provides core research competency in the following areas: (1) rehabilitation concepts and research methodology, (2) clinical epidemiology and study design, (3) methods in clinical research, (4) strategies for writing grants and publications, (5) health informatics, (6) medical statistics, and (7) responsible conduct of research. Advanced coursework and clinical training in neuromuscular diseases and neurodevelopmental disorders completes the didactic coursework. Each trainee is required to develop his/her own research project and grant proposal, author a scientific publication, and present findings at professional meetings and conferences. Rigorous and periodic assessment of the individual trainee’s progress, as well as a periodic evaluation of the training program, ensure the development of successful research training providing a research foundation that cultivates continual mentorship and provides multidisciplinary research opportunities for trainees to engage in productive careers that benefit the lives of individuals with neuromuscular and neurodevelopmental disorders.
Advanced Rehabilitation Research Training Project (ARRT)

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Principal Investigator: William C. Mann, PhD
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Project Number: 90AR5017 (Formerly H133P130009)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 13 $150,000; FY 14 $150,000; FY 15 $150,000; FY 16 $150,000; FY 17 $150,000

Abstract: This project partners with the Veterans Health Administration to train postdoctoral fellows in conducting high-quality, multidisciplinary disability policy research in the area of community living and participation for veterans with disabilities. This project collaborates with a two-site Center of Innovation for Disability and Rehabilitation Research (CINDRR) to bring opportunities to the project fellows through immediate experience in ongoing disability policy-related projects focused on veterans with disabilities. Through the training program, the project (1) increases capacity in the field by providing postdoctoral training in disability policy research to six postdoctoral fellows, including at least one fellow from a minority or underserved population; (2) conducts disability policy research, which results in fellow participation in 10 collaborative research projects, 10 conference presentations, 10 research grant proposals, and 10 peer-reviewed publications; and (3) advances each postdoctoral fellow to the next stage in their research career through career development support. Dissemination activities include a Disability and Rehabilitation Policy Seminar, planned and implemented by fellows, which provides practical experience in establishing a network for research dissemination.
Advanced Rehabilitation Research Training Projects (ARRTs)
Illinois

Advanced Rehabilitation Research Training: Interventions for Neurologic Communication Disorders

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Project Number: 90AR5015 (Formerly H133P120013)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 12 $149,278; FY 13 $148,077; FY 14 $149,900; FY 15 $149,990; FY 16 $149,083; FY 17 (No-cost extension through 9/29/2018)
Abstract: This training program targets individuals with advanced degrees in communication sciences and disorders and related fields, and engages them in rehabilitation research activities designed to address the communication needs of persons with disabilities. The program is structured to provide two years of intensive training to four post-doctoral fellows who are committed to a career in rehabilitation research. Fellows are supervised by a team of multidisciplinary mentors in a comprehensive program that has three major components: (1) didactic training; (2) a mentored clinical experience in stroke, traumatic brain injury (TBI), Parkinson’s disease, or other neurological disorder; and (3) immersion in a research practicum. The research practicum includes participation in ongoing research projects, and development and implementation of an independent research project. The capstone experience is the preparation and submission of a competitive grant application to an extramural funding agency.
Advanced Rehabilitation Research Training Projects (ARRTs)  
Illinois

Northwestern University Advanced Rehabilitation Research Training (ARRT) Program

Northwestern University  
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Center for Rehabilitation Outcomes Research  
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**Principal Investigator:** Allen W. Heinemann, PhD  
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**Project Number:** 90AR5019 (Formerly H133P130013)  
**Start Date:** October 01, 2013  
**Length:** 60 months  
**NIDILRR Officer:** Hugh Berry, EdD  
**NIDILRR Funding:** FY 13 $150,000; FY 14 $150,000; FY 15 $150,000; FY 16 $150,000; FY 17 $150,000

**Abstract:** This project provides an integrated, interdisciplinary, collaborative training program for early-career scholars focusing on rehabilitation-related health services research. Health services faculty work closely with fellows to provide a rigorous and relevant interdisciplinary curriculum, integrating faculty and programs from diverse departments and centers into a unified health services research training program. Through this program, six post-doctoral fellows develop new skills to enhance their previous training in order to pursue a research career in rehabilitation-related health services research. The program includes carefully matched mentors, didactic course work, original research, grant writing, and scientific publishing over a two-year period.
Advanced Rehabilitation Research Training Projects (ARRTs)

Illinois

Advanced Training in Translational and Engaged-Scholarship to Improve Community Living and Participation of People with Disabilities

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Project Number: 90AR5023
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 15 $148,245; FY 16 $148,438; FY 17 $149,550; FY 18 $149,852; FY 19 $149,426

Abstract: This project provides an interdisciplinary postdoctoral training program that actively engages scholars in research designed to improve the community living and participation outcomes for persons with disabilities. The advanced-training program focuses on sub-populations of people with disabilities who are most likely to encounter the greatest number of barriers in community life: minorities, persons with intellectual and developmental disabilities, persons with severe physical disabilities, and older adults with impairments. Moreover, the training program prepares scholars to conduct research that has real world impact (i.e., guiding and changing services, programs, organizations, and policies that influence the lives of persons with disabilities). As such, it emphasizes: (a) translational scholarship that uses empirical knowledge to develop, refine, and test optimal community participation assessment instruments, services, and environmental strategies to support these outcomes; and (b) engaged-scholarship whose premise is that knowledge is generated by researchers, practitioners, and individuals with disabilities and other stakeholders collaborating not only to generate theory and research but also to advance practice. Trainees complete an intensive advanced training program designed to assure acquisition of key skills critical to successful research careers. The training program includes: didactic preparation, close mentoring by researchers, immersion in ongoing research, and field placement in programs or organizations that serve the target populations. The project supports trainees to develop capacity to enter productive research careers that directly improve services, programs, policies, and societal attitudes toward people with disabilities.
Advanced Rehabilitation Research Training Projects (ARRTs)
Illinois

Rehabilitation Sciences for Engineers and Basic Scientists:
An Advanced Training Program

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Principal Investigator: Steven A. Gard, PhD
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Project Number: 90AR5031
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 16 $150,000; FY 17 $150,000; FY 18 $150,000; FY 19 $150,000; FY 20 $150,000

Abstract: The goal of this advanced rehabilitation research training (ARRT) project is to increase the number of postdoctoral engineers/scientists trained to perform research aimed at solving problems of persons with disabilities. This project trains six to eight scientists/engineers in three areas of expertise: Neurologic disorders, musculoskeletal injuries, and prosthetics and orthotics. Targeted technical, scientific, and clinical training are conducted through intensive clinical and scientific instruction and experience provided by the primary, secondary, and/or clinical mentors with relevant clinical/scientific expertise. Postdoctoral trainees are recruited using regional/national advertising in publications, web-advertising, and email list-servers with a strong effort focused on recruiting minority scientists, engineers, and/or individuals with disabilities to participate in the ARRTs training program.
Advanced Rehabilitation Research Training Projects (ARRTs)
Illinois

Northwestern University Policy Research Fellowship

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Principal Investigator: Allen W. Heinemann, PhD; Jane Holl MD; Megan McHugh, PhD; Kathleen Pike, PhD; Harold Pincus, MD; 312/238-2802
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Project Number: 90ARPO0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 17 $150,000; FY 18 $150,000; FY 19 $150,000; FY 20 $150,000; FY 21 $150,000

Abstract: This project trains disability policy researchers to specifically address the critical policy issues facing the increasing numbers of persons with disabilities and older adults aging with and into disability. Four individuals participate in a two-year fellowship, focusing their career on policy issues pertaining to disability, independent living, or rehabilitation. The primary goals of this program are to recruit and train highly qualified trainees in advanced policy research methods, focused on disability, independent living, or rehabilitation policy; provide trainees with an immersive, residential experience in the application of disability policy research; provide trainees with robust mentorship for a disability policy research project; and continuously monitor and improve the effectiveness of the fellowship program. The objectives for each post-doctoral trainee are to develop competency and independence in disability relevant policy research methods; develop effective presentation and dissemination skills for key policy audiences; advance knowledge in a disability-related policy area by designing and executing a policy research project; and be prepared to become a positive change agent in disability policy, helping to shape a healthy and productive future for Americans with disabilities and chronic health conditions.
Advanced Rehabilitation Research Training Projects (ARRTs)
Maryland

University of Maryland Advanced Neuromotor Rehabilitation Research Training (UMANRRT)

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Principal Investigator: Mark W. Rogers, PhD, PT 410/706-0841
Public Contact: Janice Abarro 410/706-0856

Project Number: 90AR5028
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 16 $150,000; FY 17 $150,000; FY 18 $150,000; FY 19 $150,000; FY 20 $150,000

Abstract: The University of Maryland Advanced Neuromotor Rehabilitation Training (UMANRRT) program trains post-doctoral fellows in interdisciplinary rehabilitation research with a primary focus on neuromuscular disorders including Parkinson’s disease and stroke. The UMANRRT program targets doctorally prepared professionals with backgrounds in bioengineering, physical therapy, occupational therapy, and the movement sciences. The overall goal of the UMANRRT program is training post-doctoral fellows to further develop and refine the skills needed to conduct high-quality, independent, interdisciplinary, funded research in the rehabilitation of clinical populations with neuromotor disorders. Specific project objectives include: (1) recruiting and selecting highly qualified candidates to become UMANRRT post-doctoral fellows; (2) providing a scientifically-based, multidisciplinary training program that includes collaboration among affiliated institutions; (3) providing mentoring and collaborative opportunities with established researchers at University of Maryland at Baltimore and affiliated institutions; (4) providing fellows with interdisciplinary neuromotor rehabilitation research leadership experience by involving them in research projects where at least one is led by the fellow; (5) providing opportunities for participation in presentations, publications, and grant development; and (6) providing opportunities to develop teaching and mentoring skills for transitioning to a junior faculty role.
Advanced Rehabilitation Research Training Projects (ARRTs)
Massachusetts

Advanced Research Training Program in Employment and Vocational Rehabilitation of Persons with Psychiatric Disabilities

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Center for Psychiatric Rehabilitation
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Principal Investigator: Zlatka Russinova, PhD; E. Sally Rogers, ScD
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Project Number: 90AR5018 (Formerly H133P130011)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Leslie J. Caplan, PhD
NIDILRR Funding: FY 13 $149,979; FY 14 $149,968; FY 15 $149,968; FY 16 $149,960; FY 17 $149,908

Abstract: This advanced rehabilitation research training project (ARRT) trains six post-doctoral fellows through a two-year training program in the area of psychiatric vocational rehabilitation. The training program is implemented in two consecutive cycles with three fellows in residence and is designed to provide broad-based, didactic training in psychiatric vocational rehabilitation and employment research, which is complemented with an intensive research practicum that combines mentored and independent research in one of the following specializations of employment-related research: vocational recovery research, interventional research, vocational rehabilitation policy and systems research, or transition-age and young adults. Throughout the program, the fellows are mentored, actively and intensely, by accomplished scholars, through a variety of modalities which allow them to acquire competencies in the following areas: research design/methodology; advanced statistics and instrument development; psychiatric vocational rehabilitation and employment research; participatory research methods and peer employment research; conduct of applied research; and grant and professional writing.
Advanced Rehabilitation Research Training Projects (ARRTs)  
Massachusetts

Advanced Rehabilitation Research Training Program on  
Health and Functioning of People with Disabilities

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Principal Investigator: Monika Mitra, PhD  
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Project Number: 90AR5024  
Start Date: September 30, 2015  
Length: 60 months  
NIDILRR Officer: Stephen Bauer, PhD  
NIDILRR Funding: FY 15 $149,998; FY 16 $149,996; FY 17 $150,000; FY 18 $149,999; FY 19 $149,999

Abstract: This project trains six postdoctoral fellows, recruited from racial, ethnic, and/or disability minority backgrounds, who are interested in research careers. The overarching focus of this program is racial, ethnic, and disability-based health disparities among children and adults with disabilities. Each postdoctoral fellow receives training driven by an individual development plan, modeled on that created by the National Science Foundation. Project participants conduct a self-assessment, and, with the guidance of a primary mentor from Brandeis University and two secondary mentors from institutions in greater Boston, develop an individual development plan. They then embark on a training and professional development program that includes: (1) biweekly meetings with the primary mentor; (2) applied research experience on a funded research project of the primary mentor; (3) support and guidance from quarterly meetings with two secondary mentors; (4) coursework in advanced research methods, health services research, and disability from any of the 11 Boston Consortium universities (including Boston University, MIT, Boston College, Tufts, and Brandeis University); (5) participation in a biweekly postdoc seminar which will address fellows’ professional development; (6) mentored research on independent projects of the fellows’ choosing; and (7) advice, guidance, and community learning activities from the disability community represented by a Community Advisory Board. Through the course of this program, postdoctoral fellows author or coauthor six papers for peer-reviewed journal articles; attend at least four national scientific conferences; develop and submit one extramural grant proposal as principal investigator; and present their research findings in the disability community four times. Project mentors are drawn from the fields of disability studies, education, medicine, occupational therapy, public health, social policy, social work, and sociology. The project is overseen by a Community Advisory Board of individuals involved in the disability field in different ways, including self-advocates, clinicians, nonprofit executives, and community leaders.
Advanced Rehabilitation Research Training Projects (ARRTs)
Michigan

The University of Michigan Advanced Rehabilitation Research Training Program in Community Living and Participation

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dgtate@umich.edu
pmr.med.umich.edu/education-training/fellowships/
advanced-rehabilitation-research-training-program

Principal Investigator: Claire Z. Kalpakjian, PhD; Denise G. Tate, PhD
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Project Number: 90AR5020 (Formerly H133P140005)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 14 $150,000; FY 15 $150,000; FY 16 $150,000; FY 17 $150,000; FY 18 $150,000

Abstract: The ARRTP-CP trains six postdoctoral fellows and up to five physician resident trainees to advance the rehabilitation field in community living and participation, promoted by embracing community-based research approaches. This training program is guided by the principles of competency-based education and assessment to develop individualized training plans and the achievement of core competencies. The overall objectives of the ARRTP-CP are to: (1) provide research training in community living and participation in persons with disabilities; (2) orient training toward advancement of rehabilitation science by promoting community-based research that enables the development of sound disability policy; (3) prepare researchers to conduct studies in community-based settings, including home, school, and other environments; (4) foster advanced research skills that result in successful research proposals addressing issues relevant to persons with disabilities; and (5) build productive partnerships and collaborations that lead to successful careers to address the critical shortage of qualified rehabilitation scientists. Training in research methods focuses on diverse community-based research approaches designed to capture community living and environmental, social, and situational contextual factors. A core curriculum complements hands-on experience, and includes academic courses, seminars, and workshops to train fellows in qualitative methods (i.e. community-based participatory research - CBPR) supported by quantitative ones. Opportunities to complete a CBPR project, attend presentations and lectures at partner institutions and national conferences, and engage in networking round out the training program. This program is a collaborative effort among academic researchers at the University of Michigan’s School of Public Health, Institute of Social Research, and the Department of Physical Medicine and Rehabilitation and their partners at community-based organizations.
**Advanced Rehabilitation Research Training Projects (ARRTs)**

**New Jersey**

**Advanced Rehabilitation Research Training in Rehabilitation Neuroscience and Engineering**

Rutgers, The State University of New Jersey  
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**Principal Investigator:** Guang Yue, PhD  
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**Project Number:** 90ARHF0002  
**Start Date:** September 30, 2017  
**Length:** 60 months  
**NIDILRR Officer:** Dawn Carlson, PhD, MPH  
**NIDILRR Funding:** FY 17 $147,060; FY 18 $147,458; FY 19 $147,451; FY 20 $147,437; FY 21 $147,758

**Abstract:** This project trains doctoral-level researchers committed to advancing the field of rehabilitation that will improve overall health and function of individuals with neuromuscular and musculoskeletal diseases and injuries, specifically in the domains of sensorimotor neuroscience, rehabilitation robotics and engineering, and neuroimaging. The program is designed to be multidisciplinary, and solicits and enrolls postdoctoral fellows from rehabilitation-related fields. These fellows receive research training that will facilitate their pursuit of a career in rehabilitation research. Fellows complete a minimum of one independent research project, participate on a minimum of two ongoing collaborative research projects, present results to professional and consumer groups, submit findings for publication in peer-reviewed journals, and participate in writing extramural grant proposals, including their own grant applications.
Advanced Rehabilitation Research Training Projects (ARRTs)
New York

Rusk Advanced Rehabilitation Research Training
Postdoctoral Fellowship

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rusk.med.nyu.edu/research/psychology-
postdoctoral-fellowship-rehabilitation-research

Principal Investigator: Joseph F. Rath, PhD
Public Contact: 212/263-6183

Project Number: 90ARHF0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 17 $145,089; FY 18 $147,970; FY 19 $149,891; FY 20 $149,925; FY 21 $149,841

Abstract: This project trains psychology postdoctoral fellows in skills necessary to become independent investigators in clinical rehabilitation research. Doctoral-level professionals from appropriate fields of study (e.g., rehabilitation, clinical, counseling, and health psychology and neuropsychology) receive training through mentored independent research projects (IRPs) and ongoing multidisciplinary collaborative research projects. In addition to expanding their research expertise, fellows increase their knowledge of participatory action research (PAR) through collaborations with consumer disability advocacy groups, PAR-focused seminars, and/or partnership with a consumer whose disability is the focus of the fellow’s IRP. By completion of training, fellows are expected to complete a minimum of one IRP, participate on a minimum of one ongoing collaborative research project, present research results to professional and consumer groups and/or submit findings for publication in peer-reviewed journals, and participate in writing extramural grant proposals, including their own grant applications.
Advanced Rehabilitation Research Training Project at the Langston University Rehabilitation Research and Training Center (LU-RRTC) on Research and Capacity Building for Minority Entities

Langston University
Department of Rehabilitation Counseling and Disability Studies
LU-RRTC
6700 North Martin Luther King Avenue
Oklahoma City, OK 73111
clmoore@langston.edu
www.langston.edu/capacitybuilding-rrtc

Principal Investigator: Corey L. Moore, RhD
Public Contact: 405/530-7530; Fax: 405/962-1638

Project Number: 90AR5029
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 16 $150,000; FY 17 $150,000; FY 18 $150,000; FY 19 $150,000; FY 20 $150,000

Abstract: The goal of this program is to improve the capacity of minority-serving institutions (MSI) to develop and support disability and rehabilitation training pipeline infrastructure that can facilitate the development of talent and produce qualified investigators of color who can lead and participate in research and development aimed at improving the employment status of individuals with disabilities from traditionally underserved racial and ethnic populations. To this end, the ARRT objectives are to: (1) implement a recruitment strategy that will attract four to six well-qualified MSI-based fellows, including individuals with disabilities, interested in pursuing research careers in the rehabilitation of individuals with disabilities for advanced research training; (2) provide fellows with a multidisciplinary training program that includes didactic research coursework and classroom instruction offered through alternative technological platforms (including online) that will increase their knowledge of scientific research methodologies, multicultural research best-practices, and solutions-focused translational approaches suitable to the field of rehabilitation; (3) implement mentoring through an interface between fellows and a peer-to-peer multiple mentor approach that consists of a primary mentor and a scientific mentorship panel comprised of context experts, multicultural specialists, methodologists, and a statistician from the LU-RRTC, Institute on Community Inclusion at the University of Massachusetts Boston (an Asian American and Native American Pacific Islander-serving institution), North Carolina Agricultural and Technical State University (an historically Black college/university or HBCU), South Carolina State University (HBCU), and Jackson State University (HBCU); (4) increase fellows’ scientific writing abilities by having them collaborate with researchers on grant writing and preparation of independent research findings for submission to peer-reviewed journals; (5) improve fellows’ presentation abilities to both professionals and consumers; (6) provide fellows with interdisciplinary research experiences; and
(7) involve fellows in consumer-related experiences by providing opportunities to deliver clinical em-
ployment support interventions and/or participate in structured community-based settings with organiza-
tions representing individuals with disabilities such as Oklahoma Department of Rehabilitation Services,
Goodwill Industries of Central Oklahoma, and Oklahoma City Public School District-Department of
Special Education.
Advanced Rehabilitation Research Training Projects (ARRTs)
Pennsylvania

ARRT - Career Advancement for Engineers in the Science of Rehabilitation

University of Pittsburgh
School of Health and Rehabilitation Sciences
Department of Rehabilitation Science and Technology
6425 Penn Avenue, Suite 400
Pittsburgh, PA 15206
dad5@pitt.edu
www.herl.pitt.edu/education/postdocs

Principal Investigator: Dan Ding, PhD
Public Contact: 412/822-3684; Fax: 412/822-3699

Project Number: 90AR5021 (Formerly H133P140012)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 14 $149,991; FY 15 $149,993; FY 16 $150,000; FY 17 $149,966; FY 18 $149,997

Abstract: Career Advancement for Engineers in the Science of Rehabilitation (CAESOR) provides integrated engineering and clinical training for up to seven postdoctoral fellows, fostering a deep understanding of human function and needs, enabling them to design innovative rehabilitation devices, tools, and techniques to help people with disabilities and older adults live more satisfying and productive lives. CAESOR utilizes a rehabilitation research team consisting of a focused cadre of mentors with interdisciplinary expertise in engineering, clinical, and psychosocial disciplines to provide the trainees with a balanced exposure to research, clinical, and academic approaches to rehabilitation and disability issues. The program is specifically designed to give the postdoctoral trainees the skills needed to become independent researchers in rehabilitation engineering. The comprehensive training activities are designed to facilitate the development of skills and competencies in six key areas including technical, person-centered (clinical and psychosocial), research, communication, innovation, and leadership skills. The training program consists of five components, with each component addressing one or more of the six key skills: (1) immersion in a mentored rehabilitation research experience by matching postdoctoral trainees with highly successful research mentors; (2) complementary didactics including core and individualized components that teach and enhance the critical skills necessary for a successful research career (such as grant writing, ethics, and issues in human subject research), and topics that are not usually covered in traditional engineering curricula (such as medical and social aspects of disability, research methods, and statistical analysis); (3) involvement in mentored clinical experience to gain clinical insights into and better understanding of the clinical decision-making process; (4) structured professional development and networking activities; and (5) participation in a community practicum to understand the real user needs and contextual constraints of technology. The capstone experience for the postdoctoral trainees is the submission of an extramural research proposal.
Advanced Rehabilitation Research Training Projects (ARRTs)
Texas

Health and Function: Advanced Rehabilitation Research Training (ARRT) at UTEP

The University of Texas at El Paso
500 West University Avenue
El Paso, TX 79968
asalvatore@utep.edu

Principal Investigator: Anthony P. Salvatore, PhD
Public Contact: 915/747-7265

Project Number: 90AR5016 (Formerly H133P130001)
Start Date: October 01, 2013
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 13 $150,000; FY 14 $150,000; FY 15 $150,000; FY 16 $150,000; FY 17 $150,000

Abstract: This project provides a multidisciplinary, doctoral-level rehabilitation research training in traumatic brain injury (TBI) that teaches six postdoctoral fellows techniques in rehabilitation counseling, speech-language pathology, public health, sports medicines, clinical laboratory sciences, diagnostic imaging, computer science, and kinesiology. The project (1) provides a multidisciplinary training program that emphasizes advanced research methodology, participatory in the initiation and carrying out of advanced research projects; (2) provides a clinical research experience utilizing both group designs and single-subject designs to further develop research skills in the rehabilitation of persons with TBI; (3) provides advanced research experience in a community-based research setting and community outreach to organizations serving individuals with TBI; (4) provides advanced research mentoring and opportunities for scientific collaboration with researchers in Kinesiology Vestibular Lab, Clinical Laboratory Science Lab, Public Health Sciences, Computer Modeling Lab, Sports Medicine Clinic, Concussion Management Research Lab, and the Department of Emergency Medicine at the Texas Tech University Medical School in El Paso; and (5) provides trainees with opportunities to publish findings and present papers in national, regional, local, and university outlets. The project’s training program leads postdoctoral researchers toward receiving the Certificate of Concussion Management.
Advanced Rehabilitation Research Training Projects (ARRTs)
Virginia

Principal Investigator: Jeffrey S. Kreutzer, PhD 804/828-3704
Public Contact: Nancy H. Hsu, PsyD 804/828-0231; Fax: 804/828-2378

Project Number: 90AR5025
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 15 $150,000; FY 16 $150,000; FY 17 $150,000; FY 18 $150,000; FY 19 $150,000

Abstract: This project implements a highly effective advanced rehabilitation research training program (ARRT) for individuals with advanced degrees, committed to a career in rehabilitation research, with a focus on neurobehavioral recovery and intervention. Training and research activities address brain injury and other neurological disorders including Parkinson’s, stroke, and brain tumors. The program trains a diverse group of fellows, including persons with disabilities. Individualized research training plans emphasizing scientific rigor guide fellows’ choices of training activities. Multidisciplinary mentors, didactic experiences, and collaborative and independent research activities provide the foundation for the VCU ARRT program. Mentors include scientists from the fields of rehabilitation medicine, neuropsychology, neurosurgery, and vocational rehabilitation. Core courses on ethics, biostatistics, research design, and grant writing are complemented by graduate courses, seminars, grand rounds, and conferences. All fellows complete and submit a grant application during the second year of their fellowship. The ultimate goal of the VCU ARRT is to benefit rehabilitation practice and outcomes by increasing the number of highly skilled clinical research professionals.
Advanced Rehabilitation Research Training Projects (ARRTs)
Washington

Advanced Training on Outcomes in Rehabilitation Research
(UW-ATORR)

University of Washington
Department of Rehabilitation Medicine
1959 Northeast Pacific Street
Box 356490
Seattle, WA 98195
dagmara@uw.edu
www.uwcorr.washington.edu

Principal Investigator: Dagmar Amtmann, PhD; Kurt Johnson, PhD
Public Contact: 206/543-4741; Fax: 206/685-9224

Project Number: 90AR5013 (Formerly H133P120002)
Start Date: October 01, 2012
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 12 $149,997; FY 13 $147,559; FY 14 $149,999; FY 15 $149,999; FY 16 $149,998; FY 17 (No-cost extension through 9/29/2018)
Abstract: This ARRT program provides unique opportunities for rehabilitation researchers to acquire and apply modern psychometric techniques and for researchers trained in modern psychometric theory to develop expertise in rehabilitation and physical medicine. Postdoctoral trainees receive two years of advanced training that includes: (1) immersion in a mentored rehabilitation research experience, matching postdoctoral trainees with highly successful rehabilitation researchers; and (2) complementary didactics (core and individualized) to support trainee development. The overall goal of this project is to advance research capacity in rehabilitation research by providing researchers with training and mentoring opportunities that facilitate better outcomes measurement in rehabilitation research. Researchers with training in both rehabilitation and outcomes measurement are best positioned to develop, test, and evaluate psychometrically sound and clinically meaningful outcomes, translate research into practice, identify gaps in evidence that most affect people with disabilities, examine the prognostic information available to patients and providers, and examine behaviors, lifestyles, and choices within people’s control that may affect their health outcomes.
Advanced Rehabilitation Research Training Projects (ARRTs)
Washington

Advanced Rehabilitation Research Training in Rehabilitation Research Policy (UW-ARRT-RP)

University of Washington
Department of Rehabilitation Medicine
1959 Northeast Pacific Street
Seattle, WA 98195
imolton@u.washington.edu

Principal Investigator: Ivan Molton, PhD
Public Contact: 206/543-3602

Project Number: 90AR5026
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 15 $79,103; FY 16 $148,677; FY 17 $148,935; FY 18 $149,203; FY 19 $81,242

Abstract: This project implements a five-year Advanced Rehabilitation Research Policy Fellowship (UW-ARRT-RP) for postdoctoral rehabilitation professionals. Through a collaborative partnership between the University of Washington and the Health and Aging Policy Fellows Program, administered by Columbia University, the primary goal is to increase the number of successful independent rehabilitation policy researchers who are prepared to conduct investigations related to healthcare policy in individuals with disabilities across the lifespan, with an emphasis on older adults. The program provides advanced training for four postdoctoral trainees in two phases. The first year immerses fellows in a mentored rehabilitation research experience at UW, matching trainees with researchers in disability and rehabilitation. All trainees complete an individualized research development plan, as well as formal coursework in policy research. In year 2, fellows move into the policy intensive portion of the program, by participating in the residential track of the Health and Aging Policy Fellows Program in Washington, DC, working inside the Federal policymaking and policy-related research process as legislative assistants in Congress, or as professional staff members in executive-branch agencies or policy organizations. Both years of training include core and individualized didactics and coursework, as well as workshops and integrated mentorship. Fellows also complete a mentored policy research project, culminating in a presentation of findings at the end of Year 2. The UW-ARRT-RP also conducts ongoing formal evaluation of all aspects of the program.
Advanced Rehabilitation Research Training Projects (ARRTs)
Washington

Collaborative on Health Reform and Independent Living Fellowship
(CHRIL-F)

Washington State University
Department of Health Policy and Administration
PO Box 1495
Spokane, WA 99210-0001
jjkennedy@wsu.edu

Principal Investigator: James J. Kennedy, PhD
Public Contact: 509/368-6971

Project Number: 90ARCP0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 17 $149,896; FY 18 $149,788; FY 19 $149,896; FY 20 $149,788; FY 21 $149,896

Abstract: The objective of the Collaborative on Health Reform and Independent Living Fellowship (CHRIL-F) is to provide a highly personalized 18-month research training experience to three scholars with disabilities who hold doctorates or similar advanced degrees and are personally committed to understanding and improving health policies and services for all Americans with disabilities. The CHRIL-F complements and extends the work of the Collaborative on Health Reform and Independent Living (CHRIL), a multisite Disability and Rehabilitation Research Project funded by NIDILRR. The fellowship program involves rigorous coursework and supervised research. Each CHRIL-F participant is expected to work with CHRIL investigators on secondary analyses of health survey data, and may also opt to work with other select health scientists at the WSU Spokane campus. Fellows are required to enroll in at least two graduate courses in health policy and/or health services research methods. Fellows also participate in one or more WSU-sponsored workshops on grant writing. By the end of their first 12 months, CHRIL-F participants must prepare at least one research grant proposal, one conference abstract, two journal manuscripts, an academic curriculum vitae, and an individualized plan of research. During the last part of their training period, fellows may choose to spend three to six months at one or more CHRIL affiliate sites, including: Washington, DC (American Association on Health and Disability); Lawrence, KS (Institute for Health and Disability Policy Studies); or Houston, TX (Independent Living Research Utilization) to work on CHRIL research or knowledge translation projects.
Advanced Rehabilitation Research Training Projects (ARRTs)
Wisconsin

Advanced Rehabilitation Research Training in Pediatric Mobility for Physicians and Engineers

Marquette University
Orthopaedic and Rehabilitation Engineering Center
735 North 17th Street
PO Box 1881
Milwaukee, WI 53201-1881
Deborah.Epps@Marquette.edu
www.tech4pod.org/4researchers/training-activities/t1

Principal Investigator: Gerald F. Harris, PhD 414/288-1586
Public Contact: Deborah Epps 414/805-6098; Fax: 414/288-0713

Project Number: 90AR5022 (Formerly H133P140023)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 14 $150,000; FY 15 $150,000; FY 16 $150,000; FY 17 $150,000; FY 18 $150,000

Abstract: This project offers advanced education and training in rehabilitation research to selected engineers and physician researchers in four areas that support opportunities for career-oriented contributions to the field of pediatric mobility: (1) musculoskeletal biomechanics and biomaterials, (2) assistive devices and robotics, (3) foot and ankle mobility, and (4) functional assessment/outcomes measurement. A team of two senior mentors and a physician/surgeon with qualifications specific to each of these research areas support candidates entering the program to enhance their current skills and offer additional, high-level training and experience. The postdoctoral trainees experience a program designed to provide a unique set of capabilities to succeed as a rehabilitation researcher. The program includes three essential elements: didactics, mentored research areas, and collegial and collaborative activities. Fellowship research requirements include the successful submission of an intramural proposal, pilot study completion and refinement, multiple journal article submissions, and submission of extramural proposals. The fellowship experience also includes an ‘away’ rotation at one of several research support laboratories including: the Lawrence Berkeley National Laboratory (CA); the University of California, Berkeley Department of Materials Science and Engineering (CA); the Hospital for Special Surgery Motion Analysis Laboratory (NY); the Thomas Jefferson University School of Health Professions (PA); and the Northwestern University Biodynamics Laboratory (IL). The fellowship also provides an international clinical rotation through videoconference with colleagues in the Motion Analysis Laboratory at ITESM, Chihuahua, Mexico. Optional off-site rotations are also available through facilities in Cali, Columbia and Manila, Philippines.
Grantees
Advocates for Human Potential, Inc.
Sudbury, MA
90IF0098 ..........................................................2-25

Aeon Imaging, LLC
Bloomington, IN
90BISA0004 ..........................................................5-42

Albert Einstein Healthcare Network
Elkins Park, PA
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American Institutes for Research (AIR)
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American Institutes for Research (AIR)
Washington, DC
90DP0082 ..........................................................6-3

Annamaria Norweg, PhD
New York, NY
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Boston University
Boston, MA
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Brandeis University
Waltham, MA
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California State University Los Angeles
Los Angeles, CA
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Carmen E. Capo-Lugo, PhD
Chicago, IL
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Carnegie Mellon University
Pittsburgh, PA
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Case Western Reserve University
Cleveland, OH
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Chemica Technologies
Portland, OR
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Children's Hospital Medical Center
Cincinnati, OH
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Children's Hospital of Philadelphia
Philadelphia, PA
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Colorado State University
Fort Collins, CO
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Cornell University
Ithaca, NY
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Craig Hospital
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Crystal M. Noller, PhD
Miami, FL
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Dicapta Foundation Corporation
Winter Springs, FL
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Duke University
Durham, NC
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Ekaterina Dobryakova
West Orange, NJ
90SF0009 .............................................................. 8-13

Erica Weber
Bloomfield, NJ
90SF0015 .............................................................. 8-11

FTL Labs Corporation
Amherst, MA
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Gallaudet University
Washington, DC
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Genevra Jones, PhD
Everette, WA
90SFGE0004 .............................................................. 8-15

Georgia Institute of Technology
Atlanta, GA
90IF0125 .............................................................. 1-26
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Georgia Tech Research Corporation
Atlanta, GA
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Landover, MD
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Howard University
Washington, DC
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Icahn School of Medicine at Mount Sinai
New York, NY
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Indiana University
Indianapolis, IN
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Innovative Design Labs, Inc.
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Institute for Human Centered Design, Inc.
Boston, MA
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JFK Health Systems
Edison, NJ
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Johns Hopkins University
Baltimore, MD
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Jongsang Son, PhD
Chicago, Il
90SFGE0005 .............................................................. 8-10
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<td><strong>Linda Marie Long-Bellil, PhD, JD</strong></td>
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<td><strong>Medstar National Rehabilitation Hospital</strong></td>
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<td><strong>Meeting the Challenge, Inc.</strong></td>
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New York University School of Medicine
New York, NY
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Northwestern University
Chicago, IL
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NYU Langone Health
New York, NY
90DPTB0010 ...................................................3-60

Ohio Valley Center for Brain Injury Prevention and Rehabilitation
Columbus, OH
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Pathway Accessibility Solutions, Inc.
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90BISA0002 ....................................................5-51

Peii Chen, PhD
West Orange, NJ
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Pison Technology Incorporated
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Rancho Los Amigos National Rehabilitation Center
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