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 maximize the full inclusion and integration into society, employment, independent living, family support, and economic and social self-sufficiency of individuals with disabilities of all ages.

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 (ACL) at the Department of Health and Human Services.

This edition of the NIDILRR Program Directory lists all projects funded by NIDILRR during the 2020 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 2018-2023 Long Range Plan, NIDILRR supports a wide range of research, development, and other related activities aimed at improving outcomes in three major domains of health and function, employment, and community living and participation. NIDILRR also supports research, development, and other related activities in three areas that support outcomes across these domains: technology for access and function; disability statistics; and a nationwide network of technical assistance, training, and research centers to support implementation of the Americans with Disabilities Act (ADA). NIDILRR’s Long-Range Plan for 2018-2023 was published by ACL in January 2019. To download a copy, go to https://acl.gov/sites/default/files/about-acl/2019-01/NIDILRR%20LRP-2018-2023-Final.pdf.

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. The ADA National Network comprises ten ADA regional centers, an ADA collaborative research center, and an ADA Knowledge Translation (ADA KT) Center, funded under this program.
Advanced Rehabilitation Research Training Projects

The Advanced Rehabilitation Research and Training (ARRT) Program increases capacity for high-quality rehabilitation research by supporting grants to institutions to provide advanced research training to individuals with doctorates or similar advanced degrees who have clinical or other relevant experience. Grants are made to institutions to recruit qualified persons, including individuals with disabilities, and to prepare them to conduct independent research related to disability and rehabilitation, with particular attention to research areas that support the implementation and objectives of the Rehabilitation Act and that improve the effectiveness of services authorized under the Act.

This research training may integrate disciplines, teach research methodology, and promote the capacity for disability studies and rehabilitation science. Training projects must operate in interdisciplinary environments and provide training in rigorous scientific methods.

Disability and Rehabilitation Research Projects

The Disability and Rehabilitation Research Projects (DRRP) program funds projects that include a range of activities that include research, development, demonstration, training, knowledge translation, technical assistance, and related activities. These projects may develop methods, procedures, and rehabilitation technology to maximize the full inclusion and integration into society, employment, independent living, family support, and economic and social self-sufficiency of individuals with disabilities, and 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 support to highly qualified individuals, including those who are individuals with disabilities, to conduct original research in the rehabilitation of individuals with disabilities. Only individuals are eligible to be recipients of Fellowships. Any individual who has training and experience that indicate a potential for engaging in scientific research related to rehabilitation and independent living for individuals with disabilities is eligible for assistance under this program. 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 rehabilitation services in those three injury areas. 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, evaluation, and information dissemination.

**Rehabilitation Engineering Research Centers**

The purpose of the Rehabilitation Engineering Research Center (RERC) program is to improve the effectiveness of services authorized under the Rehabilitation Act by conducting advanced engineering research and development of innovative technologies designed to solve particular rehabilitation problems or remove environmental barriers. RERCs also demonstrate and evaluate such technologies, facilitate service delivery systems changes, stimulate the production and distribution of equipment in the private sector, and provide training opportunities to enable individuals (including individuals with disabilities) to become researchers and practitioners of rehabilitation technology.

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 a center focusing on knowledge translation for technology transfer 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.

**Section 21 Program**

The Section 21 program focuses on research capacity building for minority entities, such as Historically Black Colleges and Universities (HBCU) and institutions, serving primarily Hispanic, Asian, and American Indian or Alaska Native students, as well as non-minority entities with an interest in improving understanding about the needs and outcomes of individuals with disabilities from minority populations. Program activities include assisting minority entities with networking that supports enhanced collaboration between minority entities and non-minority entities, and the exchange of expertise and advanced
training across program areas. NIDILRR’s Section 21 program includes grants from across NIDILRR’s other grant funding mechanisms, i.e., Rehabilitation Research and Training Centers, Advanced Rehabilitation Research and Training Centers, Field-Initiated Projects.

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 https://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, 2020. 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

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 into 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)
Illinois

Rehabilitation Research and Training Center (RRTC) on Employment for People with Physical Disabilities

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www.sralab.org/research/labs/rrtc-employment-and-disability

Principal Investigator: Allen W. Heinemann, PhD
Public Contact: 312/238-2802; Fax: 312/238-4572

Project Number: 90RTEM0001
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 18 $875,000; FY 19 $875,000; FY 20 $875,000; FY 21 $875,000; FY 22 $875,000

Abstract: The goal of this project is to promote job retention by persons with physical disabilities. Toward this goal, this center conducts a randomized control trial comparing an evidence-based, telehealth pain self-management intervention, adapted to address risk and protective factors for employment disability, to a waitlist control in adults who are employed; assesses employer-, client-, job-, and environment-related barriers and facilitators of job retention after vocational rehabilitation; evaluates an implementation science approach to employment interventions in people with Parkinson’s disease; and evaluates job accommodation strategies and assistive technology resources for rural and low resource environments. Outcomes include producing empirical evidence to support a telehealth pain self-management program; developing a deeper appreciation of barriers to and facilitators of job retention, and strategies to surmount them; identifying strategies to and interventions that support employment for people with progressive neurological disorders; developing accommodation strategies and assistive technology resources that are suitable for rural and low resource environments; and promoting knowledge translation that enhances employment outcomes for persons with physical disabilities and the professionals who work with them. Project partners include Northwestern University, the University of Washington, the University of Illinois at Chicago, and two regional ADA Centers.
Rehabilitation Research and Training Center on Improving Employment Outcomes for Individuals with Psychiatric Disabilities

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

Project Number: 90RT5029 (Formerly H133B140028)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 14 $499,596; FY 15 $574,991; FY 16 $574,956; FY 17 $574,959; FY 18 $574,965; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 6/30/2021)
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 and testing of Thinking Skills for Work, a tablet application to extend a work-focused cognitive remediation intervention; research to predict employment outcomes with client and program characteristics, work environment, and community characteristics; a randomized clinical trial to evaluate the efficacy of the peer-run Vocational Empowerment Photovoice (VEP) program; development and testing of Opening Doors, a career education and career development project; and a study of the impact of federal and state government policies and practices on employment outcomes for people with psychiatric disabilities. To achieve this goal, this project develops a National Resource Center (NRC) on Employment and Vocational Recovery to provide technical assistance, conduct training, and develop and disseminate resources. Technical assistance is provided to organizations delivering employment and vocational recovery services and to support state-level SAMHSA grantees in providing high-fidelity, evidence-based supported employment. Training includes two programs: Advanced Practitioner and Peer Specialist Skills (APPS): Building Partnerships for Employment and Vocational Recovery Through Distance Learning and Moving Along to Employment: Exposure Training to Inspire Networks of Support. Development and dissemination projects include the National Resource Center on Employment and Vocational Recovery Online and “Let’s Talk Employment”, a family toolkit for educating families about employment and vocational recovery. This project is a collaboration between the Center for Psychiatric Rehabilitation, Westat, and other organizations from around the nation.
Rehabilitation Research and Training Centers (RRTCs)
Massachusetts

Rehabilitation Research and Training Center on Improving Employment Outcomes for Individuals with Psychiatric Disabilities

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

Project Number: 90RTEM0004
Start Date: September 30, 2019
Length: 60 months

NIDILRR Officer: Kirstin Painter, PhD, LCSW

NIDILRR Funding: FY 19 $874,415; FY 20 $874,887; FY 21 $874,846; FY 22 $874,554; FY 23 $874,575

Abstract: This project conducts a coordinated program of research and knowledge translation projects and activities that builds on existing evidence-based supported employment and improves employment outcomes for individuals with psychiatric disabilities. Project objectives include: (1) conducting a qualitative study of the barriers and facilitators to accessing individual placement supports (IPS), (2) creating a typology of provider-generated adaptations to IPS, (3) examining performance-based incentives and their effects on clients and IPS specialists, (4) testing an intervention of self-management strategies for workplace success, (5) developing and testing an innovative metacognitive intervention to improve work outcomes, and (6) testing an integrated career guidance and supported education intervention to improve employment outcomes and income. To achieve these objectives, the National Resource Center (NRC) on Employment and Vocational Recovery provides technical assistance, conducts training, and develops and disseminates resources to increase utilization of research findings. NRC also (1) provides academic and in-service training to help providers and stakeholders improve employment services, (2) tests an innovative approach to benefits counseling, (3) conducts online technical assistance to improve employment services, (4) conducts online dissemination activities, and (5) develops and tests a mobile application to change providers’ low expectations about work, particularly in treatment settings. This project increases awareness and adoption of promising enhancements to IPS, increases knowledge and skill about benefits counseling, increases access to facts and resources about employment, and increases positive attitudes about work. Dissemination and products include training and technical assistance programs, research syntheses, briefs, manualized interventions and curricula, mobile phone applications, and publications and presentations. This project is in partnership with the Center for Psychiatric Rehabilitation at Boston University and its network of collaborators around the nation.

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Rehabilitation Research and Training Centers (RRTCs)
Massachusetts

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: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 14 $499,596; FY 15 $499,593; FY 16 $499,595; FY 17 $499,593; FY 18 $499,593; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)
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- to 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)
Massachusetts

The Learning and Working During the Transition to Adulthood
Rehabilitation Research and Training Center

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Project Number: 90RTEM0005
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 19 $874,991; FY 20 $874,998; FY 21 $874,997; FY 22 $874,995; FY 23 $874,994

Abstract: The Learning and Working During the Transition to Adulthood RRTC (L&W RRTC) develops and shares new knowledge about core concepts, interventions, and policies to greatly improve the transition to employment for youth and young adults (Y&YAs) ages 14 to 30 with serious mental health conditions (SMHC). The Center uses research and knowledge translation to help ensure that policies, programs, and supports for transition-age Y&YAs with SMHC help them build the strong cornerstones that support successful long-term adult work lives. This RRTC conducts a coordinated and comprehensive set of activities that: (1) further the evidence base for interventions that build these capacities, (2) explore factors that contribute to successful transitions to employment in vulnerable subgroups of Y&YAs with SMHC, (3) provide national statistics on how Y&YAs with SMHC and their vulnerable subgroups are faring in education and employment, and (4) explore barriers and facilitators to access that Y&YAs with SMHC have to Workforce Innovations and Opportunity Act-mandated services for students with disabilities and Perkins Act-mandated Career and Technical Education. Through state of the science knowledge translation processes, the L&W RRTC speeds capacity-building for service providers, the movement of findings into practice and policy, and prepares the future research workforce in this area. The L&W RRTC’s activities are deeply embedded in the participatory involvement of Y&YAs with SMHC, their families, service providers and policy experts.
Employment for Individuals with Blindness or Other Visual Impairments

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Principal Investigator: Michele C. McDonnall, PhD; Karla Antonelli; Jennifer Cmar; Adele Crudden, PhD
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; FY 20 (No-cost extension through 9/29/2021)
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 to 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)
Mississippi

RRTC on Employment of People Who are Blind or Have Low Vision

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Principal Investigator: Michele C. McDonnall, PhD
Public Contact: 662/325-2001

Project Number: 90RTEM0007
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 20 $875,000; FY 21 $875,000; FY 22 $875,000; FY 23 $875,000; FY 24 $875,000

Abstract: This goal of this research and training center (RRTC) is to improve employment opportunities and outcomes for people who are blind or low vision (B/LV). To achieve this goal, the RRTC on Employment of People Who are Blind or Have Low Vision partners with the American Foundation for the Blind and stakeholders to conduct rigorous research, training, technical assistance, and dissemination activities that (1) explore access technology (AT) in the workplace over time; (2) evaluate the effects of virtual interview training for youth; (3) develop and test an interactive video to educate employers about B/LV; (4) evaluate the feasibility and efficacy of teaching job search skills via videoconferencing; (5) identify internal and external barriers and facilitators to labor force participation; (6) explore employment predictors and outcomes using large national datasets; and (7) evaluate the accessibility and usability of job application websites. Anticipated outcomes include: (1) improved job-seeking and interview skills of youth and adults; (2) improved knowledge and attitudes of employers; and (3) increased knowledge about AT in the workplace, facilitators and barriers to employment, and online job application accessibility for all stakeholder groups; (4) better employment outcomes for individuals who are B/LV; and (5) training and technical assistance to benefit individuals who are B/LV, family members, service providers, policymakers, employers, and other stakeholders. Expected products include: an interactive educational video, an intervention curriculum, accessible virtual interview training, and multiple peer-reviewed publications, project reports, and online courses.
Rehabilitation Research and Training Centers (RRTCs)
New Hampshire

Rehabilitation Research and Training Center on Employment Policy and Measurement

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Principal Investigator: Debra L. Brucker, PhD 603/862-4320
Public Contact: Matthew Gianino 603/862-2300; Fax: 603/862-0555

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; FY 20 (No-cost extension through 9/29/2021)

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, compiling journal volume 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)
New York

Rehabilitation Research and Training on Employment Policy:
Center For Disability-Inclusive Employment Policy Research

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Principal Investigator: Peter D. Blanck, PhD, JD
Public Contact: 315/443-9703

Project Number: 90RTEM0006
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 20 $874,012; FY 21 $873,565; FY 22 $874,110; FY 23 $874,999; FY 24 $874,652

Abstract: The Rehabilitation Research and Training Center (RRTC) on Disability-Inclusive Employment Policy (DIEP) designs and implements a series of studies that produce new data and evidence on DIEP policy to increase employment rates and outcomes for persons with disabilities. The Center conducts a scientifically rigorous set of randomized control trials and quasi-experimental studies that look across the employment lifecycle: (1) enhancing employment re-engagement, (2) enhancing employment, and (3) enhancing job quality and retention. Studies examine federal, regional, state, and private industry policies and programs to identify critical outcomes and impacts that improve multiple facets of employment: entry options, better wage and income levels, worker retention and job quality and benefits, career growth and paths to economic stability, employment reengagement in the event of job loss, and reduced dependence on Social Security disability benefits. DIEP RRTC provides a comprehensive and accessible set of knowledge translation activities, customized for both specific and across-target audiences. Anticipated outcomes include: (1) new evidence-based employment-related policy development for policy makers; (2) evidence-based practices to enhance worker retention and quality of work experience for businesses and human resource professionals; (3) evidence-based strategies to improve employment, job retention, and employment reengagement for employment service providers assisting persons with disabilities; (4) increased strategies to support job seekers with disabilities for vocational rehabilitation (VR) and workforce development professionals; (5) increased access to new knowledge and exploration of alternative paths to employment and career advancement for individuals with disabilities; (6) generation of new data and evidence to support existing and next-generation research for researchers and students; and (7) establishing a disability policy framework to advance employment and economic self-sufficiency for working-age adults with disabilities. Products include working papers, employment policy briefs and newsletters, academic articles and presentations; online and in-person training and technical assistance support for policymakers, business leaders, and people with disabilities;
online trainings and continuing education for VR and other workforce development professionals; and webinars and virtual academies that bring together key stakeholders for collective learning and action.

The DIEP RRTC partners with Syracuse, Harvard, and Rutgers Universities to bring together a consortium of researchers from multiple disciplines including economics, psychology, law and public policy, business management, and health. The project is complimented by ten stakeholder national associations including: Disability:IN, National Governors Association, Council of State Administrators of Vocational Rehabilitation, Association to Support Supported Employment, American Association of People with Disabilities, Independent Living Research Utilization, National Disability Institute, the Center on Women and Work, and the ABLE National Resource Center.
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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Public Contact: 804/828-1852

Project Number: 90RT5041
Start Date: September 30, 2016
Length: 60 months

NIDILRR Officer: Kirstin Painter, PhD, LCSW

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.
Rehabilitation Research and Training Centers (RRTCs)  
Virginia

Rehabilitation Research and Training Center (RRTC) on Employment of People with Intellectual and Developmental Disabilities

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Principal Investigator: Paul Wehman, PhD  
Public Contact: 804/828-1852

Project Number: 90RTEM0003  
Start Date: September 30, 2019  
Length: 60 months

NIDILRR Officer: Dawn Carlson, PhD, MPH

NIDILRR Funding: FY 19 $875,000; FY 20 $875,000; FY 21 $875,000; FY 22 $875,000; FY 23 $875,000

Other Funding: FY 20 Virginia Department of Education

Abstract: Rehabilitation Research and Training Center (VCU-RRTC) on Employment of People with Intellectual and Developmental Disabilities (I/DD) provides needed information in employer practices that are associated with better employment outcomes for individuals with I/DD. The cornerstone of this research is a series of studies to examine the critical variables that can improve competitive integrated employment (CIE) outcomes for individuals with I/DD. These studies empirically examine the complex interactions between a wide range of variables directly impacting the employment outcomes of people with I/DD including: (1) understanding how a major corporation implements a demand side approach to hiring workers with I/DD, (2) identifying ways young adults from minorities with I/DD acquire technology skills to enable them to access careers in information technology (IT) fields, (3) understanding how college students with autism spectrum disorders (ASD) can use cognitive technology to impact their academic and employment outcomes, (4) assessing how parent intervention impacts parent expectations and their children’s CIE outcomes, and (5) understanding how training employment specialists using a competency based curriculum can improve CIE outcomes. VCU-RRTC establishes an advisory committee comprised exclusively of people with I/DD that assist in all stages of research and knowledge translation activities. These activities include establishing a National Resource Center for individuals with I/DD and their families and conducting a variety of customized dissemination and knowledge transfer activities. The new knowledge generated from this RRTC’s research improves the CIE outcomes for individuals with I/DD and enhances rehabilitation professionals and other stakeholders’ capacity to provide employment opportunities and supports. This project is in partnership with the University of Wisconsin-Madison, Vanderbilt University, and Kent State University.
Rehabilitation Research and Training Center (RRTC) on Employment of Transition-Age Youth with Disabilities

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Principal Investigator: Paul Wehman, PhD
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Project Number: 90RTEm0002
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 19 $875,000; FY 20 $875,000; FY 21 $875,000; FY 22 $875,000; FY 23 $875,000

Abstract: The RRTC on Employment of Transition-Age Youth with Disabilities generates evidence-based interventions to assist youth to enter competitive integrated employment; and addresses the need for evidence-based research for youth with disabilities, family members, school personnel, vocational rehabilitation (VR) counselors, and other stakeholders on information and interventions that can impact the employment outcomes of transition-age youth. Working with a consortium of researchers, this project conducts the following six research studies: R1 is a systematic review of the literature to assess and organize the relevant research. R2 is a pilot intervention developed from a randomized controlled trial (RCT) on effective knowledge translation (KT) methods for Pre-Employment Transition Services (Pre-ETS) counselors working with students with significant disabilities ages 14-16. R3 is an RCT on the effects of paid internships for at-risk youth with disabilities prior to graduation. R4 is an RCT on the effects of technology for college students with traumatic brain injuries. R5 is intervention development RCT on the effects of paid work in high school of youth with severe disabilities. R6 is an intervention to test the effects of an online course and subsequent technical assistance for postsecondary staff providing employment supports for college students with intellectual and developmental disabilities (I/DD). Project research findings are disseminated through products and technical assistance to all stakeholders in the transition field. This project is a consortium of Virginia Commonwealth University, Vanderbilt University, the University of Wisconsin-Madison, and Kent State University.
Securing Employment and Economic Keys to Stability (SEEKS)

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Project Number: 90DPCP0005
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 19 $410,844; FY 20 $496,660; FY 21 $499,590; FY 22 $469,208; FY 23 $432,235

Abstract: This project aims to improve education and employment outcomes, increase gross monthly income, and expand community participation for Coloradans with disabilities. Securing Employment and Economic Keys to Stability (SEEKS) delivers services to individuals applying for SSA disability benefits while concurrently receiving services from an employment specialist to obtain employment and a comprehensive benefits planner through the Center for Independent Living (CIL) system in partnership with the department of vocational rehabilitation. Project objectives are to: (1) Connect persons with disabilities applying for SSI/SSDI with competitive employment; (2) train CIL staff to utilize SOAR strategies; (3) train CIL staff in Customized Employment; (4) provide comprehensive benefits counseling to persons with disabilities applying for SSI/SSDI; (5) provide Community Partner Work Incentive Counselor training to CIL staff so they can provide comprehensive benefit counseling to persons with disabilities applying for SSI/SSDI; and, (6) increase connections for persons with disabilities who are seeking independent living services.
Disability and Rehabilitation Research Projects (DRRPs)
Georgia

Workplace Accommodation Expert Support System (Work ACCESS)

Georgia Tech Research Corporation
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**Principal Investigator:** Karen Milchus; Carolyn Phillips
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**Project Number:** 90DPEM0001
**Start Date:** September 30, 2018
**Length:** 60 months
**NIDILRR Officer:** Timothy Beatty

**NIDILRR Funding:** FY 18 $474,999; FY 19 $474,997; FY 20 $474,998; FY 21 $474,997; FY 22 $474,996

**Abstract:** This project develops Work ACCESS, an online tool and mobile application to help employers assess the workplace accommodation needs of their employees with disabilities to improve the provision of accommodations that increase workplace performance and participation, while providing a user-friendly tool that employers and employees can use together to make informed, evidence-based decisions. Project objectives are to: (1) develop, with the help of crowd sourcing, an expert system that uses decision trees and information about personal, task, and environmental factors to determine potential solutions; (2) incorporate workplace accommodation best practices from published and new research, and from feedback from system users on accommodation effectiveness; (3) provide resource links to facilitate accommodation implementation; (4) optimize the website/app’s content and usability; (5) evaluate how employers and employees utilize the system in the field; and (6) disseminate Work ACCESS through employment and disability employment networks. Project outcomes include employers and employees using the tool to explore accommodations that better fit their employees’ needs, which that are also more cost-effective and likely to be used.
Promoting Entrepreneurship Among Low-Income Youth with Disabilities

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Project Number: 90DPEM0002
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 19 $474,993; FY 20 $474,999; FY 21 $474,994; FY 22 $474,999; FY 23 $474,994

Abstract: This project develops and evaluates a school-based model to promote employment and/or entrepreneurship outcomes among transition-aged minority youth with disabilities from low-income communities. Specific objectives include: (1) Identifying specific practices and supports that can improve employment and/or entrepreneurship outcomes for minority youth with disabilities from low-income communities by conducting in-depth interviews with students who were able to succeed in finding employment after graduation and/or were able to start their own businesses as well as interviewing teachers, vocational rehabilitation (VR) administrator/counselors involved in the process to gather data on the supports and barriers to employment or self-employment among these youth. (2) Conducting formative evaluations of interventions by recruiting youth from the urban area to participate in a model including best practices for regular employment plus an intervention to promote entrepreneurship skills among interested youth with an employment component emphasizing vocational guidance, work-based learning experiences, dual enrollment, and readiness training; and an entrepreneurship component including skill development and training on preparing a business plan, mentoring from existing business owners, access to small capital for business start-up, and technical assistance and support. (3) Conducting summative evaluation using data to make modifications and adjustments to the interventions as needed to maximize their impact. Revised models are implemented using a randomized control trial of youth interested in pursuing regular employment post-graduation and those interested in pursuing self-employment. Anticipated outcomes include identifying the best practices, supports, and skills as well as barriers to transition to employment and/or entrepreneurship for minority youth with disabilities from low-income communities to be incorporated into future intervention models.
Integrated Scaling Approach: A Model for Large Scale Implementation of Effective Interventions for Employment

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**Principal Investigator:** Marianne Farkas, ScD  
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**Project Number:** 90DP0096  
**Start Date:** September 30, 2016  
**Length:** 60 months

**NIDILRR Officer:** Kirstin Painter, PhD, LCSW  
**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.
Helping Youth on the Path to Employment (HYPE):
Creating Economic Self-Sufficiency

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Project Number: 90DPGE0008
Start Date: September 30, 2018
Length: 60 months

NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 18 $474,980; FY 19 $474,991; FY 20 $474,990; FY 21 $474,998; FY 22 $474,995

Abstract: The goal of this project is to create a career development program, Helping Youth on the Path to Employment (HYPE), to improve the negative education and employment outcomes of young adults with mental health conditions (MHC). The HYPE program aims to minimize disruptions of post-secondary education and promote degree completion to drive competitive employment in meaningful careers and financial self-sufficiency. Project activities include: (1) conducting a fully-powered randomized trial testing HYPE’s efficacy; (2) establishing implementation sites meeting HYPE fidelity standards; (3) providing high quality HYPE-coordinated postsecondary education and employment services; (4) recruiting and retaining college students; (5) and collecting and analyzing data on HYPE recipients and an active control group of college students over two years related to academic progression and performance, and employment in benefitted jobs. Project outcomes include developing HYPE data and products in preparation for wider implementation, and scale-up testing and adoption. Dissemination products include a mobile application on accommodations; peer-reviewed publications, policy white paper, and cost-analysis; informational tip sheets, webinars, presentations; and HYPE webpage.
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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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.
A Professional Development and Case Management (PDCM) Model for Seamless Transition Planning: Improving Postschool Outcomes

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Project Number: 90DPEM0003
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 19 $475,000; FY 20 $475,000; FY 21 $475,000; FY 22 $475,000; FY 23 $475,000

Abstract: This project implements and evaluates the Professional Development and Case Management (PDCM) Model for Seamless Transition Planning to improve competitive integrated employment outcomes and seamless transition planning for youth with cognitive, intellectual, and developmental disabilities, including youth with traumatic brain injury, autism, and multiple disabilities, to provide transition services and coaching to 125 youth. Researchers work with 50 multi-agency transition teams in Northeast and Central Ohio to provide professional development and coaching for vocational rehabilitation special education (VR-SPED) counselors, educators, and developmental disability case managers serving transition-age youth with cognitive disabilities. Researchers use a collaborative case management approach to provide professional development for two cohorts of multi-agency teams of VR counselors, educators, and developmental disability case managers in serving transition-age youth with cognitive disabilities with planning and preparing for transition during the last three years of high school and the first year after exit. The collaborative process assists professionals in planning and preparing individuals with cognitive disabilities for transition during the last three years of high school and the first year after exit.
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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education.musc.edu/colleges/health-professions/research/help/projects  
www.facebook.com/longevityafterinjuryproject  
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Principal Investigator: James S. Krause, PhD 843/792-1337  
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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 9/29/2018); FY 18 (No-cost extension through 9/29/2019); FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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.
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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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, and George Washington University.
Disability and Rehabilitation Research Projects (DRRPs)
Virginia

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, e-mail, 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)  
California

Career Outcomes of Certified Peer Specialists with Psychiatric Disabilities

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Project Number: 90IFRE0029  
Start Date: September 30, 2019  
Length: 36 months  
NIDILRR Officer: Hugh Berry, EdD  
NIDILRR Funding: FY 19 $199,988; FY 20 $199,965; FY 21 $199,954

Abstract: This collaborative project conducts a systematic, national study of employment outcomes of individuals with psychiatric disabilities who have obtained a certified peer specialist (CPS) credential. CPSs are mental health workers who have a psychiatric history and use this lived experience plus formal training to support other people with psychiatric histories. The overarching goal of this study is to produce new scientific knowledge about how the CPS certification process contributes to new graduates’ employment outcomes and opportunities for career advancement. Using an observational prospective cohort study design, researchers recruit and follow a sample of 675 working age adults who recently received a CPS in one of four US States. This project explores three research questions: (1) What characterizes employment outcomes after certification as a peer specialist? (2) To what extent are employment outcomes associated with peer specialist graduates’ local labor markets? (3) How does certification impact peer specialist graduates’ psychological and economic outcomes? Study outcomes provide a greater understanding of the correlates of labor force and work-related psychological outcomes, maximize employment opportunities of individuals with psychiatric disabilities with a CPS credential; and provide recommendations for vocational rehabilitation policy and practice. Products and dissemination include published findings for the use of state certification bodies and coalitions of CPSs and their supporters, as well as free and accessible public reports on the Internet for target audiences.
Field Initiated Projects (FIPs)
California

Reclaiming Employment: Self-Employment Resources for Mental Health Service Users

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Project Number: 90IFDV0016
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 20 $199,945; FY 21 $199,947; FY 22 $199,945

Abstract: The goal of this project is to develop and evaluate a public-facing online platform, Reclaiming Employment™, that provides support for individuals with psychiatric disabilities to pursue self-employment and entrepreneurship. The aim of Reclaiming Employment™ (RE) is to improve employment and workforce participation outcomes by increasing competencies for individuals with psychiatric disabilities who wish to become self-employed, and ability to sustain and grow for those already operating small businesses. Project objectives include: (1) Complete and implement a full-scale prototype of the RE platform; (2) test the full-scale RE prototype to assess user experiences and outcomes; and (3) refine the RE technology transfer plan in collaboration with research partners. Project outcomes include a full-featured platform with empirical evidence ready for broader adoption by the target population and service systems, as well as a technology transfer plan. The final RE product provides three key offerings accessibility via a single sign-on including a library of resources through curated external links; courses to provide asynchronous, self-paced learning; and moderated social support platform/network by Live & Learn, Inc., a service user-led research and consulting firm that partners with consultants with lived experience of both disability and self-employment as well as research, curriculum design and training, and new media organizations to support the project objectives.
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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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 and Tools for Life’s Our Favorite Apps; (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 ATIA.
Field Initiated Projects (FIPs)
Georgia

Field Initiated Project 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; FY 20 (No-cost extension through 9/29/2021)

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 individuals with disabilities engaged in various forms of contingent employment, including the so-called “gig economy.” Findings from this qualitative research 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)
Hawaii

Culturally Appropriate Research in American Indian Employment Programs (CARE)

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Project Number: 90IFRE0041
Start Date: September 01, 2020
Length: 60 months

NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 20 $199,997; FY 21 $199,999; FY 22 $199,992

Abstract: The goal of this project is to determine the characteristics of practices and policies used by staff of American Indian Vocational Rehabilitation Services (AIVRS) programs and their correlation to effectiveness in assisting American Indians/Alaskan Natives (AI/AN) with disabilities in gaining and maintaining quality integrated employment, ultimately improving employment outcomes for AI/AN with disabilities. Researchers identify and describe AIVRS practices and policies, including those that are culturally appropriate, and the associated characteristics (e.g., descriptions of the qualities, traits, attributes, and distinctions). Researchers partner with AIVRS program directors, counselors, and the consumers they serve, with support from an AI/AN led advisory council, to conduct research using a community-based participatory research (CBPR) process addressing the following objectives: (1) Empower the project advisory council to guide the CBPR process, (2) collect first and second rounds of data, through a CBPR process; (3) analyze first and second rounds of data; (4) finalize data findings; (5) prepare products for dissemination; and (6) prepare for the Phase Two research. Project outputs include descriptions of policies and practices used by AIVRS programs, publications of research findings, and practice briefs.
Field Initiated Projects (FIPs)
Illinois

Career and Occupational Readiness Experience (CORE): Enhancing Supported Employment for TAY with Psychiatric Disabilities

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Project Number: 90IFRE0032
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 19 $199,973; FY 20 $199,927; FY 21 $199,975

Abstract: This project implements, tests, and refines the Career and Occupation Readiness Experience (CORE), a provider-developed add-on to Individual Placement and Support (IPS) Supported Employment. The goal of CORE is to improve IPS responsiveness and meet the vocational needs of vulnerable and at-risk transition-age youth (TAY) with youth-onset psychiatric disabilities. CORE is a 15-week intervention delivered by IPS Specialists and TAY Peers that includes 3 weeks of multi-modal experiential learning to boost vocational knowledge, skills, and confidence; and 12-weeks of in-vivo learning in career-related paid internships. Project objectives include: (1) examining CORE feasibility and refining CORE practices and protocols through key stakeholder partnerships (e.g., TAY, Vocational Peer Mentors, IPS Specialists, and TAY experts; (2) pilot testing CORE across 3 agencies with 120 TAY with psychiatric disabilities; and (3) widely sharing generated knowledge and tools. Outcomes result in: (1) successful CORE implementation and engagement; (2) increased TAY vocational skills, knowledge, self-efficacy, and competitive employment rates; and (3) CORE being translatable to other providers. Products include a CORE implementation manual, CORE Coordinator and Vocational Peer Mentor training manuals, web-based and in-person trainings, a community of practice, and provider technical assistance.
Field Initiated Projects (FIPs)
Kansas

Promoting Career Design and Development via Telehealth for Rural Adults with Intellectual and Development Disabilities

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Project Number: 90IFRE0039
Start Date: September 01, 2020
Length: 36 months

NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 20 $200,000; FY 21 $200,000; FY 22 $200,000

Abstract: This project examines the feasibility, efficacy, and cost-effectiveness of implementing a career design intervention using telehealth for adults with intellectual and developmental disabilities (IDD) who live in rural areas. The goal of this project is to evaluate effective services delivered via telehealth to promote employment for people waiting for formal Home and Community-Based Services (HCBS) in Kansas. The intervention uses the Self-Determined Career Design Model (SDCDM), an evidence-based intervention designed for people with IDD. Researchers have demonstrated that the SDCDM is effective in promoting self-determination and employment. The objectives are: (1) train facilitators to implement the SDCDM via telehealth; (2) randomly assign participants to waitlist control or intervention groups; (3) deliver the SDCDM via telehealth to the intervention group for two years and the waitlist control group in year 2; and (4) evaluate and disseminate the results. Anticipated outcomes include: (1) enhanced employment and self-determination of adults with IDD; (2) enhanced cost-effectiveness of delivering the intervention via telehealth; and (3) documented best practices for using telehealth with adults with IDD. Project outputs include one manuscript documenting the comparative effectiveness of the SDCDM via telehealth, a manuscript describing replicated effectiveness when the waitlist control group receives the intervention, training materials that incorporate lessons learned in the telehealth intervention, and increased community capacity in terms of a group of facilitators who are trained to deliver an evidence-based career development intervention.
Helping Young Adults Succeed at Work and School Through IPS Supported Employment

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Project Number: 90IFRE0034
Start Date: September 30, 2019
Length: 36 months

NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 19 $199,960; FY 20 $199,930; FY 21 $199,329

Abstract: The purpose of this study is to evaluate the effectiveness of Individual Placement and Support (IPS) for young adults with psychiatric disabilities, a priority population in the Workforce Innovation and Opportunity Act. IPS, an evidence-based model, has not yet been adequately studied in this population. In collaboration with the IPS Learning Community (a network comprised of state vocational rehabilitation and mental health leaders, clients, and others from 24 states and 300 IPS programs), this project conducts a mixed-methods, prospective, 1-year cohort study of 150 young adults (ages 16-24) with psychiatric disabilities enrolled in 10 established IPS programs in 5 geographically diverse states. Quantitative component objectives examine: (1) the range of young adult populations served, (2) organizational adaptations of IPS services, (3) employment and education outcomes over a 12-month follow-up period, (4) IPS fidelity using a newly-developed adaptation of a standard scale, (5) the correlation between IPS fidelity and client outcomes, and (6) client factors associated with better outcomes. Qualitative component objectives examine: (1) barriers to employment and education; (2) interagency collaborations; and (3) organizational, financial, and system barriers. Project outcomes include the formation of the IPS Young Adult Network, a mini-learning community embedded within the IPS Learning Community; improved employment and education outcomes for 150 youth adults; and dissemination of knowledge within participating States, nationally at the annual IPS Learning Community conferences, and online at ipsworks.org. Products include resource materials to assist state leaders and IPS practitioners working with young adults, and a well-validated fidelity scale for the young adult population.
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:** Kirstin Painter, PhD, LCSW
**NIDILRR Funding:** FY 17 $199,932; FY 18 $199,880; FY 19 $199,943; FY 20 (No-cost extension through 9/29/2021)

**Abstract:** This field-initiated project is researching the progressive employment (PE) model for individuals with the most significant disabilities and 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.
ES-Coach: A Smartphone and Web-Based Performance Coaching Application for Employment Specialists and Teams

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Project Number: 90IFDV0009
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Timothy Beatty

NIDILRR Funding: FY 19 $199,999; FY 20 $199,999; FY 21 $200,000

Abstract: Bridging the gap between evidence-based employment supports and what is implemented by employment specialists is necessary for ensuring job seekers with disabilities receive high quality employment services and achieve jobs that support career growth and self-sufficiency. The goal of this project is to build ES-Coach, a performance coaching application that supports employment specialists to implement established standards of practice leading to improved employment outcomes of job seekers with disabilities. The objectives are to: (1) develop a complete ES-Coach application that supports employment specialists to reflect on their work, set goals, and engage in continuous quality improvement; (2) implement beta testing with 60 employment specialists; and (3) develop a technology transfer plan. Outcomes include employment specialists and their teams incorporate ES-Coach in their management practices, set goals to improve support practices, and engage in continuous learning. The long-term outcome is improved employment outcomes for job seekers with disabilities and reduced time to hire.
Field Initiated Projects (FIPs)
Massachusetts

Testing the Effectiveness of Mainstream Coaching Tools to Increase Organizational Commitment and Job Satisfaction and Decrease Turnover Among Peer Providers

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Project Number: 90IFRE0027
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 19 $199,970; FY 20 $199,967; FY 21 $199,965

Abstract: The employment of peer providers in mental health settings has grown, with many states now training and certifying peer providers for work in mental health programs. Research suggests that peer providers experience workplace challenges, such as stress due to role ambiguity, conflict, and overload as well as burn out. The result can be high turnover and job dissatisfaction yielding in sub-optimal services for thousands of individuals receiving peer support in mental health programs. This project develops and refines Coaching and Achievement for Peer Providers – CAPP, an intervention informed by mainstream best-practice executive and business coaching as well as by the unique challenges experienced by peer providers. Project researchers conduct a randomized trial to test CAPP’s effectiveness using a sample of peer providers recruited through national collaborators, randomly assigning participants to CAPP or to an “enhanced control” group and following them over nine months to assess key outcomes. A qualitative study is also conducted to better understand the mechanisms of action of the model.
Field Initiated Projects (FIPs)
Massachusetts

Scale-Up Progressive Employment (PE):
Promoting Implementation of a Tested Practice to Improve Vocational Rehabilitation and Employment Service Delivery and Outcomes

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Project Number: 90IFDV0019
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 20 $200,000; FY 21 $200,000; FY 22 $200,000

Abstract: The Scale-Up Progressive Employment (PE) project promotes the adoption of the PE model by developing implementation and evaluation tools that facilitate scale-up of this tested employment practice targeted at individuals with the most significant disabilities and barriers to employment. Objectives of the Scale-Up PE project are to: (1) Promote adoption of a tested practice, Progressive Employment, in several new vocational rehabilitation (VR) agencies by addressing implementation challenges using a VR Program Management framework; (2) use the PE Learning Collaborative approach to facilitate peer-to-peer and subject matter expert support for innovation; (3) expand ExploreVR.org to house virtual learning resources and an online community on PE to promote model adoption; and (4) embed existing evaluation tools into adoption processes to measure fidelity of implementation and impact on outcomes. Project outcomes include: (a) Increased use and adoption of a suite of NIDILRR-sponsored practices, products, and tools that promote PE adoption in dual-customer employment service delivery; (b) impact of PE implementation on targeted outcomes contributes to growing evidence base for promising employment practice; and (c) new knowledge generated about effective scale-up strategies that support innovation in employment service delivery and enable future research. Project outputs include a Scale-Up Toolkit that provides a step-by-step guide supporting implementation and adoption, an active online evaluation tool that generates data and reports on outcomes, and an expanded ExploreVR.org web portal for widespread dissemination.
Developing and Validating a Measure of Career Advancement for Individuals with Psychiatric Disabilities: 
A Field Initiated Research Grant

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Project Number: 90IFRE0023
Start Date: September 30, 2018
Length: 24 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 18 $199,242; FY 19 $199,856; FY 20 (No-cost extension through 9/29/2021)

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)
Minnesota

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

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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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 6/30/2021)
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.
Field Initiated Projects (FIPs)  
New Hampshire

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; FY 20 (No-cost extension through 8/31/2021)

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 by using 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.
Developing a Career Services Toolkit for Individuals with Serious Mental Illness (SMI) Pursuing Post-Secondary and Technical Education (CTE)

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Project Number: 90IFDV0015
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 20 $199,999; FY 21 $199,999; FY 22 $199,999

Abstract: This project develops a career services toolkit to assist individuals with serious mental illnesses (SMI) to succeed in post-secondary career and technical education (CTE) programs, and to gain employment within their intended field. CTE provides individuals opportunities to complete their education more quickly, with less financial burden, and have strong job prospects; however, individuals with SMI entering CTE programs are twice as likely as other students to take remedial courses and leave school without completing their programs. The goal of this project is to assist individuals with SMI to complete CTE, improve employment rates and earnings post-graduation, and develop upward career trajectory. Project objectives are to: (1) Conduct a Delphi study drawing upon a diverse group of stakeholders, including individuals with lived experience, to identify unique knowledge, skills, and resources required to succeed in CTE; (2) develop a CTE toolkit incorporating the findings of the Delphi study—the resulting toolkit consisting of two main sections: one for individuals with SMI and family and the other for service providers; (3) pilot test the toolkit involving 8 to 10 individuals in CTE programs; and (4) revise and refine the CTE. Project outcomes include a completed prototype of a Career Services CTE Toolkit that includes the knowledge, skills, and resources needed to succeed in CTE programs and gain/maintain employment in CTE fields for individuals with SMI.
Field Initiated Projects (FIPs)
New Jersey

Using Virtual Reality to Improve Job Reentry in Adults with TBI:
An RCT

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Project Number: 90IFRE0031
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 19 $199,678; FY 20 $199,754; FY 21 $199,671

Abstract: Individuals who have sustained traumatic brain injury (TBI) have significant difficulty returning to work (RTW). Reduced social competence following brain injury has been shown to be a primary reason for difficulty in RTW. The goal of the current study is to improve the RTW process by implementing a Virtual Reality Job Interview Training (VR-JIT) program to target social competency skills needed for successful job interviewing. VR-JIT has been shown to be highly successful in autism spectrum disorder and schizophrenia in improving job interview skills and employment outcomes. However, the efficacy of VR-JIT has not been evaluated in TBI. Thus, the objectives are: (1) to examine the efficacy of VR-JIT in improving job interview performance, confidence and anxiety; (2) to examine the efficacy of VR-JIT in improving employment outcomes at long-term follow-up; and (3) to examine qualitative feedback regarding VR-JIT by members of the TBI community regarding appropriateness of the intervention for a TBI population. Participants are randomly assigned to VR-JIT or an active control group, and evaluated for interview performance, confidence, and anxiety, as well as rates of job offers at long-term follow-up. Qualitative data is used to understand how best to tailor the intervention to the TBI population and may be used to develop products such as a TBI-specific manual (to help those with cognitive impairment) to supplement VR-JIT.
Field Initiated Projects (FIPs)
New York

**Connecting Practices to Outcomes:**
Lessons from the Federal Sector Workplace

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**Project Number:** 90IFRE0014
**Start Date:** September 30, 2018
**Length:** 36 months
**NIDILRR Officer:** Timothy Beatty
**NIDILRR Funding:** FY 18 $200,000; FY 19 $200,000; FY 20 $200,000

**Abstract:** This project uses federal sector secondary data and qualitative focus groups to assess the impact of employer practice adoption on the retention, advancement, separation, and the workplace experience of individuals with disabilities. Further, it promotes the adoption of effective diversity practices with federal and private employers. The goal of the project is to increase capacity among employers to create an equitable and inclusive workplace for people with disabilities. Project objectives supporting goal achievement are to: (1) develop a thorough knowledge base of how diversity practice adoption impacts outcomes, such as disability representation, hiring, and advancement; (2) reveal whether diversity practice adoption moderates differential employee experiences and attitudes of individuals with disabilities and whether employee experiences and attitudes explain relationships between practice adoption and outcomes; (3) enhance understanding of findings and increase relevance to a target audience of employers through focus groups of employer representatives and employees; and (4) broadly share findings with the community. Outcomes for employers and other stakeholders include: (1) increased access to rigorous research on effective employer practices; (2) improved understanding of how to improve workplace practices; and (3) increased adoption and implementation of effective practices.
Efficacy of a Community College Transition Program for Young Adults with Autism Spectrum Disorder

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Project Number: 90IFRE0019
Start Date: September 30, 2018
Length: 36 months

NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 18 $200,000; FY 19 $200,000; FY 20 $200,000

Abstract: The goal of this project is to assess the feasibility, social validity, and efficacy of the T-STEP intervention for 16- to 21-year-old community college students with ASD. The objectives of this 3-year study are (1) to conduct a pilot study including key stakeholder feedback to refine the T-STEP to ensure social validity and feasibility in a community college setting; (2) to examine the efficacy of the T-STEP in both in-person and online formats (with 45 young adults with ASD receiving the intervention and 45 young adults in a waitlist control group); (3) to examine characteristics of adults who most benefit from the program; and (4) to describe employment and college outcomes three months after program completion. Anticipated intervention outcomes include improved (1) executive function/organization; (2) social communication; (3) emotion regulation; and (4) self-advocacy/self-determination skills. Additionally, the study examines who benefits most from the T-STEP and whether there is a higher rate of employment and/or college success at follow-up. The expected products are conference presentations, peer reviewed publications, and a socially valid, evidence-based intervention manual that feasibly can be implemented broadly across community college campuses.
Virtual Office Space (VOS): Improving Employment Opportunities for Individuals with Low Vision

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Project Number: 90IFDV0012
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 19 $199,767; FY 20 $199,965; FY 21 $199,932

Abstract: This project evaluates a fully-integrated, high-resolution virtual desktop for individuals with low vision that can be accessed online from home or the workplace. Project goals include: (1) developing and perfecting a fully customizable Virtual Office Space (VOS) for individuals with low vision, as well as producing a virtual visual environment that permits satisfactory perception of information on the computer screen; (2) evaluating the acceptability and effectiveness of VOS technology specifically for individuals with albinism; and (3) dissemination of VOS technology testing results. Project goals are achieved through three objectives: (1) iteratively testing of VOS with individuals with low vision in four cycles using customizable features that allow for a positive visual experience; (2) evaluation by an expert panel to determine the effectiveness and acceptability of VOS with participants reporting improved and/or satisfactory experiences; and (3) dissemination of VOS research online and presented at professional conferences with VOS being available to consumers with low vision throughout the nation.
Collaborate for Change (C2)

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Project Number: 90IFDV0011
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 19 $199,981; FY 20 $197,936; FY 21 $199,830

Abstract: This project develops and field-tests competencies to advance secondary transition collaboration among special educators and vocational rehabilitation counselors. Collaborate for Change (C2) combines theories of collaboration, secondary transition, and diffusion of innovations to develop these competencies. C2 has professional benefits for preparation to collaborate on activities which may increase the frequency of adoption and utilization for improved personnel and transition outcomes. The primary target populations are special educators and vocational rehabilitation counselors because they are the mandated transition collaborators. However, the targeted benefactors are the transition-age population with disabilities and their families, whom are the consumers of these services. The major goal is the development of validated competencies. Objectives include: (1) developing and validating competencies that are theory-based, and operationalized in the context of secondary transition, and (2) pilot field testing the competencies and developing a structural and measurement model. Outcomes are proof of adoption by expert/early adopters at the national, state, and local levels who have contextualized competencies to collaborate for change.
**Small Business Innovation Research (SBIR), Phase II**  
Oregon  

**Person-Centered Planning ToolKit: Development of an Application to Improve Workforce Participation for Individuals with Cognitive Disabilities Through Team Collaboration and Employment Discovery**

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**Project Number:** 90BISB0015  
**Start Date:** September 30, 2019  
**Length:** 24 months  
**NIDILRR Officer:** Hugh Berry, EdD  
**NIDILRR Funding:** FY 19 $279,056; FY 20 $295,925

**Abstract:** This project evaluates the usability and feasibility of a Person-Centered Planning Toolkit to address the need for increased opportunities for competitive integrated employment for individuals with cognitive disabilities. The Toolkit enhances implementation of person-centered planning (PCP), often limited by lack of follow-through on action items, and a lack of tools to match career preferences to specific customized employment opportunities. The goal of the project is to complete development of a prototype application with demonstrated usability and feasibility based on previous Phase I results from both transition students with mild to moderate cognitive disabilities and their PCP or Individual Education Program (IEP) team members. The first application, the Team Assignments, Collaboration, and Task Tracking tool (TACT) enables users to understand action items and due dates, systematically remind participants of commitments, and track completion in ways that clearly identify who is responsible and when items are completed. A second component, the Community Assets Mapping application (CAM) supports the employment discovery process by crowd-sourcing identification of community businesses, associations, mentors, and professionals who can be resources in exploring career discovery. Results are detailed on a mapping interface similar to Google Maps and are interoperable with the TACT. The toolkit is evaluated for usability and feasibility by transition students, PCP facilitators, and adults with disabilities. Effectiveness is evaluated through a randomized control trial with students recruited from throughout the State of Oregon and nationally. Project outcomes include a commercially implemented, cognitively accessible software tool (PCP Toolkit) to improve self-directed execution of employment-focused action items from person-centered plans for persons with disabilities as well as other PCP domains such as community participation, independent and supported living, health, and recreation.
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 Americans with Disabilities Act (ADA).

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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.
Community Living Policy Center

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Project Number: 90RTCP0004
Start Date: September 30, 2018
Length: 60 months

NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 18 $875,000; FY 19 $875,000; FY 20 $875,000; FY 21 $875,000; FY 22 $875,000

Abstract: This Community Living Policy Center (CLPC) aims to improve policies and practices that promote community living outcomes for individuals with disabilities through a program of seven broad research projects in three priority areas: (1) Policies and Programs Related to Provision of Home and Community Based Services; (2) Policy Barriers and Facilitators of Community Living and Participation Outcomes; and (3) Rapid, Timely Data and Policy Analyses to Inform Policies and Programs that Promote Community Living and Participation Outcomes. The center also conducts knowledge translation activities, including dissemination, training, and technical assistance targeted to needs of stakeholders. An online CLPC portal, a key component of knowledge translation activities, serves as a national resource for research-based community living policy. Individuals with disabilities are integrally involved in and advise all research and knowledge translation activities through the Disability and Aging Collaborative, a coalition of 40 national organizations. Project partners include: University of California San Francisco, Association of University Centers on Disabilities, Autistic Self Advocacy Network, Disability Rights Education & Defense Fund, Disability Policy Consortium, Centene Corporation, National Association of States United for Aging and Disabilities, Human Services Research Institute, Topeka Independent Living Resource Center, and national policy expert Henry Claypool.
Rehabilitation Research and Training Centers (RRTCs)
Minnesota

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

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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; FY 20 (No-cost extension through 9/29/2021)
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 is prepared and submitted for approval by the NQF. In addition to identifying and testing measures, the RRTC/OM investigates methodological issues with respect 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 Centers (RRTCs)
Minnesota

Rehabilitation Research and Training Center (RRTC)
on Community Living and Participation

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Project Number: 90RTCP0003
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 18 $875,000; FY 19 $875,000; FY 20 $875,000; FY 21 $875,000; FY 22 $875,000
Abstract: This center conducts advanced research, training, and technical assistance and dissemination activities focused on community living and participation of individuals with intellectual and developmental disabilities (I/DD). The center includes seven studies relevant to community living interventions, policy and outcomes. Studies include: analyses of National Health Interview Survey data to identify characteristics and needs of persons with I/DD; policy and outcome analyses using National Core Indicators (NCI), a random sample of 18,000 adults with I/DD from 46 states, and a longitudinal study using NCI data from Pennsylvania in years 2000-2022; intervention studies related on the direct support workforce, social inclusion for older adults, employment; and technology use in community living settings. The center also provides a comprehensive training program that continues to develop new generations of competent and skilled disability researchers and professionals.
Rehabilitation Research and Training Centers (RRTCs)  
Montana

Place-Based Solutions for Rural Community Participation, Health, and Employment

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Project Number: 90RTCP0002
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 18 $875,000; FY 19 $875,000; FY 20 $875,000; FY 21 $875,000; FY 22 $875,000

Abstract: The goal of this RRTC is to conduct research and knowledge translation (KT) activities across health, community living, and employment domains to explore, develop, and test strategies to improve the quality of life of rural people with disabilities. To achieve this goal, this project fully engages people with disabilities and other relevant stakeholders in all aspects of research and KT activities, utilizes national service systems as research and KT partners to improve the reach and uptake of effective solutions, and evaluates the RRTC’s research and delivery sites for better understanding of how strategies and available community resources align to maximize impacts. This project conducts eight research projects and three additional KT projects, along with dissemination, training, and technical assistance (TA) activities. Research projects include: R1. Expanding the Availability and Quality of Rural Data, a collaboration with the RRTC on Disability Statistics to develop a rural addendum to the annual Disabilities Statistics Compendium; R2: Exploring the Rural Disability Penalty, a longitudinal data study using secondary panel data sources to investigate how health and disability evolve differently over the lifecycle for people living in rural and urban places; R3: Rural Access to Health Insurance and Health Care, a collaboration with the NIDILRR-funded Collaborative on Health Reform and Independent Living, to extend the reach of their national longitudinal National Health Reform and Disability Survey to allow for rural and urban comparisons about health insurance access and coverage related to changes in the Affordable Care Act; R4: Rural Resource Analysis, focusing on understanding contextual differences across place to provide contextual understanding for intervention development work in R5-R8 research projects; R5: Building Networks to Expand Living Well Delivery, promotes healthy rural community living through scale-up of the Living Well in the Community program in rural hospitals; R6: Rural Personal Assistance Services partners with consumers and providers of rural home- and community-based
services to identify how personal assistance services (PAS) are secured, delivered, and consumed in rural places. The project examines aspects of care that increase health and community participation and use this information to translate existing PAS training for application and evaluation in rural places; R7: Rural Transportation Options, uses survey and informant interviews to explore how different transportation options impact community living outcomes for rural people with disabilities to inform rural transportation policy and development; and lastly, R8: Rural Self-Employment Builds Vocational Rehabilitation (VR) and American Indian VR Service (AIVRS) explores capacity to support consumers who express an interest in self-employment by refining and evaluating materials that are responsive, appropriate, and prepared for intervention efficacy research.
Abstract: This project advances the development of interventions that maximize community living and participation of individuals with severe mental illness (SMI) through research and knowledge translation activities in partnership with consumers and other key stakeholders, and serves as a national resource center for people with SMI, their families, service and support providers, researchers, policymakers, and other stakeholders through knowledge translation activities based in state-of-the-art translational practices. This project conducts seven research studies resulting in new knowledge about the effectiveness of interventions in enhancing community mobility, using eHealth in promoting community participation, increasing parenting outcomes through family leisure, and advancing college student success using Photovoice. Additional studies identify new research and interventions, examine modifiable cognitive factors associated with community participation, highlight promising initiatives undertaken by First Episode Psychosis programs, and elicit stakeholder-driven research priorities for promoting community participation within rural areas. Research data and project activities result in new knowledge that drives the next generation of policies, programs, and practices that directly impact the lives of people with SMI. The RRTC products include trainings for mainstream organizations, rights advocates, and providers; technical assistance that is responsive to the needs of key stakeholders; and dissemination through social media and podcasts to translate and transmit information leading to a real-world impact.
Rehabilitation Research and Training Centers (RRTCs)
Pennsylvania

Center for Research, Training, and Dissemination of Family Support for People with Disabilities Across the Life Course

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Principal Investigator: Heidi S. Donovan, PhD, RN; Scott Beach, PhD; Bambang Parmanto, PhD
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Project Number: 90RTGE0002
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 19 $874,999; FY 20 $874,999; FY 21 $874,999; FY 22 $874,999; FY 23 $874,999

Abstract: The Center for Research, Training, and Dissemination of Family Support for People with Disabilities Across the Life Course focuses research, training, technical assistance, and dissemination efforts under the theme of Caregiver Support Empowers the Whole Family. The mission of this Center is to facilitate the rapid translation and dissemination of state-of-the-art research and training to inform direct services and support programs designed to improve care, health, and quality of life of people with disabilities (PwD) and their families. To achieve this mission of increasing access to family support, the center aims to: (1) Advance state-of-the-science research in caregiving, rehabilitation, and e-health self-management support in PwD and their family caregivers with the goal of maintaining independent living in the community; (2) train health and rehabilitation providers and researchers to support families caring for PwD; (3) leverage findings from center research projects to advance the capacity of healthcare and public health systems to deliver high-quality, tailored support to family caregivers of PwD, and; (4) utilize dynamic mechanisms to translate and disseminate knowledge to PwD, family caregivers, policymakers, service providers, researchers, employers, and other key stakeholders. Four research projects have been designed at the intersection of three domains of science: caregiving, disability/rehabilitation, and e-health self-management support with the goal of supporting family caregivers of PwD to maintain independent living in the community. R1 analyzes national data sets to characterize family support and its impact on health and quality of life outcomes among PwD across the lifespan and their family caregivers living in the community. R2 develops and evaluates an iMHere mobile health self-management intervention for family caregivers to be delivered in conjunction with an existing intervention for patients with brain and spinal anomalies. R3 scales up and disseminates CAPABLE (an established intervention to support older adults with activity limitations and their family caregivers with aging in place) into Area Agencies on Aging with the goal of increasing access to families who do not qualify for Medicaid and cannot afford services. R4 implements and evaluates an mHealth SmartRehab program (a caregiver self-management intervention with demonstrated efficacy) across a large healthcare system to optimize return to social participation for survivors of gynecologic cancer with participation restrictions and their family caregivers.
Rehabilitation Engineering Research Centers (RERCs)
New York

Rehabilitation Engineering Research Center
on Physical Access and Transportation

The Research Foundations of SUNY
on behalf University at Buffalo
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Project Number: 90REGE0015
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 20 $924,997; FY 21 $924,996; FY 22 $924,993; FY 23 $924,998; FY 24 $924,991

Abstract: This center advances accessibility and universal design (UD) across built environments (i.e., commercial buildings, community infrastructure, housing) and along the travel chain, through an integrated research, development, and deployment program. The goal of the RERC on Physical Access and Transportation is to engage consumers, designers, service providers, and policy makers in designing, using, and evaluating innovative accessible physical environments, transportation systems, and information technologies. The objectives of this RERC are to address key knowledge gaps, leverage innovative software technology, and demonstrate the value of evidence-based practice through improved building regulations and voluntary UD standards. The projects build from successful prior work and deployed solutions with attention to both high priority, near-term needs and long-term solutions. Desired outcomes are (1) universal designs and enabling technologies that support independent community engagement, including for employment, social participation, and community mobility; and, (2) expanded professional capacity in the domains of accessibility and UD across the built environment and transportation systems. Products of the RERC may include new research findings, tools, standards, and products that advance physical access across built environments and transportation. These include (1) research findings on the effectiveness of UD practice, including the health and performance benefits of and business case for UD, (2) knowledge on how street infrastructure and emerging transportation systems can address mobility challenges, (3) software tools to assist designers in implementing accessibility and UD standards, and (4) industry partnerships to improve community wayfinding. These initiatives will all be developed with ongoing and extensive input from disability, professional, policy, and industry stakeholders. Project partners include the University Health Network, the University of Michigan, and other stakeholders.
Financial Engagements as a Gateway to Community Participation: A Multi-Level Intervention Study

Disability and Rehabilitation Research Projects (DRRPs)
District of Columbia

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Project Number: 90DPCP0003
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 18 $499,998; FY 19 $499,999; FY 20 $499,998; FY 21 $499,974; FY 22 $499,985

Abstract: This project examines the promise of ABLE accounts in increasing community participation for individuals with intellectual and developmental disabilities (I/DD) and cognitive disabilities. The ABLE Act of 2014 allows an estimated seven million individuals with significant disabilities to establish tax advantaged saving accounts exempt from means-tested requirements for federal public benefits (SSI, Medicaid, and SNAP), and prohibits reduction of public resources when an account is established. Individuals who contribute to ABLE accounts are able to build financial independence and set goals for the future. This research represents the first empirical longitudinal study of the impact of ABLE implementation. The project goal is to enhance understanding of the benefits of financial health trainings to improve outcomes. A randomized controlled trial study examines impact of (1) an ABLE account and (2) the joint impact of an ABLE account and Future Savers training program on community participation. Objectives include evaluation of self-directed engagement in ABLE accounts, evaluation of facilitated engagement in ABLE accounts, and a comprehensive training program that assists in planning for the future and managing finances to reach goals. Outcomes include community participation and its related and antecedent outcomes: self-determination, financial capability, life satisfaction, and quality of life. Deliverables include evidence regarding interventions that improve economic self-sufficiency and community participation, and knowledge translation strategies to replicate interventions nationwide.
Disability and Rehabilitation Research Projects (DRRPs)
Georgia

Accommodation Expert Support System for Aging Well
(ACCESS for Aging Well)

Georgia Tech Research Corporation
Centers for Inclusive Design Innovation (CIDI)
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Principal Investigator: Carolyn Phillips
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Project Number: 90DPCP0006
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 20 $499,962; FY 21 $499,997; FY 22 $499,988; FY 23 $499,974; FY 24 $499,941

Abstract: The goal of this project is to develop and evaluate the efficacy of ACCESS for Aging Well, an online accommodation assessment system that service providers can use while conducting community living evaluations with older adults and their families. The system considers all personal, environmental, and contextual factors to make recommendations and prioritize suggestions on accommodation effectiveness. The Georgia Institute of Technology and the University of Washington partner with state agencies to evaluate user feedback and predictive analytics from historical data to create a mobile application version of the ACCESS for Aging Well system. The system enables service providers to use the resource in the field in consultations with clients in their homes and facilitates service providers and older adults with disabilities to work together in making informed choices about the most appropriate accommodations. These include assistive technologies, strategies, inclusively designed features of mainstream technologies and environments, and community services. Project outcomes include the ACCESS for Aging Well system, including validated decision algorithms and its web and mobile interfaces, as well as new findings on accommodation effectiveness. The resulting system enables service providers and their clients to make more informed decisions about community living accommodations leading to greater independence and continued participation for older adults with disabilities.
Disability and Rehabilitation Research Projects (DRRPs)
Massachusetts

Enhancing the Community Living and Participation of Individuals with Psychiatric Disabilities

The Trustees of Boston University
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Principal Investigator: Zlatka Russinova, PhD; E. Sally Rogers, ScD
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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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 1/31/2021)
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.
Participatory Community Integration for TBI Survivors: Development of a Computer Adaptive Test

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Project Number: 90DPCP0008
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 20 $497,023; FY 21 $498,336; FY 22 $497,674; FY 23 $497,237; FY 24 $497,932

Abstract: This project develops a cutting edge computerized adaptive test that efficiently measures community participation of traumatic brain injury (TBI) survivors to help with needs assessment, connecting individuals with resources, and improving participation in meaningful life roles. The Traumatic Brain Injury-Participatory Computerized Adaptive Test (TBI-PCAT) includes items specifically developed for those with TBI focusing on six domains of participation: Participatory interactions and activities, relationships with family and friends, work and employment, romantic relationships, and sexual relationships. Items for TBI-PCAT are identified through extensive literature reviews and focus groups to ensure relevancy to community-dwelling TBI survivors. Researchers test these identified items and develop, calibrate, and conduct psychometric evaluations using advanced measurement methodologies; conduct a pilot study to examine the validity and reliability of TBI-PCAT among TBI survivors to create norms for comparisons to a general population; and engage with TBI survivors and other stakeholders to build a high-quality TBI-PCAT platform that is accessible and easy to use. Project outcomes include the application of TBI-PCAT as an efficient, easy to use, and precise measure of participation among individuals with TBI; and as a robust instrument available to clinicians, researchers, survivors of TBI for needs assessments and to connect survivors with resources to improve community participation following TBI. Products for this project include a web-based platform accessed through the Traumatic Brain Injury Model System and the Brain Injury Association of America website (BIAA). Additionally, this project produces videos and a webinar series, accessible through the BIAA, to increase awareness of community participation issues among individuals with TBI.
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: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 16 $500,000; FY 17 $499,999; FY 18 $500,000; FY 19 $500,000; FY 20 $499,999

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 website, where parents and family members currently interact, share knowledge, and empower each other.
Disability and Rehabilitation Research Projects (DRRPs)  
Missouri

Building Capacity to Improve Community Participation for People Aging with Long-Term Disability Through Evidence-Based Strategies

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Principal Investigator: Susan L. Stark, PhD; Kerri Morgan, PhD; Michelle Putnam, PhD; 314/273-4114  
Public Contact: Marian Keglovits 314/273-4118

Project Number: 90DPCP0001  
Start Date: September 30, 2017  
Length: 60 months  
NIDILRR Officer: Anne Ordway, 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.
Minority Youth and Centers for Independent Living (MY-CIL)

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Project Number: 90DPGE0013
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 19 $449,948; FY 20 $1,293,390; FY 21 $1,293,389; FY 22 $1,293,389; FY 23 $1,293,389
Other Funding: FY 19 $793,390 (Administration on Disabilities, Office of Independent Living Programs)

Abstract: The goal of Minority Youth and Centers for Independent Living (MY-CIL) is to generate and share new knowledge that empowers CILs to improve transition outcomes of out-of-school youth from minority backgrounds. The activities and objectives of this project are developed with input from CILs and other stakeholders. These activities and objectives include a survey of CILs; qualitative interviews with CILs; pilot testing practices and services with CILs; developing and testing a manualized randomized control trial intervention designed to improve outcomes for the target population, learning collaboratives; and technical assistance related to outreach, data analysis, collaboration, and other practices that show promise for improving outcomes for out-of-school youth with disabilities from minority backgrounds. Project outcomes include new knowledge on CIL practices and services, an expanded evidence base on effective CIL practices, and increased CIL capacity to deliver evidence-based best practices to improve transition outcomes more out-of-school youth from minority backgrounds. The products include CIL practice briefs, manuscripts for publication, podcasts, conference and webinar presentations, and a website and shareable media to disseminate these products widely.
Aging and Participation After Spinal Cord Injury: Promoting Utilization to Enhance Community Outcomes

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Project Number: 90DPCP0009
Start Date: September 01, 2020
Length: 60 months

NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 20 $499,890; FY 21 $499,890; FY 22 $499,890; FY 23 $499,890; FY 24 $499,890

Abstract: This project builds upon the Spinal Cord Injury (SCI) Longitudinal Aging Study with new research and utilization components to improve community outcomes for individuals with SCI across the life span. The goal is to identify how community participation changes over time, differs as a function of race/ethnicity, and is impacted by significant life events; and to facilitate the development of an innovative resource program to enhance community participation among individuals with SCI. Additionally, this project partners with the Minnesota Department of Health to improve community outcomes of persons with chronic SCI and facilitates knowledge translation of key research findings and links to care. The objectives of this project are to identify: (1) aging related longitudinal trajectories in participation, (2) modifiable person and environmental factors related to change, and (3) how participation relates to corresponding changes in health and employment. Project research activities include: (1) conducting a qualitative study of 60 participants, equally divided based on years’ post-injury (under 25, 25-39, 40+); (2) longitudinal follow-up of participants who have completed between 4-9 previous assessments (n = 406); and (3) assessment of more recently injured participants, oversampling those from underserved racial/ethnic groups (n = 800, N = 1206). Products may include: (1) new data from which to guide policy, practice, and self-management; (2) archival data; (3) publications, presentations, webinars, and stakeholder products; (4) development of guidelines for active participation while aging with SCI; and (5) a monograph including a summary of methodology, study findings, and the life stories of 20 individuals with long-standing SCI.
Disability and Rehabilitation Research Projects (DRRPs)  
Utah

A Socio-Ecologic Framework Supporting Individuals with Disabilities’ Community Living and Participation

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Project Number: 90DPCP0004  
Start Date: September 30, 2019  
Length: 60 months

NIDILRR Officer: Amanda Reichard, PhD  
NIDILRR Funding: FY 19 $500,000; FY 20 $500,000; FY 21 $500,000; FY 22 $500,000; FY 23 $500,000

Abstract: This project develops a socio-ecologic framework to examine the physical environmental factors associated with community participation of individuals with disabilities, and the effect of mainstream community planning practices and policies on their community participation. Project objectives include: (1) developing a computational model, using UrbanSim, of physical community environment context (housing, employment, services); (2) developing a computational model of social networks and activities of daily community living; (3) developing a computational model, using four-step demand forecasting, of community transportation context; (4) constructing a socio-ecologic framework describing the interdependent relationships between community environment context, transportation context, social networks, and activities of daily community living; (5) identifying current recommended community-scale planning best practices and model policies (codes and ordinances) which support the community living and participation of individuals; (6) using the socio-ecologic framework, examine these community-scale planning practices and policies effects on community participation and activities of daily community living (intervention efficacy research); (7) developing and disseminating a socio-ecologic community infrastructure planning tool which may be implemented in mainstream community planning to support the community living and participation of individuals with disabilities; (8) developing and disseminating validated community-scale planning practices and model policies (codes and ordinances) which may be implemented in mainstream community planning to support the community living and participation of individuals with disabilities; and (9) integrating interdisciplinary academic and community collaborative opportunities to enhance awareness and promote meaningful application of a socio-ecologic understanding of the role community environment and transportation contexts play in community living and participation. Project outcomes are disseminated as tools, practices, and policies which contribute to greater opportunities for people with disabilities to live more fully and independently, enjoy self-determination, contribute to society, pursue meaningful careers, and enjoy full inclusion and integration in economic, political, social, cultural, and education mainstream society.

NIDILRR Program Directory FY 2020 - Community Living and Participation

2-20
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; FY 20 (No-cost extension through 9/29/2021)

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.

NIDILRR Program Directory FY 2020 - Community Living and Participation
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Field Initiated Projects (FIPs)
Alabama

CrossingPoints High Tide

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Project Number: 90IFDV0007
Start Date: September 30, 2018
Length: 36 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 18 $199,964; FY 19 $199,974; FY 20 $199,970

Abstract: The goal of the CrossingPoints High Tide project is to develop, test, and refine a model of off-campus integrated community living and participation for students with intellectual disabilities (ID) attending the CrossingPoints postsecondary program at The University Alabama. Drawing upon a pilot study involving summer on-campus dorm living, the objectives are to: (1) develop a replicable model of integrated off-campus community living and participation for students with ID; (2) develop a model of integrated peer living involving college students with and without ID; (3) develop partnerships with community residential providers to support integrated community living by college students with ID; (4) foster skills for independent college living and integrated community participation by students with ID; and (5) assess the impact of integrated off-campus community living and participation on both peer mentors and students with ID resulting from participating in the CrossingPoints High Tide Program.

Outcomes include: (1) a framework for colleges and universities with programs serving students with ID to provide integrated independent living and community participation; (b) peer mentors and college students with ID living and participating in integrated off-campus community settings; (c) community partners and other residential stakeholders supporting integrating off-campus student housing for students with and without ID; (d) students with ID demonstrating skills and competencies critical for successful independent living and participation in an integrated community; and (e) peer mentors demonstrating social role valorization while those with ID demonstrate increased self-determination and improved desired postsecondary transition outcomes.
Testing an Intervention to Promote Financial Wellness Among Adults with Psychiatric Disabilities

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Project Number: 90IFRE0042
Start Date: September 01, 2020
Length: 36 months

NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 20 $199,579; FY 21 $199,542; FY 22 $199,931

Abstract: The goal of the study is to conduct a randomized controlled trial to test the effectiveness of a financial literacy intervention called Building Financial Wellness (BFW) delivered to adults with serious mental illness. The objectives of the project are to recruit and randomly assign 100 people with serious mental illness to an experimental condition that receives BFW, or to a control condition that receives services as usual. Researchers assess changes in the primary outcome of financial distress and well-being, and the secondary outcomes of economic self-sufficiency, financial strain, financial anxiety, general depression and anxiety, and basic financial knowledge. The objectives include: (1) recruiting and retaining research participants; (2) delivering BFW with a high level of fidelity and quality; (3) gathering outcome, demographic, and clinical data; and (4) conducting statistical analyses to test study hypotheses and assess participant satisfaction with the intervention. The products from this project include publications in peer-reviewed journals, presentations at scientific conferences, and social media posts sharing study results and access to the intervention. The ultimate goal of this project is to deliver the first evidence-based financial literacy curriculum for adults with psychiatric disabilities, which will be made available to the field free of charge. Project partners include Collaborative Support Programs of New Jersey, Trilogy Behavioral Healthcare of Chicago, and Sertoma Centre Inc. of Illinois.
Community Life Engagement Guidepost Fidelity Scale Development and Testing

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Project Number: 90IFRE0025
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 19 $199,999; FY 20 $199,999; FY 21 $199,999

Abstract: This project develops and tests the Community Life Engagement (CLE) Guidepost Fidelity Scale (GFS). CLE is defined as a key outcome of day services and supports whereby individuals with intellectual and developmental disabilities (IDD) access and participate in the community as part of a meaningful day. The development of the GFS is based on assessing service provider’s adherence to the four guideposts for CLE, a research-based model for day services and supports that lead to CLE. Project objectives move existing research from the exploration and discovery stage to the intervention development stage and include: (1) advancing an existing self-assessment tool into a complete, scorable GFS; (2) assessing content validity of the GFS via a Delphi panel process; and (3) further testing of validity and reliability with a sample of 300 service provider personnel. The outcome of this project is to increase service provider capacity to deliver day services and supports that lead to CLE for people with IDD. Products include the GFS itself, one manuscript submitted to a peer-reviewed journal, conference presentations, webinars, research briefs for various audiences, and an online CLE training module for direct support professionals. This project is being conducted by the Institute for Community Inclusion (ICI), in partnership with the American Network of Community Options and Resources (ANCOR), and the Association of People Supporting Employment First (APSE).
Field Initiated Projects (FIPs)
Massachusetts

Developing Implementation and Fidelity Monitoring Tools for the Bridge for Resilient Youth in Transition (BRYT) Program

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Project Number: 90IFDV0014
Start Date: September 01, 2020
Length: 36 months

NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 20 $199,995; FY 21 $199,635; FY 22 $199,002

Abstract: This project develops, tests, and refines standardized implementation products for the Bridge for Resilient Youth in Transition (BRYT), an innovative program that supports high school students returning from an extended absence due to mental health crises. Most schools are ill-prepared to adequately support students’ unique clinical, social, and academic needs during this transition. The BRYT program provides integrated and individualized supports for these students and their families. A preliminary evaluation of BRYT showed positive outcomes as a result of BRYT participation and BRYT’s implementation in over 100 high schools to-date establishes it as a feasible intervention. However, BRYT currently lacks the specific and standardized tools required to implement and evaluate BRYT in a future fully powered randomized control trial. This project produces: a BRYT intervention logic model and a BRYT implementation package including includes a BRYT manual, a BRYT training and technical assistance plan, and fidelity measures and protocols. Development activities include: (1) focus groups and interviews with BRYT stakeholders to finalize the BRYT logic model; (2) partnering with BRYT stakeholders to develop the BRYT implementation package; and (3) piloting and iteratively refining the implementation package with active feedback from BRYT stakeholders. Project outcomes foster the establishment the proof of concept of the BRYT intervention (i.e., BRYT logic model) and the proof of concept and proof of product of the BRYT implementation package. This project is a collaboration of the Brookline Center and the Transitions to Adulthood Center for Research, Implementation Science and Practice Advances Research Center (iSPARC) at the University of Massachusetts Medical Schools.
ACT Together: Using Technology to Facilitate Service Integration for Individuals with Psychiatric Disabilities

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Project Number: 90IFDV0005
Start Date: September 30, 2018
Length: 36 months

NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 18 $199,877; FY 19 $199,581; FY 20 $199,952

Abstract: The goal of this project is to leverage successful technologies developed in previous projects to create ACT Together, a technology platform for enhanced Assertive Community Treatment (ACT) service delivery for consumers with serious psychiatric disability. ACT is an evidence-based, team-delivered intensive care management model that supports comprehensive integrated community-based care for individuals with severe psychiatric disability to promote community living and participation. ACT emphasizes recovery, shared decision-making, and active consumer-driven treatment planning. It is resource intensive and requires ongoing coordination between team members, consumers, and community services and supports. Project activities are organized to meet the following objectives: (1) identify areas of adaptation and expansion of existing technologies through focus groups and interviews with consumers and ACT providers; (2) iteratively develop ACT Together using state-of-the-art, state-of-the-science, and industry standard user-centered processes that involve continuous input from consumers and provider team stakeholders, and (3) evaluate acceptance and feasibility of the ACT technology with four ACT teams in a 6-month implementation trial. The project assesses the impact of use of ACT Together on the following outcomes: implementation process, client service engagement, ACT provider job satisfaction, and consumer client empowerment and satisfaction with ACT care.
Return to School (RTS): A Mixed Methods Investigation of Community Integration After Pediatric Rehabilitation

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Project Number: 90IFRE0030
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 19 $199,356; FY 20 $199,945; FY 21 $198,047

Abstract: Education is an essential part of childhood, and attending school is vital to community integration for children with special health care needs. These children continue to face significant barriers to obtaining a high-quality educational experience, despite decades of federal legislation designed to promote full inclusion and access to schools for everyone. Children with special health care needs often struggle with school functioning because chronic health problems increase the risk for lengthy illnesses and hospitalizations. Pediatric rehabilitation specialists assist these children and their families with the transition back to school after a health event. However, the educational outcomes of these children are largely unknown. Particularly, there is a profound lack of long-term information available to help clinicians, families, and educators plan for the dynamic experience of disability as a child develops and interacts with the school environment. Healthcare providers need this information to evaluate their transition services from hospital to community and develop new interventions that can improve the educational success of these children over time. In a previous study, the research team pilot tested the feasibility of using state educational records to understand long-term school outcomes for a very diverse population of children with special health care needs. This work identified and consented a large cohort of children who returned to school in New Jersey after an inpatient hospitalization and successfully linked to their education data. The purpose of the current project is to expand upon this initial work and engage former patients and their families to identify the school experiences and processes that affect quality of life. The researchers use a combination of educational records, focus groups, and interviews to understand the experience of return to school after pediatric rehabilitation. The goal is to develop a prospective process to identify the educational needs of children with special health care needs that can be implemented across a variety of healthcare settings. The information produced by this study will help improve the coordination between healthcare systems, schools, and families. Information from this study will also be used to develop guidelines to inform public policy for special education services, the development of interventions such as long-term social work follow-up and support, peer support groups, and medical education for clinicians about community integration issues faced by some of our most vulnerable children and adolescents.
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; FY 20 (No-cost extension through 9/29/2021)

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 U.S. though 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.
Field Initiated Projects (FIPs)
Oregon

Getting Out: Development of a Web-Based Application to Leverage Social Capital and Enable Self-Directed Community Participation for Individuals with Significant Cognitive Disability

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Project Number: 90IFDV0008
Start Date: September 30, 2018
Length: 36 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 18 $199,974; FY 19 $199,939; FY 20 $199,948

Abstract: This project develops an innovative web application, Getting Out, that provides a cognitively accessible tool for individuals with mild to moderate cognitive disabilities to help them effectively maintain social relationships established during high school transition, build new relationships, and turn virtual connections with social network members with and without disabilities into real world relationships around activities of common interest and mutual support. The project has two goals: (1) to develop a proof of concept version of the Getting Out application in collaboration with the Eugene 4J Schools Connections Transition Program (Connections), and (2) develop a proof of product version of Getting Out and evaluate its effectiveness in the City of Eugene’s Adaptive Recreation Program as a tool to promote inclusive recreation and community participation, followed by extensive beta testing by similar organizations and the general public. Major objectives take place over a three-year period. During Year 1, the project develops and evaluates the Getting Out proof of concept, conducts feasibility testing, and publishes specifications for full development in partnership with Connections. Transition students aged 18-22 with mild to moderate cognitive disabilities including autism and intellectual disabilities are engaged as usability testers and feasibility study participants. During Year 2, the project develops a minimally viable application product for collaborative implementation with participants in the Eugene Adaptive Recreation Services Program, and evaluates the prototype using qualitative methods and a within-subjects repeated measures effectiveness study. In the final year, the project continues development and evaluation on social engagement with both collaborating program, as well as public beta testing in preparation for commercialization. Outcomes include increasing self-direction and community participation and increased creation of social capital for inclusion. Products include a web application with high potential for commercial marketing that integrates with the Cognitopia Connect Platform to meet users’ need for life management tools, and dissemination of project results through written reports and multimedia presentations to diverse audiences.
Field Initiated Projects (FIPs)
Oregon

Project B-JUST: Brain Injury & Juvenile Services Training: Empirically Defining Training Needs and Competencies for Juvenile Services Personnel for Young Offenders with TBI

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Project Number: 90IFRE0033
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 19 $200,000; FY 20 $200,000; FY 21 $200,000

Abstract: The goal of this project is to improve the service provision for young offenders with traumatic brain injury (TBI) in juvenile corrections settings through completion of Project B-JUST: Brain Injury & Juvenile Services Training. Research has illustrated that youth with TBI in juvenile corrections are not receiving the support needed to achieve positive outcomes. Many staff in juvenile correction facilities lack the knowledge and skills needed to adequately support youth due to little or no professional development relevant to youth with TBI. Objectives of this project are to: Identify the initial training needs of juvenile services personnel working with youth offenders with TBI; confirm those training needs through a more comprehensive survey of juvenile correction personnel training needs; and identify core competencies across correctional personnel roles to inform the development of initial training materials for each residential juvenile services personnel stakeholder group. The primary outcome of B-JUST is to empirically identify the core training competencies for the juvenile services personnel which, if utilized, will improve service provision and ultimately improve life outcomes of young offenders with TBI. The products ready for dissemination at the completion of this project include: (a) core training competencies for each type of juvenile services personnel, and (b) a collection of training materials (e.g., quick guides, tip sheets) targeting TBI services aligned with the training competencies.
Increasing Community Participation in Young Adults with Autism Living in Rural Communities

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Project Number: 90IFRE0018
Start Date: September 30, 2018
Length: 36 months

NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 18 $199,999; FY 19 $200,000; FY 20 $199,999

Abstract: This project assesses the impact of PArticipation in Rural Settings to Engage in Communities (PARSEC), an intervention for families of young adults with autism living in rural areas to increase community participation. Approximately 27,000 individuals with autism reside in a rural community in Pennsylvania. Individuals living in rural communities often experience multiple barriers to community participation. Recent data assessing community participation in young adults with autism demonstrated significantly lower rates and variability of community participation in comparison to same-age peers without autism. Participants will enroll in PARSEC for a minimum of 3 months and up to 12 months. PARSEC is assessed to determine whether participants report higher number of days participating in community activities and more variation of community activities as compared to baseline. Quantitative analyses are used to assess two primary outcomes (e.g., days of community participation, number of community participation activities) from self- and caregiver-report questionnaire. Qualitative analyses are used to assess for satisfaction with the intervention and identify barriers to engagement.
Field Initiated Projects (FIPs)
Pennsylvania

Enhancing Community Participation for Adults with Autism Spectrum Disorders Through Peer-Mediated Transportation Interventions

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Project Number: 90IFRE0013
Start Date: September 30, 2018
Length: 36 months

NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 18 $200,000; FY 19 $200,000; FY 20 $200,000

Abstract: This project develops and tests a peer-mediated intervention to reduce barriers to public transportation for transition-aged youth and adults with autism spectrum disorders (ASD). Transportation is a major obstacle to accessing essential services and overall community participation for many individuals with ASD. Driving is often not a viable option due to the impact of the disability or lack of financial resources, resulting in a reliance on alternative modes of transportation. Public transportation is a low-cost option, although often avoided due to lack of training and experience. Preliminary research has demonstrated positive outcomes of training programs for people with disabilities to learn how to use public transportation systems, although none of the interventions explored the impact of peers as interveners. Peer-mediated interventions connect two individuals with a shared lived experience (i.e., condition of ASD), which is believed to enhance the interpersonal relationship, benefits of role modeling, and promote a more equal relationship. The goals of this project are to: (1) implement a randomized control study with 64 participants to determine the efficacy of an innovative peer-mediated intervention to reduce transportation barriers for transition-aged youth and adults with ASD; (2) determine dosing recommendations for the intervention; and (3) collect qualitative data to identify potential outcomes for future studies targeting peer-interventionists.
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; FY 20 (No-cost extension through 9/29/2021)

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)
Texas

Efficacy of the ASD Screening and Parent ENgagement (ASPEN) Intervention Program in Low-Resource Communities

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Project Number: 90IFST0004
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 19 $199,998; FY 20 $199,873; FY 21 $199,999
Abstract: The goal of this project is to examine the efficacy of the Autism Spectrum Disorder (ASD) Screening and Parent ENgagement (ASPEN) intervention, a culturally-informed parent-mediated intervention (PMI) program when delivered to caregivers and children at risk for ASD who reside in low-resource households. The objectives are: (1) to assemble an advisory group comprised of community and parent leaders to inform the intervention development and implementation; (2) to deliver a PMI program to families with young children at risk for ASD in low-resource communities; (3) to improve developmental outcomes in young children at risk for ASD; and (4) to improve parenting practices among caregivers of children at risk for ASD. The result is an intervention that is culturally- and linguistically-informed, acceptable and feasible in these communities, and leads to gains in social communication and reduction in challenging behavior in children at risk for ASD and gains in knowledge and skills for their parents and caregivers.
Identifying Predictors for Enhanced Outcomes for People with Intellectual and Developmental Disabilities

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Project Number: 90IFRE0015
Start Date: September 30, 2018
Length: 36 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 18 $200,000; FY 19 $200,000; FY 20 $200,000

Abstract: The overall goal of this project is to determine what individual and service characteristics are associated with better outcomes for people with intellectual or developmental disabilities (I/DD), and how these factors interact with costs. Researchers utilize state databases to retrieve and link individual-level data on demographic characteristics, support needs, Medicaid expenditures, and service outcomes. Data sources include the National Core Indicators Project Adult Consumer Survey, assessment scores from the Supports Intensity Scale, and Medicaid claims for fiscal years 2017 and 2018. Research objectives are to: (1) identify predictors of enhanced outcomes for people with I/DD who use Medicaid long term supports and services, and (2) examine how individuals’ outcomes change over time as Medicaid systems change policies and practices are implemented. Outcomes include research findings that can be used in advocacy and programmatic decision making to improve the participation of individuals with I/DD in community living, and documentation and national dissemination of a process for linking and analyzing state datasets, so that I/DD systems across the country can adapt project protocols to measure I/DD system quality and the impact of system changes in their own states.
Small Business Innovation Research (SBIR), Phase I
California

**SkillTalk: Using Streaming Video for Young Adults with Autism Spectrum Disorder to Build Microskills to Develop and Sustain Relationships for Healthy and Independent Living**

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**Principal Investigator:** Regina Firpo-Triplett, MPH, MCHES

**Public Contact:** 831/440-2162

**Project Number:** 90BISA0037

**Start Date:** September 01, 2020

**Length:** 6 months

**NIDILRR Officer:** Amanda Reichard, PhD

**NIDILRR Funding:** FY 20 $99,999

**Abstract:** This SBIR project develops and tests SkillTalk, a prototype video-delivered microskills training program to improve relationship skills among transition-age adults between 18 and 28 years with autism spectrum disorder (ASD). Microskills such as showing empathy, active listening, and open-ended questioning can help build relationships. During Phase I, this project (1) conducts formative research with transition-aged adults with ASD; (2) develops content for 2 relationship skillsets and 20 corresponding microskills training; (3) produces training videos approximately 30 to 120 seconds in length; and (4) develops and evaluates a prototype of the SkillTalk platform. Projected outcomes include the successful development of the SkillTalk platform that provides individuals with ASD the skills to increase community involvement, form successful friendships and romantic relationships among their peers, and ultimately improve mental health outcomes and quality of life. This project is conducted in partnership with experts in ASD relationships and sexuality as well as youth with lived experience.
Maximizing health and function among people with disabilities is critical to the achievement of NIDILRR’s mission and the associated higher-order outcomes of employment as well as community living and 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 and more integrated rehabilitation and long-term services and supports.

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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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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 Center on Integrated Health Care and Self-Directed Recovery

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Principal Investigator: Judith A. Cook, PhD 312/355-3921
Public Contact: Jessica A. Jonikas 312/355-1696; Fax: 312/355-4189

Project Number: 90RT5038
Start Date: September 30, 2015
Length: 60 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 15 $574,951; FY 16 $574,991; FY 17 $574,986; FY 18 $574,937; FY 19 $574,927; FY 20 (No-cost extension through 9/29/2021)
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 experts 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.
Rehabilitation Research and Training Centers (RRTCs)
Illinois

Rehabilitation Research and Training Center (RRTC) on Health and Function of People with Psychiatric Disabilities

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Project Number: 90RTHF0004
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 20 $874,569; FY 21 $874,931; FY 22 $874,960; FY 23 $874,073; FY 24 $874,010

Abstract: This project establishes the Rehabilitation Research and Training Center (RRTC) on Health and Function of People with Psychiatric Disabilities. Project activities include: (1) conducting a national web survey on the status of adults with psychiatric disabilities during the COVID-19 pandemic; (2) developing and testing a model for rebuilding health and wellness in the pandemic aftermath; (3) developing and testing a blended telehealth navigation intervention designed to promote access to primary health care; (4) conducting a national survey to assess the health status and health care utilization of the certified peer specialist workforce; (5) testing a virtual mental health self-management program and creating and evaluating a national certification for its providers; and (6) conducting a national web survey of the health of transition-age youth followed by a qualitative longitudinal study of disrupted transitions to normative adult roles due to the pandemic. This RRTC also establishes a national resource center, the University of Illinois at Chicago (UIC) Practice, Policy, & Science Exchange for Health and Wellness, to deliver training, dissemination, and technical assistance on promoting health and function of youth and adults with psychiatric disabilities. Anticipated outcomes of this RRTC include: (1) improved health and function of youth and adults with psychiatric disabilities, (2) effective self-management of health and mental health conditions to promote self-determination, (3) development of the peer specialist workforce, (4) increased health care access and treatment utilization, and (5) normalized recovery of health and function as all people rebuild their lives following the COVID-19 pandemic. Expected products include four intervention manuals (healthy restart, smoking cessation, immune health, telehealth navigation); a comprehensive education program for emerging physicians; a podcast series on participatory action health research; interactive research education through social media; and knowledge translation activities embedded in five mental health organizations.
Research and Education to Support the Science of Independent Living for Inclusion and Engagement: National Center of Excellence RRTC (RESILIENCE RRTC)

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Principal Investigator: Sarah L. Szanton, PhD, MSN, RN; Deborah Gross, DNSc, RN; 410/502-2605
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Project Number: 90RTGE0003
Start Date: June 01, 2020
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 20 $873,625; FY 21 $781,400; FY 22 $874,723; FY 23 $874,143; FY 24 $874,810

Abstract: This project aims to advance translational research and implementation science and increase the availability of evidence-based interventions that improve caregiver support services for those assisting family members with a disability. The Research and Education to Support the Science of Independent Living for Inclusion and Engagement: National Center of Excellence RRTC (RESILIENCE RRTC) improves the health and function of people with disabilities and their caregivers through two evidence-based programs: Community Aging in Place Advancing Better Living for Elders (CAPABLE) and Chicago Parent Program (CPP) based at the Johns Hopkins School of Nursing. This project adapts and tests the CAPABLE and CPP programs for new populations and new delivery methods and improves sustainability by incorporating key stakeholder perspectives. The project uses human-centered design methods and a multi-level resilience framework to establish a national resource center on disability and caregiving to provide information and technical assistance to consumers, and to provide training to post-doctoral fellows and to disability and aging services providers. Center outputs include: (1) an individualized format for the Chicago Parent Program, (2) training modules for clinicians and family members to involve caregivers in CAPABLE, (3) practice support for primary care settings to integrate CAPABLE, (4) a policy conference, and (5) plain language fact sheets for dissemination of results through partnerships with organizations serving people with disabilities and their caregivers.
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Project Number: 90RTHF0003  
Start Date: September 30, 2019  
Length: 60 months  
NIDILRR Officer: Pimjai Sudsawad, ScD  
NIDILRR Funding: FY 19 $874,963; FY 20 $874,964; FY 21 $874,985; FY 22 $874,988; FY 23 $874,999

Abstract: This Rehabilitation Research and Training Center on Health and Function for People with Physical Disabilities focuses on people with physical disability who have neurogenic lower urinary tract dysfunction (NLUTD). NLUTD cuts across multiple types of physical disability and commonly affects people with spinal cord injury and disease (SCI/D), stroke, spina bifida, multiple sclerosis, Guillain-Barre syndrome, brain injury, Parkinson’s disease, and others. As such, this project serves a broad range of people with physical disability with the three research projects. In R1, researchers examine the expanded use of intravesical Lactobacillus for urinary symptoms among people with NLUTD who use indwelling catheters for bladder management. In R2, researchers assess neuromodulation of the bladder using transcutaneous tibial nerve stimulation in a randomized controlled trial. In R3, in conjunction with an ongoing clinical trial, researchers describe the impact that bladder management has on quality of life and participation outcomes and assess these in the context of the first-in-human clinical trial of the Connected Catheter (a urethral prosthetic designed to allow for on-demand voiding in people with NLUTD). Consumer experts (i.e., people with or caregivers for people with NLUTD) are integrated with all research and dissemination efforts (including leading consumer dissemination activities) ensuring that research activities are relevant and impactful for the community of people with physical disability and NLUTD. The RRTC is a collaboration of rehabilitation centers including Georgetown University (GU), The Institute for Rehabilitation Research (TIRR), Children’s National Medical Center (CNMC) in partnership with national organizations such as the Neurogenic Bladder Research Group, Spina Bifida Association, United Spinal Association, and National Multiple Sclerosis Society.
Rehabilitation Research and Training Centers (RRTCs)
Michigan

Rehabilitation Research and Training Center (RRTC) on Promoting Healthy Aging for People with Long-Term Physical Disabilities

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Project Number: 90RTHF0001
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 18 $874,960; FY 19 $874,935; FY 20 $874,913; FY 21 $874,927; FY 22 $874,984

Abstract: Despite evidence of the importance of environmental factors for health and functioning outcomes for individuals with disabilities, it is often personal factors which are the focus of healthy aging studies and interventions. The overarching goal of the Investigating Disability factors and promoting Environmental Access for Healthy Living RRTC (IDEAL RRTC) is to promote the healthy aging of adults with long-term physical impairments and disabilities. This is achieved by identifying factors at the intersection of the person and environment that impede or support positive health and function outcomes and creating solutions that improve the fit between the two. The objectives of the synergistic group of research projects under this center are to: (1) identify how different person-level characteristics interact with environmental characteristics to influence healthy aging for people with physical disabilities using national, longitudinal databases; (2) identify best practices for promoting healthy aging with physical disabilities across individuals from diverse socioeconomic communities; and (3) develop a suite of informed interventions that promote healthy aging at the intersection of person and environment. Outcomes include a better understanding of the person-environment fit so that persons with physical disabilities, their families, and care providers can optimize healthy aging. Center outputs include interventions that will serve as the basis for the Center’s training, technical assistance, and dissemination activities, including: (1) best-practices alerts for medical information systems; (2) tailored information about best practices and community programs; (3) on-demand environmental audits; and (4) policy briefs.
Can You Hear Me Now? Listening to People with Intellectual and Developmental Disabilities in Health Research

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Project Number: 90RTHF0002
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 18 $875,000; FY 19 $875,000; FY 20 $875,000; FY 21 $875,000; FY 22 $875,000

Abstract: The goal of this rehabilitation research and training center is to conduct systematic research that contributes to improving the long-term health-related function and quality of life outcomes for adults with intellectual and developmental disabilities (I/DD). The research objectives are to: (1) adapt diagnostic, health, and health-related quality of life measures to increase self-report in adults with I/DD; (2) determine the prevalence of mental health conditions and health outcomes among adults with I/DD; and (3) develop best practice guidelines for psychotherapy for adults with I/DD. Project outcomes include: (1) stronger voice for self-advocating adults with I/DD in health research; (2) known prevalence of people with I/DD and co-occurring mental health conditions; (3) better understanding of health outcomes in adults with I/DD and co-occurring mental health conditions; and (4) established psychotherapy guidelines to advance mental health treatment for adults with I/DD. Project outputs include: (1) new cognitively accessible, reliable, and valid health measures for adults with I/DD; (2) guidelines on providing mental health care for adults with I/DD; and (3) peer-reviewed publications, policy briefs, cognitively accessible data briefs, conference presentations, and training webinars. To ensure the quality and relevance of our work, the center engages people with I/DD throughout the project to emerge as a national resource on health and function for people with I/DD.
Abstract: The Rehabilitation Engineering Research Center (RERC) on Information and Communication Technologies (ICT) Access for Mobile Rehabilitation (mRehab) develops, evaluates, and disseminates information about mRehab interventions to optimize health and function of people with disabilities. mRehab refers to the delivery of rehabilitation services and support for home-based rehabilitation using mobile ICT. When executed successfully, mRehab can address key challenges of access and affordability of rehabilitation services for people with disabilities. mRehab interventions can support home-based interventions and instructions, support the use remote sensor technology to gather timely data on patient status rather than relying on imprecise recall during clinic visits, and update prescribed home therapy between visits. The centerpiece of the mRehab RERC is use of “Big Data” analytics to change the paradigm of outpatient rehabilitation with the goal of improving the effectiveness of conventional home-based rehabilitation through a combination of innovative digital health technologies such as: (1) app-based therapy management; (2) sensor-based activity tracking and gamified exercise; and (3) an advanced analytic toolset for monitoring, managing, and optimizing mRehab delivery. To cultivate the use of “Big Data” analytics, this RERC develops a repository with an artificial intelligence core trained on historical data from over 500,000 users. The repository is used to: (1) provide understanding of the factors associated with successful outcomes; (2) develop patient profiles to predict therapy adherence, engagement, and outcomes; and (3) develop algorithms to support patients’ progress through the clinical path based on their participation profile and measured performance at home. Development projects focus on building new mRehab interventions, including use of conversational agents and machine learning to develop voice-interface capabilities; and research efforts focus on usability and preliminary efficacy studies to verify proof of concept of newly developed interventions, and a hybrid effectiveness-implementation trial to compare effectiveness of outpatient therapy using mRehab management tools versus conventional approaches. Partners in the RERC include Duke University; University of California, Irvine; Moss Rehabilitation Research Institute; and commercial partners Flint Rehab and Pt Pal.
Rehabilitation Engineering Research Centers (RERCs)
Maryland

Rehabilitation Interventions Based on Accurate Assessments with Combined Home-Hospital Rehabilitation

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Project Number: 90REMM0001
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 20 $924,855; FY 21 $925,000; FY 22 $924,885; FY 23 $924,901; FY 24 $924,964

Abstract: The mission of this RERC is to champion innovative technologies/approaches for assessment-based rehabilitation with combined hospital-home rehabilitation that will improve therapeutic outcomes among individuals with neurologic disorders and older adults with disabilities. This RERC develops and tests devices and techniques to increase the volume and effectiveness of impairment-specific therapies. Stroke and other neurologic disorders often involve considerable sensorimotor impairments with complex pathological changes: these impairments involve multiple muscle groups, multiple joints, and thus many variables are involved. These impairments negatively affect mobility and manipulation in a large population of patients. Due to this complexity, it is often not feasible to assess complicated impairment accurately through current clinical examinations. Furthermore, the vast majority of therapies focus on in-clinic, one-on-one treatments with therapists, and there is a need for combining technology-enabled home therapies and accurate impairment assessments to augment clinic-based treatment. This RERC develops and tests devices and techniques that may increase the volume and effectiveness of impairment-specific therapies. Many rehabilitation technologies, including rehabilitation robots, have been developed and applied to rehabilitation successfully. However, there is a lack of combined accurate assessment and treatment protocols and devices that evaluate and treat specific impairments. The RERC objectives are to assess closely related impairments post-stroke or associated with older adults with high fall risks, including sensorimotor impairments across multi-joints, impaired balance and gait post-stroke, and reduced balance and increased risk of falls associated with aging. Outcomes include accurate assessments of mobility and manipulation impairments and improvements following combined hospital and home rehabilitation, ranging from muscles to joint, from single to multiple joints, from hand to arm, and from balance control to stepping. The project develops novel products, including assessment tools, wearable rehabilitation robots, multi-joint arm/hand robots, and sliding-stepping robots.
Disability and Rehabilitation Research Projects (DRRPs)
California


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Project Number: 90DPHF0007
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 20 $349,922; FY 21 $349,674; FY 22 $348,427; FY 23 $349,420; FY 24 $349,171

Abstract: The primary goal of this project is to test and refine a novel prototype smart system built from an existing smart technology platform aimed at changing pressure relief activity behavior in manual wheelchair (MWC) users with spinal cord injury (SCI). For these individuals, pressure injuries are one of the most frequent secondary complications. These injuries limit independence and reduce quality of life, while complications arising from them are the second leading cause of death in individuals with SCI. Regular performance of pressure relief activities (i.e., leans and lift-offs) is a key component of preventing pressure injury development: these activities offload the skin and allow blood perfusion. However, patient adherence to pressure relief recommendations is low and new approaches to help individuals with SCI develop positive pressure relief activity behaviors are needed. The latest smart technologies offer a potential avenue to address these issues. These technologies have a wide range of advanced sensing, artificial intelligence, and feedback capabilities, and have recently been adapted for use in improving health outcomes. This project refines a prototype smart system in collaboration with potential end users (e.g., MWC with SCI, clinicians) to ensure that the user factors limiting mass adoption and utilization are addressed. Researchers will establish the efficacy of the fully developed system to produce behavioral change through active real-time feedback and coaching under real-world conditions encountered at home and in the community. Researchers will also evaluate the feasibility of integrating state-of-the-art temperatures and humidity sensors (additional contributors to pressure injury development) into this system. This project provides advances in four key areas related to pressure injury prevention: (1) identifying obstacles to adoption of existing technologies and specifically characterizing the needs of individuals with SCI for future technology development; (2) generating new datasets and knowledge as to how individuals with SCI might utilize a consumer-based system over a multi-year time-period, including identifying obstacles to long-term technology adoption, retention and engagement; (3) evaluating the feasibility and effectiveness of temperature and humidity sensors as complementary technologies added into a pressure sensing system; and (4) generating a new fully-realized real-time sensor and feedback system that will be ready for large-scale adoption.

NIDILRR Program Directory FY 2020 - Health and Function
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Disability and Rehabilitation Research Projects (DRRPs)
Colorado

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.
Disability and Rehabilitation Research Projects (DRRPs)
Colorado

Characterization and Treatment of Chronic Pain After Moderate to Severe Traumatic Brain Injury

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clinicaltrials.gov/ct2/show/NCT03739307

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Project Number: 90DPTB0017
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 18 $600,000; FY 19 $600,000; FY 20 $600,000; FY 21 $599,999; FY 22 $600,000
Other Funding: FY 18 $127,000 (ACL TBI State Partnership Program)

Abstract: This project researches and evaluates the treatment needs of individuals with living with chronic pain; specifically, individuals with traumatic brain injury (TBI). Living with chronic pain impacts almost all aspects of a person’s life: physical function, concentration and memory, sleep, and feelings of depression, and anxiety and irritability. The aims of this project include (1) determining chronic pain classification (musculoskeletal, headache, central/neuropathic); the prevalence, location, duration, and demographic associations of those living in chronic pain; and the injury severity, current level of functioning, and comorbidities in participants followed through the NIDILRR-funded TBI Model Systems, and Department of Veterans Affairs databases; (2) identifying extreme groups based on responses to pain (interference and perception of improvement and treatment), or chronic pain extreme phenotypes to determine key differences between those with positive versus negative outcomes; and (3) identifying treatment practices by clinicians who treat comorbid TBI and chronic pain to determine gaps in availability and accessibility of guideline level treatment, and highlight underserved populations were applicable. Study results provide a more detailed picture of the issues surrounding chronic pain after TBI, and identify treatment targets (behavioral, cognitive, biological, and molecular) to advance a personalized medical approach for treatment for individuals with TBI living in chronic pain. Outcomes include educational materials on chronic pain and pain management that benefit patients, family members, clinicians, and policymakers; and a data-driven impact on clinical practice.
iManage Sexual Wellness:  
Development of a Symptom-Monitoring/Self-Management Program to Enhance Sexual Wellness After SCI and TBI

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Project Number: 90DPCP0010  
Start Date: September 01, 2020  
Length: 60 months  
NIDILRR Officer: Timothy Beatty  
NIDILRR Funding: FY 20 $499,986; FY 21 $499,995; FY 22 $499,987; FY 23 $499,909; FY 24 $499,900

Abstract: This project develops and evaluates iManage, a web-based symptom-monitoring/self-management system to improve sexual wellness in individuals with spinal cord injury (SCI) or traumatic brain injury (TBI). Sexual wellness, including the ability to participate in sexual activities, experience quality intimate relationships, identify as a sexual being, and experience full societal participation is a key dimension of recovery after traumatic injury. However, many individuals with SCI and/or TBI experience a significant post-injury reduction in sexual wellness. Unfortunately, psychometric outcome measures of sexual wellness after SCI or TBI and empirically supported intervention strategies are lacking. The iManage platform teaches individuals with SCI/TBI to independently monitor and improve their sexual wellness. Researchers work with individuals with SCI or TBI, their intimate partners, and SCI/TBI clinicians in developing two four-item response theory-calibrated item banks, one each for TBI and SCI, to assess the sexual wellness of individuals with TBI and SCI. Additionally, this project develops intervention videos to treat and improve sexual wellness in individuals with TBI/SCI. Project deliverables include the intervention platform (iManage) which teaches individuals with SCI or TBI to independently monitor and improve their sexual wellness through the completion of new measures and watching intervention videos prompted by their scores, resulting in an application which improves overall sexual wellness and quality of life.
Disability and Rehabilitation Research Projects (DRRPs)
District of Columbia

Improving Assessment of Opioid Use Disorder in People with Disabilities Related to Chronic Musculoskeletal Pain

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www.air.org/project/improving-assessment-opioid-use-disorder-people-disabilities-related-chronic-musculoskeletal

Principal Investigator: Kathryn Paez, PhD, MSN 301/592-2229
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Project Number: 90DPGE0006
Start Date: September 30, 2018
Length: 36 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 18 $499,979; FY 19 $499,909; FY 20 $499,826

Abstract: The goal of this project is to lay the groundwork for primary care providers and specialists to accurately assess for opioid use disorder (OUD) in people with disabilities who are taking opioids long term to manage musculoskeletal pain while using the best evidence to minimize OUD over- and under-diagnosis. The objectives are to: (1) conduct a systematic literature review to identify evidence-based best OUD assessment practices, tools, and resources; (2) identify barriers and facilitators to OUD assessment and treatment access through qualitative research; (3) adapt and test a screening tool to detect OUD in people who take opioids long term to manage musculoskeletal pain; and (4) develop an OUD assessment and referral toolkit and disseminate it through provider and disability organizations and those training providers in addiction medicine. The outcomes of this project are increased understanding of opioid misuse versus appropriate use in the target population, increased provider knowledge of steps to accurately assess for OUD, strategies for OUD risk stratification, and ways to facilitate transition into OUD treatment.
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; FY 20 (No-cost extension through 9/29/2021)

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.
Disability and Rehabilitation Research Projects (DRRPs)
Georgia

App Factory to Support Health and Function of People with Disabilities

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Project Number: 90DPHF0004
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 19 $475,000; FY 20 $474,986; FY 21 $474,928; FY 22 $474,990; FY 23 $474,932

Abstract: The goal of this project is to promote the development of smart phone technology mobile applications (apps) to address high-priority health needs of people with disabilities. Mobile healthcare or mHealth is an important new tool for management of chronic conditions; however, the increase of these mHealth “apps” may increase health disparities, leaving behind vulnerable populations, including people with disabilities. In a targeted effort to promote mHealth apps addressing the needs of people with disabilities, this DRRP applies the successful App Factory model to achieve the following objectives: (1) identify the need for mHealth app development targeting health and function of people with disabilities; (2) develop and deploy a selection of several mHealth apps per project year based on an annual competition targeting high priority needs; (3) evaluate long-term use and impact of mHealth apps on users with disabilities health, function, and quality of life outcomes; (4) evaluate curated mHealth apps to determine their suitability for users with disabilities, and disseminate information about accessibility and clinical utility of these apps; (5) provide training and technical assistance to people with disabilities and their support workers to aid in selection, set-up, and use of mHealth apps; and (6) provide training and technical assistance to app developers to support development of apps that address the needs of people with disabilities. This project partners with existing LiveWell RERC collaborators (Shepherd Center and Duke University), the University of Montana, and numerous commercial application partners. Deliverables include a minimum of 16 mHealth apps, a website with information about curated apps that are suitable for users with disabilities, and published articles documenting effectiveness of selected mHealth apps on health and function outcomes of people with disabilities.
A Multi-Center Clinical Trial to Evaluate the Effectiveness of Intermittent Hypoxia Therapy in Individuals with Spinal Cord Injury

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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:** Lisa Razzano, PhD; Sheila O’Neill

**Public Contact:** Nicole Pashka 773/572-5265

**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.
Disability and Rehabilitation Research Projects (DRRPs)
Illinois

Peer Navigators for the Health and Wellness of People with Psychiatric Disabilities

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Project Number: 90DPHF0008
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 20 $498,877; FY 21 $498,881; FY 22 $499,197; FY 23 $498,907; FY 24 $498,845

Abstract: This project tests the impact of a peer navigator program (PNP) on engagement of people with psychiatric disabilities in the existing service system to address their health and wellness goals. Peer navigators are people of similar ethnic heritage with lived experience of recovery. People with psychiatric disabilities become sick and die up to 20 years earlier than same age peers. One reason is their inability to engage in a fragmented health care system that is unable to coherently offer services to people with psychiatric disabilities. Service engagement is further hampered by social determinants of health including low income and ethnic disparities. Peer navigators are people of similar ethnic heritage with lived experience of recovery who can assist in successfully engaging with the health services system. This project is led by a community-based participatory research team of people with lived experience. Three hundred research participants are randomly assigned to eight months of PNP or integrated care as usual. Research design is informed by findings from two previous pilot studies on PNP. Research participants are assigned to 1 of 5 cohorts, each with 60 participants. Data is obtained at baseline, 4, 8, and 12 months, specifically data on service engagement, insurance status, hospital and emergency department use, prescription medications, blood pressure, physical and mental health symptoms, experience of health problems, depression, anxiety, recovery, and quality of life. Mediators are assessed including self-determination, personal empowerment, experience of peer disclosure, and perceived relationship for recovery. Process data examines feasibility, fidelity, and acceptability. Results inform updates of the manual and workbook, fidelity measure, and training plan, as well as dissemination and utilization activities.
Feasibility and Efficacy of a Fear of Falling Intervention for Wheelchair Users with Multiple Sclerosis

Principal Investigator: Harshal P. Mahajan, PhD
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Project Number: 90DPHF0010
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 20 $468,722; FY 21 $497,380; FY 22 $499,267; FY 23 $499,410; FY 24 $498,988

Abstract: This project evaluates a multi-factorial intervention to reduce fear of falling and associated adverse effects in wheelchair users with multiple sclerosis (MS). Specifically, the project goals are to conduct evaluations of feasibility, fidelity, and efficacy of a multi-factorial intervention in reducing fear of falling, improving falls self-efficacy, reducing activity avoidance, and ultimately increasing community participation among wheelchair users with MS. Project objectives are to: (1) independently examine effects of 12 weeks of personalized seated posture control and transfer training (TX) and 12 weeks of personalized environment modifications (EM) on fear of falling, falls self-efficacy, activity avoidance, and community participation; (2) examine intervention fidelity, TX, and EM sequence effects, and improve protocol manuals; (3) examine efficacy and fidelity of the combined TX+EM intervention; (4) conduct a randomized case control trial to examine short term efficacy and long term retention of TX+EM intervention; and (5) disseminate findings to clinicians and wheelchair users with MS. Outcomes include an increased evidence base to inform design of multifactorial falls and fear of falling prevention programs for wheelchair users with MS. Over the longer term, when these personalized interventions are integrated with training programs for new wheelchair users, they may reduce fear of falling related activity avoidance behaviors and positively impact community participation and health related quality of life.
BeHEALTHY: Chronic Disease Management for Traumatic Brain Injury (TBI)

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Project Number: 90DPHF0006
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 20 $500,000; FY 21 $500,000; FY 22 $500,000; FY 23 $500,000; FY 24 $500,000

Abstract: This project leverages the resources of the Traumatic Brain Injury (TBI) Model Systems, and partners with experts in collaborative care, self-management, policy, and consumer advocacy to develop a chronic disease management model for TBI. Growing evidence demonstrates brain injury can be a chronic, dynamic health condition with persistent health and psychosocial issues. Identifying chronic brain injury is essential for managing associated life-long conditions due to injury, and to improve health, independent function, and societal participation for individuals with TBI. “BeHEALTHY” aims to produce new knowledge to address evidence gaps in the management of brain injury as a chronic condition. The model—designed for people with TBI, their caregivers, and health providers—is developed based on foundational knowledge (i.e., systematic literature review) and refined through feasibility testing (approximately 12 studies). Research outcomes are decreased mortality and improved health, function, and quality of life for people with TBI through (1) prevention and/or reduction in the rates of new onset co-morbid disease and disability after TBI, (2) extended rehabilitation services that better integrate with community-based supports, and (3) creation of evidence-based recommendations for healthy longevity. Project dissemination targets individuals with TBI and their families, providers, researchers, payers, policy makers, and community-based agencies; and includes procedure manuals, presentations, publications, technical reports, policy briefs, and grant proposals.
INROADS: Intersecting Research on Opioid Misuse, Addiction, and Disability Services

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Project Number: 90DPGE0007
Start Date: September 30, 2018
Length: 36 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 18 $482,852; FY 19 $489,502; FY 20 $488,137

Abstract: The goal of the INROADS (INtersecting Research on Opioid Misuse, Addiction, and Disability Services) Project is to contribute to evidence-based policy and practice on behalf of people living with disabilities and opioid use disorder (OUD). The objectives are to: (1) conduct a systematic literature review on OUD and disability; (2) undertake comprehensive, targeted research activities with significant key informant input; and (3) engage the community of people with disabilities in shaping the research and informing INROADS products for widespread dissemination to diverse audiences. The project includes mixed methods research activities with analyses of quantitative data from multiple available national and state-level datasets, integrated with qualitative data from focus groups and key informant interviews, and examination of peer support services. Outcomes include knowledge transfer and dissemination of research findings to people with disabilities, advocates, practitioners, policy makers, and others, and, ultimately, improving access to care and facilitating lives in OUD recovery.
Motivating Self-Management Through Multi-Media Health Promotion

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www.facebook.com/Healthy CommunityLiving
twitter.com/WeAreHCL
www.flickr.com/groups/healthycommunityliving
www.youtube.com/channel/UCVu6D_eCN5aRQ6tYueCyg

Principal Investigator: Craig Ravesloot, PhD
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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; FY 20 (No-cost extension through 9/29/2021)

Abstract: This project, called Healthy Community Living (HCL), develops two web-based workshop curricula for community-based agencies to deliver health promotion and independent living training, and services to people with disabilities living in the community. The first development product, Living Well in the Community, is a multi-media curriculum 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, Community Living Skills, is a new multimedia independent living skills curriculum based on Self-Determination Theory that increases consumer knowledge, motivation and confidence for engaging in self-management activities and for living independently in the community. These products help to (1) 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, as well as (2) the opportunity to build important life skills to live independently in the community. 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 multiple Centers for Independent Living to participate as project development teams, pilot, and evaluation sites. 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). The development teams worked in parallel to develop each online multimedia curriculum using an Iterative Participatory Curriculum Development (IPCD) procedure. Pilot team testing led to further curriculum iterations and adaptations. Knowledge translation activities include developing new HCL program training and technical assistance procedures, including a Facilitating Groups Training, and dissemination of project outcome results to a variety of community-based programs (e.g., Centers for Independent Living, Aging and Disability Research Centers) and health promotion researchers.
Disability and Rehabilitation Research Projects (DRRPs)
Oregon

Enhancing Parenting Skills:
Application of a Web-Based Three-Tiered Model

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Project Number: 90DPHF0003
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 18 $474,502; FY 19 $474,347; FY 20 $474,507; FY 21 $474,217; FY 22 $474,686

Abstract: This project develops and rigorously evaluates an intervention to reduce challenging behavior in young children with intellectual and developmental disabilities. The objectives are: (1) to use input from stakeholders using a Community-Engaged Research framework to develop the Tiered Online Training and Support (TOTS) intervention, a web-based, three-tier model of parent training and support to manage behavioral challenges in home and community settings, (2) to test the efficacy of TOTS using a randomized controlled trial in collaboration with University Centers for Excellence in Developmental Disabilities (UCEDDs) in Oregon and Ohio, and (3) to disseminate the intervention for broad implementation in UCEDD and community settings. Outcomes include: (1) improvement of child behavioral health and function in terms of reduction of challenging behavior and improvements in adaptive behavior; (2) improvement of parenting skills, self-efficacy, problem-solving, and child behavior management; and (3) an online intervention packages that provides families with access to intervention components tailored to their child and family needs.
Promoting Independence and Self-Management Using mHealth

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Project Number: 90DP0064 (Formerly H133A140005)
Start Date: October 01, 2014
Length: 60 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW

NIDILRR Funding: FY 14 $499,911; FY 15 $499,562; FY 16 $499,291; FY 17 $499,619; FY 18 $499,581; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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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Project Number: 90DPGE0002
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Anne Ordway, 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)
Pennsylvania

Assessment and Investigation of New Coverage Policies for Complex Rehabilitation Technology (CRT) Within a Contemporary Accountable Care Environment

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Project Number: 90DPGE0014
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 20 $499,927; FY 21 $497,818; FY 22 $499,822; FY 23 $499,558; FY 24 $497,943

Abstract: The purpose of this project is to investigate a new health coverage policy for custom manual and power wheelchairs (aka: Complex Rehabilitation Technology or CRT) for people with disabilities to improve their ability to live and participate in their communities. Current health policy for these devices is very restrictive to the point that they are not even covered for people to leave their homes to attend work or school. That conflicts with the spirit of the Rehabilitation Act. Modern healthcare is moving towards accountable and value-based care that uses a combination of research, large data, and best practices to determine what services will be paid for. This presents an opportunity for CRT and people who use these devices to seek a more equitable coverage policy. Therefore, this project performs a series of interrelated project activities to: (1) evaluate current policies, novel models (both within and outside the United States) with stakeholder input; (2) develop a standardized assessment and procurement protocol; (3) perform analyses of existing datasets relevant to CRT; and (4) evaluate the feasibility of a new model. The overall expected outcome is a strategy for the provision and payment of CRT within an accountable and value-based healthcare environment that can inform all stakeholders including health plans and policy makers. This project is a collaboration between the University of Pittsburgh Department of Rehabilitation Science & Technology, the University of Pittsburgh Medical Center (UPMC), UPMC Health Plan, The Ohio State University, University of Michigan and key disability, industry, and policy stakeholders.
Risk of Opioid Use Disorder and Related Consequences: A Longitudinal Study of Spinal Cord Injury

Abstract: The goal of this project is to generate new knowledge and develop new tools to reduce opioid misuse, opioid use disorder (OUD), and opioid related consequences among those with traumatic spinal cord injury (SCI). The project uses a mixed methods approach, with quantitative and qualitative components. Self-report assessments are obtained from 1,600 participants from the SCI Longitudinal Health Study. The objectives are to identify the: (1) incidence of opioid use, misuse, and OUD, analyzing and adjusting for potential under-reporting, (2) person and environmental predictors of opioid misuse and the development of OUD, and (3) relationship of opioid use, misuse, and OUD with health, participation, and employment. Participants will be drawn from an existing prospective cohort study, broken down into high, moderate, and low risk groups. Qualitative focus groups will identify barriers and facilitators to successful self-management and treatment based on the detailed experiences of participants with a history of opioid use to treat pain. Stakeholder and expert advisory panels will provide critical input to the design of the research, dissemination, and development of utilization strategies. Anticipated outcomes include new knowledge to guide policy, clinical practice, prevention, and self-management strategies to reduce opioid misuse, OUD, and related consequences for health, participation, and employment. This project develops and disseminates multiple products to promote the utilization of the study findings including: (1) individualized risk calculators, (2) guidelines for treatment and practice, (3) issue and policy briefs, and (4) research briefs and research alerts (lay summaries with recommendations). These are disseminated through multiple publications, presentations, webcasts, and newsletters. Data will be archived for public use.
Disability and Rehabilitation Research Projects (DRRPs)
Texas

Promoting Obesity Prevention Among Latinx Children with Developmental Disabilities and Families Through Engaged Research

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Project Number: 90DPHF0005
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 19 $499,939; FY 20 $499,617; FY 21 $499,991; FY 22 $499,815; FY 23 $499,949

Abstract: This project addresses the research gap on children and adolescents with intellectual and developmental disabilities (IDD) and obesity. Recent research has shown that obesity is a growing problem for all children in the United States according to reports. Children who are obese may be at higher risk of having chronic health conditions such as asthma, joint problems, heart disease risk factors, and type 2 diabetes, and for being obese as adults. Children and adolescents with IDD are more likely to be obese than their peers without disabilities. Additionally, there are racial and ethnic disparities within the Latinx community with children and adolescents experiencing higher rates of obesity then their white peers, and these disparities are likely to be heightened among children and adolescents with IDD. Project objectives include: (1) examining social determinants of health and health disparities among Latinx children and adolescents with IDD, (2) examining health, obesity, and health behaviors among children and adolescents with IDD and their maternal caregivers; and (3) developing and testing an intervention for Latinx children and adolescents with IDD and their families to promote healthy lifestyles. Products and dissemination activities are grounded in knowledge translation and contribute toward the application of findings about Latinx children and adolescents with IDD and health.
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: Amanda Reichard, 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: 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: The goals of the North Texas Burn Rehabilitation Model System (NTBRMS) are to (1) assess long-term outcomes of individuals with burn injury by enrolling participants into the Burn Model System National Database, (2) conduct one site-specific research project “Vitamin D Deficiency in Adults Following a Major Burn Injury,” and (3) participate in three module research projects. The goal of the Vitamin D project is to compare low dose versus high dose Vitamin D replacement and evaluate its effects on Vitamin D levels and burn-related symptoms such as fatigue, muscle weakness, pain, itch, and peripheral neuropathy. The site-specific intervention study provides information regarding the maintenance of Vitamin D levels following the supplementation and its impact on these burn-related secondary conditions. NTBRMS module projects build on the existing Burn Model System infrastructure and include: (1) Early predictors of functional outcomes after burn injury, examining early clinical hospital events to better understand the effects of early injury and in-hospital events on functional outcomes and risk factors for recovery; (2) Genetic predictors of functional outcomes after burn injury, investigating whether preexisting genetic factors influence physical and psychological recovery; and (3) LIBRE Profile Social Integration Outcomes, using the LIBRE Profile to determine the importance of post-traumatic growth, mental health, and burn-related clinical complications as predictors of social participation outcomes. Module project outcomes include identifying an effective bio-psycho-social model of predictors affecting burn recovery. Products include educational materials in various formats disseminated to both professional and layperson audiences such as burn survivors and their families.
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: 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 (NWRBMS) (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. NWRBMS includes a site-specific research project, a randomized controlled trial of 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 functional outcomes for individuals with burns in a real-world setting. The NWRBMS participates in four BMS collaborative modules. NWRBMS investigators lead two of these modules: (1) Early post-injury and in-hospital data predictors of functional outcomes after burn injury, and (2) genetic predictors of functional outcomes after burn injury. NWRBMS participates in two other modules led by other BMS centers: (1) Effects of anabolic steroids and blockade of chronic catecholamine mediated stress on quality of life and physical function after massive burn injury and (2) defining clinical predictors of social integration following burn injury.
Spinal Cord Injury Model Systems
Alabama

UAB Spinal Cord Injury Model System

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Project Number: 90SI5019
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 16 $468,364; FY 17 $468,364; FY 18 $468,364; FY 19 $468,364; FY 20 $468,364

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 Agustin, 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.
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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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 $483,916; FY 20 $483,699

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)

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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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Project Number: 90SI5026
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Theresa San Agustín, 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.
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Project Number: 90SI5017
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 16 $456,375; FY 17 $456,375; FY 18 $456,375; FY 19 $456,375; FY 20 $456,375

Abstract: 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 in 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 reduces 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.
Regional Spinal Cord Injury Center of the Delaware Valley

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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 specific 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

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 (UTH), Baylor College of Medicine, and the University of Montana.
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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, the Brain Waves newsletter published twice annually, with more than 10 years of issues archived on the project website; 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 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.
Indiana TBI Model System

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Principal Investigator: Flora M. Hammond, MD
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Project Number: 90DPTB0002
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 17 $435,000; FY 18 $435,000; FY 19 $435,000; FY 20 $435,000; FY 21 $435,000

Abstract: 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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Principal Investigator: Joseph T. Giacino, PhD
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Project Number: 90DPTB0011
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW
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 post-acute 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 post-acute 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.
Principal Investigator: Robin A. Hanks, PhD
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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 provides researchers with 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.
**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) variable 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 and to each other. 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 Alliances/Associations nationwide to improve outcome following TBI.
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.
**Trumatic Brain Injury Model Systems:**

**New Jersey**

**Trumatic Brain Injury Model Systems:**

**Improving Longitudinal Assessment and Tracking of Activity Limitations in Individuals with Traumatic Brain Injury**

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**Principal Investigator:** Yelena Goldin, PhD; Georgianna Dart, PhD; Brian Greenwald, MD; 732/906-2645 (Goldin)

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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.
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.
Over the course of the 5-year cycle, Rusk Rehabilitation aims to 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 while considering the 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 multi-faceted 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. As a result of the site-specific project, expected products include a toolkit to disseminate clinical care recommendations as well as culturally-tailored educational materials to individuals, community-based organizations and other relevant stakeholders.
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:** Amanda Rabinowitz, 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.
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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Principal Investigator: Mark Sherer, PhD; Angelle Sander, PhD
Public Contact: 713/799-7007

Project Number: 90DPTB0016
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW
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.
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 is the lead in a 6-center, longitudinal study of caregiver resilience. VCU is also a participant in a module titled, “Return to Driving After Moderate-Severe TBI: Who, When, Where, and How Safe?” 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 on an annual basis hosts a national TBI rehabilitation conference in Williamsburg, VA. The conference was first held in 1977 and remains the longest running TBI rehabilitation conference in the world. The conference planning committee continues to include research and researchers from TBIMS sites in organizing upcoming conferences.
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

Kids Low Vision and Reading Study (KLoVR)

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Project Number: 90IFRE0024
Start Date: September 30, 2019
Length: 36 months

NIDILRR Officer: Hugh Berry, EdD

NIDILRR Funding: FY 19 $200,000; FY 20 $200,000; FY 21 $200,000

Abstract: Research has shown that, on average, children with low vision (LV-impaired sight not correctable with glasses) do not read as well as their peers without low vision. The goal of this project is to determine which factor or factors are most predictive of reading difficulties in children with LV so that problems can be identified early, and treatment strategies can be developed. Project objectives are: (1) to determine the role of executive function on reading in LV, (2) to understand the role of automaticity, and (3) to determine the visual span in children with LV. This study examines the role of these factors in children who are learning to read with impaired sight. Study outcomes include a greater understanding of which factors are most predictive of reading difficulties in children with LV allowing for better early allocation of resources where they are needed, and ultimately improving community living and participation for individuals with LV. Dissemination products include papers in peer-reviewed journals, and conference presentations.
Field Initiated Projects (FIPs)
California

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

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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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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 results in new exercise guidelines that improve health, and technology-based solutions to provide greater accessibility outside of the rehabilitation setting.
Field Initiated Projects (FIPs)
Florida

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; FY 20 (No-cost extension through 3/1/2021)

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.
Environmental Barriers and Facilitators to Assisted Toilet Transfers by People Aging with Disability and their Spousal Caregivers

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Principal Investigator: Su Jin Lee; Jon Sanford
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Project Number: 90IFRE0045
Start Date: August 2, 2020
Length: 13 months
NIDILRR Officer: Sarah Ruiz, PhD
NIDILRR Funding: FY 20 (No-cost extension through 9/29/2021)

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.
Comparing Transition Support Interventions for Family Caregivers of ABI Patients

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Project Number: 90IFRE0026
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 19 $200,000; FY 20 $200,000; FY 21 $200,000

Abstract: The goal of this research project is to compare the effectiveness of two interventions that offer support to caregivers of patients with acquired brain injury (ABI) during the transition home from inpatient rehabilitation. An ABI occurs when there is damage to the brain caused by trauma (accident, fall, sports-related blow to the head, or act of violence) or from stroke, brain tumors, brain hypoxia, or encephalitis. ABI can impact basic activities of daily living, communications, cognitive functioning (e.g., memory, concentration, executive functioning), and personality. ABI can also result in mood changes and depression. Caring for persons with ABI can be stressful and demanding. Caregivers cope with their loved ones’ memory loss, behavioral and personality changes, chronic care needs and the high costs of care. Caregivers are at increased risk of anxiety, frustration, depression, and burden. The problem of caregiver distress and lack of preparation for caregiving is widely acknowledged. Evidence points to the long-term adverse impact of caregiver stress/burden on both patient and caregiver. Yet health systems serving ABI patients struggle to find effective strategies to support family caregivers before and after the transition home. This project examines two interventions, Building Better Caregivers (BBC) and Problem-Solving Training (PST), and measures their impact on (1) caregiver stress/burden and depression, (2) caregiver self-efficacy in their ability to manage their loved-one’s care needs, and (3) healthcare utilization (i.e., hospitalization, emergency room, and doctor office visits) by patients and caregivers in the first six months after discharge from the rehabilitation hospital. Both interventions include education and support to help family members better manage their loved one’s care needs and manage the stress and rigors of caregiving.
We Walk 4 Health: A mHealth Intervention to Promote Physical Activity in Adults with Intellectual and Developmental Disabilities

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Project Number: 90IFST0005
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 20 $199,999; FY 21 $199,999; FY 22 $199,999

Abstract: This project collaborates with community partners serving minorities to develop a mobile health (mHealth) intervention, We Walk 4 Health, to promote physical activity in adults with intellectual and developmental disabilities (IDD). Project activities include: (1) developing a walking program protocol for adults with IDD, (2) improving self-efficacy for physical activity, (3) establishing social networking to improve social support, (4) increasing access to technology promoting physical activity, and (5) developing an evidence-based walking program that can be implemented in community settings. Researchers utilize a sample of participants comprised of approximately 60 percent African American and Latinx individuals with IDD. During the intervention, participates receive text messages, use maps to plan walking routes, join a social networking support group, and wear Fitbit devices. Anticipated outcomes include: (1) an increase in physical activity through walking for adults with IDD, (2) improved cardiovascular and mental health outcomes for adults with IDD, (3) an increase of knowledge translation through the evidence-based research, and (4) publication of at least two peer-reviewed journal articles. The resulting We Walk 4 Health intervention merges technology, peer supports, and person-centered motivational practices to improve health and function outcomes for adults with IDD.
**Health Insurance Literacy Academy**

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**Principal Investigator:** Charles E. Drum, JD  
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**Project Number:** 90IFDV0010  
**Start Date:** September 30, 2019  
**Length:** 36 months

**NIDILRR Officer:** Anne Ordway, PhD  
**NIDILRR Funding:** FY 19 $200,000; FY 20 $200,000; FY 21 $200,000

**Abstract:** The Health Insurance Literacy Academy (HILA) project develops and implements a health insurance literacy training academy for Centers for Independent Living (CIL) staff so that they may, in turn, empower people with disabilities to make knowledgeable and confident private and public health insurance choices. Project activities include: (1) identify of topics and learning objectives for the HILA training curriculum by project partners, CIL staff, and health insurance and health policy experts; (2) develop and draft the HILA training curriculum in coordination with project partners; and (3) develop a technology translation plan to ensure CIL staff and other disability advocates maintain ongoing access to the health insurance literacy training in order to better serve their clients. The resulting HILA curriculum and CIL and disability advocate training provide people with disabilities with the information to make informed decisions regarding their private and public health insurance coverage leading to improved health outcomes, and facilitates inclusion and integration into society, employment, independent living, family support, and economic and social self-sufficiency. The HILA Project is a partnership with the American Association on Health & Disability (AAHD), the Independent Living Research Utilization (ILRU), the Collaborative on Health Reform and Independent Living (CHRIL), including the National Council on Independent Living (NCIL), and the Association for Programs in Rural Independent Living (APRIL).
Field Initiated Projects (FIPs)
Michigan

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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Principal Investigator: Denise G. Tate, PhD
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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; FY 20 (No-cost extension through 9/29/2021)

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.
Field Initiated Projects (FIPs)
New Jersey

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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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.
Cognitive Behavioral Therapy (CBT) for Post-Traumatic Stress Disorder (PTSD) to Enhance Educational Outcomes Among Students with Psychiatric Disabilities in Post-Secondary Education

Abstract: This project tailors an existing evidence-based intervention, Integrated Cognitive Behavioral Treatment (CBT) for Post-Traumatic Stress Disorder (PTSD), in order to create a telehealth-based CBT intervention that meets the unique needs of individuals with psychiatric disabilities during their post-secondary education. This project addresses the mental health and educational needs of a critical target population, specifically individuals with psychiatric disabilities and co-occurring PTSD who are seeking post-secondary education, in order to improve educational outcomes and prevent future disability in this vulnerable population. Individuals with psychiatric disabilities experience increased exposure to trauma. The prevalence of co-occurring PTSD ranges from 28-43% in this group. Persons with PTSD have higher drop-out rates and lower success rates in educational programs. This project integrates critical strategies such as exploring disclosure, requesting accommodations, self-advocacy, stigma reduction, and CBT skills in this intervention. Modification is informed by input from persons with lived experiences and stakeholders. The project includes a randomized controlled trial evaluating the effectiveness of telehealth-based CBT, in comparison with treatment as usual among students with psychiatric disabilities obtaining their post-secondary education. This telehealth approach may remove barriers in accessing mental health care, reducing stigma, and may have potential for broad dissemination. Products from this project include a telehealth treatment manual and preliminary data on its acceptability, feasibility, and effectiveness in reducing PTSD symptoms and improving educational outcomes.
Improving Quality of Personal Care Assistance Services for People with SCI Through Online Education

Principal Investigator: Jeanne M. Zanca, PhD, MPT
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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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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 thus making 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.
The Effectiveness and Underlying Mechanism of a Mindfulness Based Stress Reduction Program for Traumatic Brain Injury: A Randomized Clinical Trial

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Project Number: 90IFRE0016
Start Date: September 30, 2018
Length: 36 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 18 $199,969; FY 19 $199,978; FY 20 $199,931

Abstract: This project evaluated the effectiveness and underlying mechanism of a modified Mindfulness Based Stress Reduction (MBSR) group intervention for individuals with severe traumatic brain injury (TBI). Individuals with TBI can experience long-term cognitive challenges in attention and memory, as well as depression, anxiety, and emotional dysregulation. Previous pilot investigations have found encouraging results in cognitive measures and clinically meaningful improvements in everyday life function. Mindfulness training is a process of developing a non-reactive focused attention to all present moment experiences, and mindfulness-based training can provide an ideal intervention to address those symptoms and the special needs of the TBI population. For this study, individuals with moderate to severe post-acute TBI with impaired attention receive either the 8-week MBSR intervention or an 8-week psychoeducational and well-being program as an active control intervention. Outcomes are assessed pre- and post-intervention, as well as six-months follow-up, to determine whether MBSR shows greater improvement in neurocognitive measures of attention as well as behavioral measures directly related to attention, including metacognition and social monitoring, while exploring its impact on everyday function and quality of life. Researchers also use neuroimaging to investigate the neural mechanisms of improvement by measuring both functional and structural connectivity associated with attentional regulation.
Adolescents with Lupus: The Impact of Patient/Provider Discordance, Depression, Cognition, and Language on Quality of Life

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Project Number: 90IFST0003
Start Date: September 30, 2018
Length: 36 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 18 $200,000; FY 19 $200,000; FY 20 $200,000

Abstract: This project addresses the knowledge gap in the research and care of adolescents with lupus, an autoimmune disease that impacts all areas of patients’ lives, often resulting in significant disabilities and poor quality of life. When lupus is diagnosed in childhood, in non-white racial/ethnic groups, and/or in patients from lower SES backgrounds, the potential for disability and mortality is even greater. The goal of this study is to evaluate discordance in the relationship between adolescent patient/provider global assessment of disease activity using a longitudinal mixed method design (i.e., surveys and semi-structured interviews). The objectives are to: (1) examine the level of discordance between patient and provider’s perceptions of disease activity; (2) explore factors related to the level of discordance between patient and provider including depression, primary language, cognitive functioning, health related quality of life, pain, regimen compliance, and lab values; (3) identify the types of disabilities that adolescents with lupus exhibit; and (4) understand patients’ and providers’ perceptions of types of disability in adolescents with lupus. The project results in methods a provider can use to identify depression, cognitive dysfunction, language barriers, disability, and poor physical/social functioning in adolescents with lupus, as well as other chronic diseases.
Harnessing Social Networks to Personalize Sensor-Driven, Just-In-Time Physical Activity Interventions for Individuals With Spinal Cord Injury

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Project Number: 90IFDV0018
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 20 $200,000; FY 21 $200,000; FY 22 $200,000

Abstract: The goal of this project is to conduct participatory design process with individuals with spinal cord injury (SCI) and their friends and/or family members to extend a pilot just-in-time adaptive intervention (JITAI) into a socially engaging JITAI system that can be deployed in the community. JITAI systems are a subgroup of smartphone-based technology interventions now being evaluated which may improve health-related outcomes in individuals with disability. JITAI systems automatically detect physical activities (PAs) from wearable sensors and provide near-real-time feedback to promote health and wellness. However, these JITAI technologies are being developed without guidelines on how to make them more engaging specifically for people with disabilities. People with disabilities such as individuals with SCI who use manual wheelchairs for mobility must overcome significant physiological and environmental barriers to participate in PA interventions in their communities. Thus, JITAI's that target the general population may not be appropriate for some populations with disability without significant design modifications. Outcomes of this project include: (1) generating new knowledge about individual and interpersonal needs for JITAI systems in individuals with SCI who use manual wheelchairs, (2) developing a JITAI that is socially engaging for its users and could remain so for long periods of time, and (3) evaluating the JITAI in the community with a small pilot group of users to establish that an intervention concept is feasible. The research team includes Temple University, Northeastern University, Magee Rehabilitation Hospital, and key community stakeholders.
Field Initiated Projects (FIPs)
South Carolina

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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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 that 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 are 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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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.
Number, Primary, and Secondary Diagnoses, and Costs of Emergency Department Visits in a Population-based Cohort of People with Spinal Cord Injury

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Project Number: 90IFRE0028
Start Date: September 30, 2019
Length: 36 months

Abstract: Spinal cord injury (SCI) leads to an elevated risk of costly hospitalizations, yet there is limited understanding of the predictors, the costs, or the consequences of emergency department (ED) visits and related hospitalizations 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 ED visits and related hospitalizations, primary and secondary diagnoses, and costs among a population-based cohort with SCI; (2) identify psychological, socioenvironmental, and behavioral factors associated with ED visits, their causes and related hospitalization; and (3) identify the relationship of ED visits to participation and quality of life. In partnership with the state of South Carolina and community stakeholders, this project links self-report longitudinal data from a population-based cohort with SCI with uniform billing administrative data of ED visits, causes, costs, and hospitalizations. 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 ED visits and hospitalizations.
Field Initiated Projects (FIPs)
South Carolina

Understanding and Promoting Longevity After Spinal Cord Injury: A Mixed Methods Study of Participation, Employment, and Quality of Life

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Project Number: 90IFRE0044
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 20 $199,936; FY 21 $199,907; FY 22 $199,951

Abstract: The goal of this project is to promote longevity after spinal cord injury (SCI) through exploration and discovery of how nonmedical factors impact long-term survival. The project addresses the seeming contradiction that mortality rates over the last three or four decades have not improved in epidemiologic studies, while aging research indicates an increasing number of people reaching aging milestones of 40, 50, or more years post-injury. Researchers utilize a crosscutting, mixed methods approach combining traditional survival analysis with qualitative interviews of successful strategies to promote longevity. For survival analysis, researchers use the National Death Index to identify the survival status of 2,210 participants who have completed 1-9 assessments as part of the long-running Health, Employment, and Longevity Project between 1973-2018. Objectives are to identify: how different aspects of participation, employment, and quality-of-life relate to longevity after controlling for demographic, SCI, and health variables; whether there are time points over the lifecycle where nonmedical factors are more highly predictive of longevity; and the extent to which a favorable history of participation, employment and quality-of-life may create a buffer leading to greater longevity. Researchers conduct in-depth qualitative interviews with 40 participants who have reached either their predicted SCI expectancy or 40 years post-injury to identify both the critical challenges and the successful strategies used to achieve longevity among long-term survivors. Project outcomes include more effective practices for addressing nonmedical factors to promote longevity; enhanced self-management and self-advocacy for people with SCI; and overall enhanced longevity through promotion of participation, employment, and quality of life. Outreach activities include dissemination to professionals and stakeholders through publications, presentations, research briefs, fact sheets, and newsletters.
Prolonged Exposure Therapy (PE) for Post-Traumatic Stress Disorder (PTSD) in Spinal Cord Injury (SCI): A Randomized Controlled Trial

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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; FY 20 (No-cost extension through 9/29/2021)

Abstract: This project uses a randomized controlled trail 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, sexual assault, non-sexual assault, traumatic injury, 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.
Field Initiated Projects (FIPs)
Texas

Building an Evidence-Base for Weight Loss Strategies Among Those with Spinal Cord Injury (SCI)

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Project Number: 90IFRE0022
Start Date: September 30, 2018
Length: 36 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 18 $199,999; FY 19 $198,288; FY 20 $197,771

Abstract: This project develops and evaluates the effectiveness and usability of an evidence-based multi-component weight loss intervention to improve the health and function of people with spinal cord injury (SCI) by addressing the unique issues they may face when adopting lifestyle changes that promote weight loss. The fundamental components of weight loss such as eating a balanced diet and/or increasing physical activity may be more challenging for individuals with SCI to adopt compared to the general population. A community-based participatory research approach is used to systematically develop the multi-component weight loss intervention, gather preliminary evidence and usability data, guide further adaptations of the intervention, and inform specific weight loss strategies. This project evaluates the effectiveness and usability of prepackaged/portion-controlled meals, self-monitoring, and intervention adaptations to achieve weight loss over a 13-week period.
Field Initiated Projects (FIPs)
Texas

Efficacy of an Evidence-Based Healthy Lifestyle Intervention for People Following CVA

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Project Number: 90IFRE0021
Start Date: September 30, 2018
Length: 36 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 18 $198,868; FY 19 $199,637; FY 20 $197,151

Abstract: This project improves the health and function of people who have experienced a cerebrovascular accident (CVA) by demonstrating the efficacy of a weight loss intervention that promotes healthy physical activity and eating behaviors. Living a healthy life may be a challenge post-CVA due to the increased risk for secondary and chronic conditions, such as obesity, diabetes, or heart disease. There is a need to identify evidence-based approaches to promote the health and function of people post-CVA. This project modifies an existing evidence-based weight loss intervention for the general population to meet the unique needs of people post-CVA, assesses the feasibility of delivery, and tests the efficacy of the modified intervention. Participants include individuals living within the community post-CVA who are overweight or obese. Outcomes include: (1) a comprehensive weight loss intervention tailored to meet the needs of people post-CVA, (2) evidence of the efficacy of intervention strategies for weight loss after CVA, and (3) a weight loss intervention that can be scaled for use within the community. Products include a usable and meaningful intervention for weight loss that is free and publicly available, a leadership guide so that individuals can deliver the intervention in different settings, and scientific papers and presentations of study results.
Foundational Ingredients of Robotic Gait Training for People with Spinal Cord Injury During Inpatient Therapy (FIRST)

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Project Number: 90IFRE0043
Start Date: September 01, 2020
Length: 36 months

NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 20 $199,992; FY 21 $197,718; FY 22 $199,917

Abstract: The goal of this project is to improve the health and function of people with incomplete spinal cord injury (SCI) by conducting innovative, systematic, and highly focused research examining robotic gait training (RGT) during inpatient rehabilitation. The ability to walk is a priority for people with SCI after injury and robotic exoskeleton training provides a unique approach to gait recovery compared to traditional therapeutic approaches. Yet, there is limited evidence to support the use of RGT for people with incomplete SCI during inpatient rehabilitation. The objectives are to: (1) develop a feasible RGT intervention for use during inpatient rehabilitation with input from an advisory board of key stakeholders (individuals with SCI, clinicians, researchers, industry members); (2) examine the differences in gait outcomes between an RGT and traditional gait training intervention in people with incomplete SCI during inpatient rehabilitation; and (3) compare the dose parameter of intensity (heart rate, rate of perceived exertion, step count) between RGT and traditional gait training interventions and the relationship with gait outcomes. Outcomes include: (1) development of an RGT intervention for use during inpatient rehabilitation specific to people with incomplete SCI; (2) data describing the effect of an RGT program on gait outcomes during inpatient rehabilitation; and (3) results useful for informing the design of a large scale efficacy trial. Products from this project may include a stakeholder informed RGT intervention that is manualized and can be replicated across inpatient rehabilitation settings nationally for people with incomplete SCI. Findings will be disseminated through patient and clinician centered fact sheets, scientific conferences, and peer-reviewed publications.
Field Initiated Projects (FIPs)
Texas

Scale Up Trial of Project WOWii to Increase Exercise Among People with Spinal Cord Injury

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Project Number: 90IFRE0037
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 20 $200,000; FY 21 $200,000; FY 22 $200,000

Abstract: This study investigates the feasibility, fidelity, and effectiveness of scaling up an innovative, evidence- and theory-based program (WOWii) to promote exercise among individuals with spinal cord injury (SCI). Americans with disabilities are between 1.8 to 2.0 times more likely to be inactive than Americans without a disability, yet individuals living with SCI are less active than either Americans generally and Americans with other disabilities. The Commission on Spinal Cord Medicine’s 2018 clinical practice guidelines recognize the substantial risks that individuals with SCI face for developing cardiometabolic disease. The commission advocates aggressive prevention via lifestyle change around dietary intake and physical activity. However, limited evidence currently supports effective approaches to promote physical activity adoption and maintenance for people with SCI. Project WOWii may offer an effective platform to promote physical activity for this population. Strengths of the Project WOWii platform include: (1) delivering the program virtually to address transportation barriers; (2) using Peer Facilitators to deliver the 16-week program that includes weekly, group-based meetings over a virtual platform that allows face-to-face conversation; and (3) disseminating the program through rehabilitation settings to reach a broader audience. Study outcomes target: (1) feasibility based on participant enrollment, retention, and participants’ program engagement and satisfaction; (2) fidelity of intervention delivery by peer facilitators; and (3) program effectiveness based on subjective and objective exercise data plus participant exercise perceptions regarding self-efficacy and barriers. The WOWii program may offer interested sites an innovative approach for providing an evidence-based program to help individuals with SCI adopt and maintain an exercise program.
A Non-Invasive Intervention (BreEStim) for Management of Phantom Limb pain (PLP) After Limb Amputation

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Principal Investigator: Sheng Li, MD, PhD
Public Contact: 713/799-5095

Project Number: 90IFRE0040
Start Date: September 01, 2020
Length: 36 months

Abstract: This project aims to translate a newly developed non-pharmacological intervention into clinical management of neuropathic phantom limb pain. The overall goal of this project is to compare the effectiveness of innovative intervention of breathing-controlled electrical stimulation (BreEStim) and conventional electrical stimulation (EStim) in management of neuropathic phantom limb pain in patients after traumatic and non-traumatic amputation of upper or lower limbs. The objectives are: (1) to examine whether BreEStim has better analgesic effects in patients with neuropathic phantom limb than EStim in a single session; (2) to examine the “dose-dependent” analgesic effect between two doses of BreEStim; and (3) to compare the analgesic effect between BreEStim and EStim after a 10-day treatment in a within-subject, cross-over design. Researchers investigate whether: (1) BreEStim has greater pain reduction and longer lasting effect. The results parallel with increased electrical pain thresholds, as compared with EStim; (2) a high-dose BreEStim will produce a longer-lasting, but similar degree of pain reduction as compared to a low-dose BreEStim, therefore supporting a possible cumulative analgesic effect of BreEStim; and (3) after a 10-day treatment, BreEStim has greater pain reduction while EStim has minimum analgesic effect. Outputs from this project may include several peer-review journal articles in the area of pain, providing new experimental findings, to advance knowledge in pain management, to provide experimental evidence to translate them into clinical practice.
Small Business Innovation Research (SBIR), Phase I
Massachusetts

A Topical Nasal Gel as an Invisible Shield Against Viral and Bacterial Pathogens

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Principal Investigator: Shantha Sarangapani, PhD
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Project Number: 90BISA0034
Start Date: September 01, 2020
Length: 6 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 20 $99,993

Abstract: This SBIR project develops and evaluates a topical nasal gel that serves as an invisible shield against viral and bacterial pathogens, which may lead to respiratory infections in individuals with spinal cord injury (SCI). Respiratory infections leading to pneumonia remain the most common cause of mortality for approximately 30 to 70 percent of the SCI population. SCI patients are most vulnerable to respiratory illness in the first year after injury but may continue to suffer from respiratory complications throughout life due to their unique risk factors. Currently, there are no proven, user-friendly, non-drug, prophylactic interventions for such acute respiratory infections in persons with SCI. The light, odorless nasal gel developed under this project can be applied in the nostrils and on the face to prevent replication or growth, thus reducing the infection rate. Outcomes of Phase I include a successful prophylactic intervention that reduces viral respiratory pathogen numbers to sub-infective levels after transmission with the inhibition of cytopathic effects on human nasal mucosal cells and porcine nasal mucosal surfaces. The goal for this product is eventual FDA approval and commercial application in community SCI rehabilitation facilities and facilities housing elderly individuals with disabilities and immune-compromised populations, reducing the healthcare cost of respiratory illnesses and improving the quality of life for people with disabilities.
Small Business Innovation Research (SBIR), Phase I
Oregon

Development of a Model System for Person Centered Oral Health Care Support for Individuals with Intellectual and Developmental Disabilities

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Project Number: 90BISA0032
Start Date: September 01, 2020
Length: 6 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 20 $99,994

Abstract: This project develops the Person-Centered Oral Health Care System (PCOHS), a model that facilitates both enhanced self-managed oral health care while also providing a platform for training, coaching, and coordinated care for individuals with intellectual and developmental disabilities (IDD) and their support teams. Through the platform, dental practitioners can customize oral health supports that enhance better self-care and individualized routines to foster consistent training, prompting, and encouragement by care providers. Progress data is measured using established health care goals that are monitored and tracked remotely by supporting team members and health care providers to help individuals with IDD improve their ongoing oral hygiene. The web-based platform also supports individuals with IDD who experience anxiety about dental procedures and visits through video priming prior to appointments. PCOHS supports individuals with IDD to take a more active role in their daily oral hygiene, so they will be more likely to have successful routine dental visits, and their care providers will have increased access to strategies specific to this target population.
Small Business Innovation Research (SBIR), Phase II  
Indiana

**NGAGE: A Neurological Guidance, Assessment, Goals, and Engagement System for People with Parkinson’s and Other Degenerative Neurological Diseases**

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**Project Number:** 90BISB0014  
**Start Date:** September 30, 2019  
**Length:** 24 months  
**NIDILRR Officer:** Theresa San Agustin, MD  
**NIDILRR Funding:** FY 19 $287,500; FY 20 $287,500

**Abstract:** This project demonstrates the technical merit, feasibility, and cost-effectiveness of a Neurological Guidance, Assessment, Goals and Engagement (NGAGE) system for people with Parkinson’s and other degenerative neurological diseases. People with Parkinson’s disease and other similar degenerative neurological diseases may be able maintain their levels of function with proper ongoing exercise programs geared towards their individualized needs. The NGAGE system supports individuals with Parkinson’s to increase their engagement in the maintenance of their disease. Specific Phase II objectives include: (1) expand NGAGE features and functions, (2) perform extended usability evaluations of the system in the homes of people with Parkinson’s, and (3) complete and prepare the system for transition into commercialization. Potential commercial markets include: (1) physical therapy or exercise training organizations in need of cost-effective options to reduce staff costs and support people with Parkinson’s at home or in their clinic, (2) people with Parkinson’s looking to improve their quality of life, (3) research facilities who are seeking standardized assessment tools and web-based reporting, and (4) providers seeking to restore the engagement of their patients from failed experiences.
Small Business Innovation Research (SBIR), Phase II
Massachusetts

UTI Reduction in Neurogenic Bladder

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Project Number: 90BISB0017
Start Date: September 01, 2020
Length: 24 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 20 $326,093; FY 21 $248,790
Abstract: This Phase II SBIR project builds upon previous research of two novel functional gel compositions for use with intermittent and indwelling catheters to establish the prototype design, dose of prototype units, and the urinary tract infection (UTI) pathogenic burden on ex-vivo models; and to evaluate pre-clinical safety. There is a high incidence of life-long recurrent UTIs in individuals with neuro-urologic disorders who use these catheters. The continuous, repeated catheterization, and compromises in hygiene and the natural mucosal barrier result in chronic inflammation, recurrent UTI episodes, stone formation, and continuous antibiotic use. Multi-resistant organisms in neurogenic bladder populations are common, leading to nosocomial infections in rehabilitation units. Currently, there is no proven prophylaxis for UTI in these populations. Phase II outcomes include successful clinical testing, FDA approval, and commercialization of this impactful prophylactic product to reduce urinary symptoms and inflammatory response due to UTI in the neurogenic bladder patient population.
Online Mindfulness Intervention for Adolescents with 22q11DS

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awareprogramsonline.com/online-for-teens-with-22q11ds

Principal Investigator: Alison Elaine Parker, PhD; Janis Kupersmidt, PhD
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Project Number: 90BISB0016
Start Date: September 01, 2020
Length: 24 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 20 $312,852; FY 21 $262,147

Abstract: This Phase II SBIR project builds upon previous research to develop and evaluate the efficacy of an online mindfulness education program for youth with 22q11DS, called the Aware Program. The program is an innovative and developmentally appropriate program that includes brief online modules designed to teach teens about mindfulness and mindfulness practices, as well as provide them with examples of how to apply mindfulness to their everyday lives. During Year 1, feedback from interviews with parents and youth, input from a Parent Advisory Panel, and consultations with professional experts are incorporated into edits to the program. The program is examined for Section 508 compliance and optimized for computers, tablets, and mobile devices. New resources are developed including a mobile messaging system and monitoring dashboard for parents. During Year 2, an evaluation study is conducted with adolescents with 22q11DS and one of their parents to examine the impact of the Aware Program on adolescents’ emotion management, emotion regulation, self-control, coping, and anxiety. Product outcomes include the Aware program for teens, a parent/caregiver guide, a mobile messaging system, and a dashboard for parents to monitor program progress. The results of this project include an evidence-based, scalable, developmentally appropriate program to teach important adaptive coping skills to adolescents with 22q11DS to improve their quality of life, health, and well-being. The program can be used by families of adolescents with 22q11DS and can be distributed by clinics and organizations that work with adolescents, schools, pediatricians, psychologists, and other health providers.
Valid and reliable disability demographics and statistics are helpful for framing issues, understanding program’s effectiveness, and monitoring progress 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.
Rehabilitation Research and Training Centers (RRTCs)
New Hampshire

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

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Project Number: 90RTGE0001
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 18 $874,999; FY 19 $874,999; FY 20 $874,999; FY 21 $874,999; FY 22 $874,999

Abstract: The objective of the Rehabilitation Research and Training Center on Disability Statistics and Demographics (StatsRRTC) is to actively narrow and bridge the divide between the producers and end users of disability statistics, thereby supporting better data collection and more relevant statistics to positively inform programs that serve people with disabilities and, ultimately, to improve conditions for people with disabilities and their families. In pursuit of this overall objective, the StatsRRTC conducts comprehensive and integrated research and knowledge translation activities that build upon and upgrade the work conducted under previous grants. The Center’s research projects narrow the divide by: generating new survey items and recommendations for improving the collection, relevance, and interpretation of disability data and statistics; developing techniques to improve the estimation of state/local statistics; and conducting deeper analyses of key demographics, outcomes, and programs. Dissemination projects actively bridge the divide by improving timely access to disability statistics by: continuing to expand the Annual Disability Statistics Compendium, its Supplement, and State Reports; refocusing the Annual Report on statistical analyses to gauge progress towards national goals; developing a new series of infographics on the intersection of disability and other demographics; and upgrading the web-enabled platform used to produce the Compendium to improve its customizability and user-friendliness. The Center also creates a new Compendium of Survey Methods to address the needs of producers. Training projects narrow the divide by bringing producers and end users together through continued expansion of the Annual Roll-Out Event/Webcast and a State-of-the-Science conference. The training projects also increase the capacity of future disability researchers to analyze data via a new online independent study curriculum and opportunities for summer fellowships and possibly post-doctoral fellowships.

NIDILRR Program Directory FY 2020 - Disability Demographics
Finally, technical assistance (TA) projects actively bridge the divide by increasing the capacity of end users to access and effectively utilize disability statistics by providing: information and referral TA, follow-up TA to answer questions about the Center’s activities, and customized statistical analyses for key stakeholders.
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 and contributes 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.

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Rehabilitation Engineering Research Centers (RERCs)
Alabama

**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 Center conducts a set of research and development projects that span across the socio-ecological model from community to clinic to address a multi-level 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 improve the 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 numerous 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.
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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Principal Investigator: Christian Vogler, PhD; Linda Kozma-Spytek
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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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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: 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 Patient-Centered, Home-Based Technologies to Assess and Treat Motor Impairment in Individuals with Neurologic Injury

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Project Number: 90REGE0004
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 18 $924,934; FY 19 $924,993; FY 20 $924,886; FY 21 $924,904; FY 22 $924,876

Abstract: This rehabilitation engineering research center (RERC-DC) promotes rehabilitation engineering-based devices, strategies, techniques, and interventions that can facilitate activity and mobility following neurologic injuries, specifically home-based technologies for treating motor impairments. Over the last decade, with the help of innovative devices, technologies, and protocols, rehabilitation has evolved from compensation for impairment to goals of recovery through neurorehabilitation. The ultimate goal is improved integration of impaired limbs into functional activities in the home and community. However, treatment and assessments are done predominantly in the clinic by therapists. Home-based technologies can have a large impact by providing tools to augment clinic-based delivery with assessments that are more valid and treatments that are less expensive, more convenient, and potentially more effective. The need to travel to the clinic to receive treatment from a therapist severely limits access for many patients and may blunt the effectiveness of some interventions. To bridge this gap, this RERC focuses research (R) and development (D) efforts on home-based technologies to treat motor impairments. D1 develops wearable upper extremity exoskeletons that can be integrated into activities of daily living for individuals with stroke. D2 develops an ankle-based robotic platform combined with video games for home-based rehabilitation of children with cerebral palsy. There are no clinically accepted, objective methods of assessing spontaneous use of impaired limbs in the home and community. R1 tracks sensorimotor development and predicts future outcomes in infants at risk for motor delay using home-based video and specially designed toys that provide novel sensory feedback. R2 studies machine learning algorithms and wrist worn accelerometry for objectively measuring the amount of functional arm use in persons with stroke. R3 investigates factors that affect the everyday choices made by persons with stroke to either use an impaired upper extremity or compensate with the opposite limb. This is critical to understand, as even mild stroke-related impairment, when measured in the clinic, can result in very little
spontaneous functional use at home. Rehabilitation technologies are often rejected by consumers. D3 explores the patient and caregiver perspective on these home-based technologies and develop guidelines and best practices for how to translate all these technologies into the home.
RERC on Technology for People who are Deaf or Hard of Hearing

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Project Number: 90REGE0013
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 19 $925,000; FY 20 $925,000; FY 21 $925,000; FY 22 $925,000; FY 23 $925,000

Abstract: The goal of this Rehabilitation Engineering Research Center (RERC) is to facilitate a shift in the role of technology and address the accessibility and usability of technology for consumers who are Deaf or hard of hearing, their family, and friends. Project objectives include: (1) a shift from clinic to consumer-centric health care models, (2) integration of data-driven approaches into practice, (3) integration of hearing technology into an interconnected mainstream ecosystem, and (4) access built into mainstream products. The project research results in (1) improved fit of hearing devices to both children and adults, (2) improved decision-making on intervention strategies for children with hearing loss, (3) evidence of effective rehabilitation strategies and cognitive function in older adults with cochlear implants, (4) improved integration of hearing technology and mainstream products with greatly improved usability, (5) accessible and usable voice assistants for people who are unable to speak clearly, (6) policy and technical standards that incorporate RERC findings, and (7) increased opportunities and training for people with hearing loss in the field. Dissemination efforts comprise materials on successful intervention strategies for children and older adults, accessibility of voice assistants, an industry-consumer portal on designing accessible products, a toolkit for integrating hearing devices into the Internet of Things, and a system to improve evaluation and fitting of hearing devices. This project is a collaboration of Gallaudet University, the University of Colorado-Boulder, the University of Iowa, the University of Minnesota, the American Institutes for Research, the Hearing Loss Association of America, and other key Deaf and hard of hearing stakeholders.
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.
RERC on Technologies to Support Aging-in-Place for People with Long-Term Disabilities (TechSAge RERC II)

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Project Number: 90REGE0006
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 18 $924,997; FY 19 $924,950; FY 20 $924,991; FY 21 $924,962; FY 22 $924,985

Abstract: RERC TechSAge aims to advance knowledge and accelerate the development, modification, and testing of technology-based interventions and strategies for use in the home and community to promote aging-in-place and reduce secondary conditions among people with long-term disabilities. Based at Georgia Tech and the University of Illinois at Urbana Champaign, the RERC conducts research and development projects as well as training and dissemination efforts that are responsive to the RERC priorities to support successful aging-in-place with disability. Research projects include: R1. Needs Assessment and Technology Use for People Aging-in-Place with Long-Term Mobility and Sensory Disabilities provides a need-based scientific foundation that is necessary for effective technology design to support aging-in-place with long-term disability. R2. Voice-Activated Digital Home Assistants to Support Health & Independence of People Aging in Place with Long-Term Mobility Disabilities examines the efficacy of a suite of voice-activated digital assistant applications (i.e., for Amazon Alexa) being developed in the D4 project. R3. Telewellness Technologies: researchers are utilizing videoconferencing to translate an in-person evidence-based Tai Chi intervention to an online, social experience for people aging with long-term mobility disabilities. Development Projects include: D1.1 SmartBathroom, a state-of-the-art laboratory that is utilized to develop transfer algorithms that will automatically adjust a motorized toilet system to meet a user’s needs and functional abilities at any point in time. D1.2 Augmented and Virtual Reality Tools to Enhance Acceptance and Adoption of Connected Home Technology, develops a series of tools that enable consumers to experience, through virtual sight and sound, how different smart home technologies would work in their own homes and guide system installers on how to match technologies to meet user needs. D2. Monitoring and Managing Falls as a Secondary Condition Among Long-Term Disabilities.
Wheelchair Users, a multi-component customizable fall-detection system that accurately detects falls among long-term wheelchair users and notify caregivers to enable quick response and reduce the amount of time an individual spends lying on the ground. D3. Silver Skill-IT, mobile and voice applications to support successful aging-in-place by people aging with long-term disabilities, including Steady Wheels, an individualized falls risk assessment, management, and prevention app; MS Assistant, a health management app to support people aging with multiple sclerosis; and Gait Speed App and tools designed to measure walking speed over a short distance. D4. Voice-Activated Digital Home Assistants, develops a suite of voice-activated digital assistant applications and an instructional protocol with various modules for different activities and tasks to enable control of the environment, encourage physical activity, facilitate social communication, and provide healthcare reminders. Additional apps and digital assistant skills are developed as part of the App & Skills Factory, wherein promising concepts identified in the TechSAge Design Competition also receive additional support for development.
Rehabilitation Engineering Research Centers (RERCs)  
Georgia

LiveWell RERC - Rehabilitation Engineering Research Center for  
Community Living, Health, and Function

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Project Number: 90RE5028  
Start Date: February 15, 2019  
Length: 19 months  
NIDILRR Officer: Stephen Bauer, PhD  
NIDILRR Funding: FY 18 $924,954; FY 19 $924,899; FY 20 (No-cost extension through 9/29/2021)  
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)
Illinois

Collaborative Machines Enhancing Therapies (COMET)

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Project Number: 90REGE0005
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 18 $924,952; FY 19 $924,971; FY 20 $924,902; FY 21 $924,972; FY 22 $924,944

Abstract: This project establishes a new Rehabilitation Engineering Research Center, Collaborative Machines Enhancing Therapies (COMET), focusing on advancing technologies that work in partnership with patients and clinicians to enhance gait and dexterity outcomes for individuals with stroke and spinal cord injury (SCI) and other people with disabilities in a real-life rehabilitation setting. This project aims to produce technological innovations that improve therapeutic outcomes, advance the state of knowledge regarding technology-enabled therapy techniques and interventions, and educate and share this new knowledge with practitioners. Project outcomes include increasing clinician knowledge and improving practices, as well as utilizing new knowledge to determine the effectiveness and clinical uptake of rehabilitation therapy technologies. Products include new therapy technologies, commercial translation with Center partners, new methods of study, scientific publications, and educational materials. This multi-institutional collaboration includes partnerships with the University of California at Irvine, University of Illinois at Chicago, Northwestern University, The University of Alabama at Birmingham, North Carolina State University, Delft University of Technology, Harvard University, and several commercial, clinical, and consumer stakeholders.
Rehabilitation Engineering Research Centers (RERCs)
Illinois

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

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Project Number: 90REGE0003
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 18 $924,999; FY 19 $925,000; FY 20 $925,000; FY 21 $925,000; FY 22 $925,000

Abstract: This RERC develops technologies to evaluate and advance mobility and manipulation for people with movement disabilities. The Center has six objectives: (1) to perform home trials of a manual standing wheelchair (developed under a previous RERC grant) and finalize the design to FDA standards; (2) modify a smart, wearable airbag system with custom smartphone application to sense falls in stroke survivors, and evaluate whether use of this system can mitigate fall injuries and improve walking confidence; (3) optimize and evaluate a robotic trainer for children with cerebral palsy; (4) develop and evaluate a low-cost prosthetic arm system targeted for individuals with amputation in both low-income countries and the US; and (5) evaluate a novel prosthetic leg with powered and passive modes (also developed under a previous RERC grant) in elderly users. In addition to research, evaluation, and developmental activities, this project implements comprehensive training programs to train the next generation of scientists and clinicians; and disseminates results to consumers, the public, and other relevant stakeholders. Outcomes include advanced production-ready prototypes of all devices that are clinically and commercially viable, production of peer-reviewed publications and conference proceedings, and training materials for fitting powered prosthetic legs; and a low-cost prosthetic arm system using a simple, low-cost fabrication method.
Rehabilitation Engineering Research Centers (RERCs)
Illinois

Sensor Technology Applied to Rehabilitation in Stroke - STARS

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Project Number: 90REGE0010
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 19 $924,810; FY 20 $924,957; FY 21 $924,846; FY 22 $924,780; FY 23 $924,910

Abstract: The primary goal of the Sensor Technologies Applied to Rehabilitation in Stroke or STARS Rehabilitation Engineering Research Center (RERC) is to enhance the capacity of clinicians to provide evidence-based, individualize, and precise therapy, and to measure impairment by developing and testing a range of sensors suitable for clinical use, understanding that these clinicians play a pivotal role in implementing routine rehabilitation care. Measures of function currently used to evaluate progress in rehabilitation are insufficiently precise and do not allow physicians and therapists to characterize and understand the sources of impairment that lead to loss of function. This RERC designs, develops, and tests sensors suitable for measure of impairment in stroke survivors, and conducts studies to determine the feasibility of implementing these devices in routine practice. The RERC brings together a multidisciplinary team of engineers, scientists, clinicians, and consumers to conduct the following program of research and development: (1) Evaluate Use of Small Exoskeletons on the Hands and Fingers of Stroke Survivors to Quantify Finger Extension Forces and Proprioception; (2) Development of a Sensor Glove for Precise Quantification of Spasticity in Stroke Survivors; (3) Low Cost Instrumentation and Computational Rating of ARAT Using an Adapted Semi-Automated Rehabilitation System; (4) Wearable Sensors to Measure Gait Impairments and Function in Individuals with Stroke; and (5) Pilot Implementation Study on Clinical Sensor Adoption and Effectiveness of Sensors. The RERC also conducts a program of advanced education and training for junior faculty, post-doctoral fellows, and graduate and undergraduate students. The SRALab Academy provides on-site and web-based training for professionals and consumers. Dissemination includes presentations at engineering and rehabilitation conferences, and publications in high-impact peer reviewed journals to contribute new scientific, engineering, and clinical knowledge. Partners in this project include the Shirley Ryan AbilityLab (SRAlab), Northwestern University, University of California at Irvine, and Virginia Tech.
Rehabilitation Engineering Research Centers (RERCs)
Maryland

Inclusive Information and Communications Technology RERC

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Project Number: 90REGE0008
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 18 $925,000; FY 19 $925,000; FY 20 $925,000; FY 21 $925,000; FY 22 $925,000

Abstract: This RERC addresses access to inclusive information and communication technologies (ICT) for people with disabilities. ICTs are an integral part of life, impacting education, employment, health, transportation, and social communication; however, as ICTs continue to evolve (e.g., digital technologies) access for individuals with disabilities may become prohibitive. This project takes a two-part approach to addressing ICT accessibility issues by (1) ensuring that existing solutions are known, effective, findable, more affordable, and available on every computer or digital technology platform; and (2) exploring the emerging next-next-generation interface technologies for which there are no effective accessibility guidelines or standards, and problem-solving in advance of these technologies. Project activities include: (1) extending data science methods to include people with disabilities (who may be considered outliers to the developer community) so that data-driven technologies will work for them; (2) identifying interface strategies that work for people with severe and progressive cognitive disabilities (e.g., dementia); (3) creating new tools to easily discover which techniques and aids a person with a particular disability and/or disabilities needs in order to use ICTs, as well as have real-time solution-driven responses on any ICT a person with a disability utilizes; (4) developing a new approach to accessibility that works for next-next-generation interfaces including speech, text, eye-gaze, gesture, virtual reality, AI agents, emotion, and virtual direct-brain interfaces; and (5) ensuring existing proven solutions are within reach and available to those who most need them.
Rehabilitation Engineering Research Centers (RERCs)
New Jersey

Rehabilitation Engineering Research Center on Wearable Robots for Independent Living

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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; FY 20 (No-cost extension through 9/29/2021)

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 master’s theses, undergraduate capstone design projects, and mentoring of pre-college students.
RERC on Universal Design and the Built Environment

Rehabilitation Engineering Research Centers (RERCs)
New York

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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; FY 20 (No-cost extension through 9/29/2021)

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.
Rehabilitation Engineering Research Centers (RERCs)
New York

The Center for Enhancing Neurocognitive Health, Abilities, Networks, and Community Engagement (ENHANCE)

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Project Number: 90REGE0012
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 19 $924,999; FY 20 $925,000; FY 21 $924,999; FY 22 $925,000; FY 23 $924,998

Abstract: The goal of this multi-site Rehabilitation Engineering Research Center (RERC), Enhancing Neurocognitive Health, Abilities, Networks, & Community Engagement (ENHANCE), is to support the ability of older adults with cognitive disabilities to live independently in the community. Cognitive disabilities, which negatively impact an individual’s ability to perform everyday community activities, disproportionately affect older adults. Technology applications hold promise in terms of enhancing community living for older adults with a cognitive disability. However, few technology solutions have been directed towards this population. The objectives of this RERC are to: (1) understand the challenges older adults with cognitive disabilities encounter with living activities, how these vary according to type of disability, and needed areas of, and preferences for, support; (2) identify, develop, and evaluate potential technology solutions; (3) disseminate findings to multiple stakeholders; and (4) advance new knowledge in the aging, cognitive disability, and technology space. The target population is adults aged 60+ with mild cognitive impairment, cognitive impairments due to stroke, and cognitive impairments due to traumatic brain injury. The project includes two research projects and two development projects. Research Project 1 involves a large-scale longitudinal needs assessment project. Research Project 2 involves developing and evaluating an adaptive intelligent software system that supports memory, everyday skills, and social engagement. Development Project 1 focuses on an instructional support aid for community mobility, and Development Project 2 focuses on a cognitive aid to support prospective memory activities such as remembering medication schedules. This program also involves training and dissemination activities. Outcomes include a database on challenges encountered by aging adults with a cognitive disability; needed areas of support; and the usability, acceptability and potential efficacy of technology solutions.
Rehabilitation Engineering Research Centers (RERCs)
Pennsylvania

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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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.
RERC on Physical Access and Transportation

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Project Number: 90REGE0007
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 18 $924,377; FY 19 $924,176; FY 20 $924,327; FY 21 $924,470; FY 22 $924,278

Abstract: The RERC on Physical Access and Transportation empowers consumers, manufacturers, and service providers in the design, utilization, and evaluation of accessible informational services, transportation equipment, and physical environments. Project activities build upon previous work to leverage emerging information technologies and address the need for customer-driven solutions that can be rapidly implemented and adapted to a wide range of transportation systems. Project outcomes include: (1) enabling technology and universal designs that support independent and efficient multi-modal travel in everyday life, including for employment and social participation; and (2) providing greater professional capacity in the domain of accessible transportation. Research and development activities provide new tools, research findings, guidelines, and products that advance the accessibility of transportation and the first/last mile (the distance between home and the nearest transportation pick-up and drop-off spot). These include: (1) research findings from a deployed, mobile transit information test bed application; (2) knowledge on how emerging transit service delivery models and automated vehicles can address first/last mile challenges; (3) new software for personalized transit information and daily travel planning; and (4) standards and regulations, reference designs, and vehicle interior concepts ready for commercialization by the autonomous vehicle industry. These products are developed with ongoing and extensive input from disability stakeholders, vehicle manufacturers, service providers, and transit agencies.
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: 90REGE0014
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 20 $924,070; FY 21 $924,726; FY 22 $923,517; FY 23 $923,057; FY 24 $924,265

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 children and adults with developmental, acquired, and severe disabilities have access to effective AAC to enhance the communication of individuals with complex communication needs (CCN). The goal of this project is to enhance communication and increase participation in education, employment, healthcare, and community living, so individuals with CCN can achieve their full potential. Project objectives include (1) advancing scientific knowledge; (2) developing and testing new AAC technologies and interventions; (3) preparing these technologies for commercial market; (4) building capacity in research and development (R&D); (5) providing technical assistance and improving evidence-based AAC practice; and (6) improving awareness of consumer needs and technology opportunities. Project activities result in (1) increased stakeholder knowledge and adoption of evidence-based AAC technologies and interventions; (2) access to new and more effective research-based AAC technologies; (3) manufacturers producing a greater number of products that meet the needs of individuals with CCN; (4) an increased number of engineers and rehabilitation scientists with expertise in ACC and R&D; and (5) an increased awareness and adoption of evidence-based practices in ACC by service providers. Project outcomes include new evidence-based AAC technologies and intervention protocols to enhance community participation and employment; increased literacy skills; improved alternative access and facilitated partner training; an online AAC training center; intensive graduate training in AAC R&D; and broad-based dissemination of publications, presentations, and social media outreach materials.
Scale-Up of an Innovative, Evidence-Based Movement-2-Music (M2M) Intervention for Adults with Physical/Mobility Disability

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Project Number: 90DPGE0005
Start Date: September 30, 2018
Length: 60 months

NIDILRR Officer: Pimjai Sudsawad, ScD

NIDILRR Funding: FY 18 $925,000; FY 19 $925,000; FY 20 $925,000; FY 21 $925,000; FY 22 $925,000

Abstract: This project examines the feasibility, efficacy, and effectiveness of an innovative, evidence-based intervention (Movement-2-Music, M2M©) for people with physical/mobility disabilities. The project conducts three studies. Study 1 is a randomized controlled efficacy trial examining the effects of a 12-week M2M© intervention in adults with physical/mobility disabilities on three functional levels: Level I – sitting exercise only, Level II – sitting and standing exercise (with or without support while standing), and Level III – sitting or standing exercise with emphasis on right/left side (for participants with hemiparesis). Study 2 is a 12-week randomized implementation trial testing the delivery methods of the M2M© intervention on study participants in two different settings: a community-based health and recreation center and a home-based telehealth (i.e., tele-exercise) platform. The final study (Study 3) is a type 1 hybrid effectiveness-implementation random control trial comparing the effectiveness of two delivery methods of M2M©. Primary outcomes include improved physical and psychosocial health for individuals with physical/mobility disabilities. Training includes the development of a certificate in disability content and M2M© with the American College of Sports Medicine. Research findings including M2M© content are to be distributed nationally through the National Center on Health, Physical Activity, and Disability.
Disability and Rehabilitation Research Projects (DRRPs)
Alabama

AI4CHRON – An Accessible and Inclusive Artificial Intelligence Assisted Chronic Disease Self-Management Telehealth Platform

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Project Number: 90DPGE0017
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 20 $499,975; FY 21 $499,948.50; FY 22 $499,890.38

Abstract: This project develops, tests, and optimizes an accessible and inclusive artificial intelligence (AI) to assist with chronic disease self-management for people with disabilities that is accessible, inclusive, scalable, and sustainable. Researchers at the University of Alabama at Birmingham partner with the Lakeshore Foundation, and other key stakeholders to (1) develop an AI-assisted, individualized, family-focused, lifestyle modification telehealth intervention, AI4CHRON, for chronic disease management in participants with disabilities; and (2) pilot test, optimize, and evaluate the feasibility, acceptability, and preliminary efficacy of AI4CHRON in adults with permanent impaired mobility and chronic conditions (i.e., diabetes, health conditions or lung conditions) using the engineering-inspired multiphase optimization strategy. Project outcomes include: (1) a robust optimized telehealth platform for chronic disease management; (2) preliminary efficacy of the intervention (program, content, and technology) established; (3) a dissemination and utilization plan instituted to begin offering this program beyond research settings; (4) identifying areas needing further research or refinement; and (5) a sustainability plan developed to support the project in the future. Products include: (1) a complete inclusive chronic disease management program including a library of textual, graphical, audio and video content; (2) a robust telehealth platform with multi-channel convergent communication capabilities and artificial intelligence assistance; (3) a coaching manual; and (4) publications.
Twenty-First Century Captioning Technology Metrics and Usability

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Project Number: 90DPCP0002
Start Date: September 30, 2018
Length: 60 months

NIDILRR Officer: Stephen Bauer, PhD

NIDILRR Funding: FY 18 $475,000; FY 19 $475,000; FY 20 $475,000; FY 21 $475,000; FY 22 $475,000

Abstract: This project examines access to video (broadcast or streaming) and its effects on societal participation (e.g., entertainment, news, political process, etc.), and develops a modern evidence-based approach to address the caption quality and caption user interface/user experience needs of viewers who are Deaf or hard of hearing. Project objectives are to: (1) develop caption quality metrics that are widely accepted, practical, technology neutral, and maximize access to video by people who are Deaf or hard of hearing; and (2) investigate factors in the presentation/display of captions on the screen to optimize their usability for and the experience of Deaf and hard of hearing viewers. Project outcomes include: (1) changes to caption quality policies, (2) changes to caption user interface guidelines, and (3) the adoption of clear standards that both human and ASR-based captioning processes should meet. Project outputs include programs, technologies, and guidelines for assessing captions; a video library for evaluating captioning methods; evidence-based reports that link caption quality metrics with subjective and objective viewer metrics; and evidence-based reports that describe the impact of caption display/presentation on the viewers. This project is a collaboration of Gallaudet University, the Rochester Institute of Technology, and Apptek in consultation with consumer and industry stakeholders.
The Assistive Technology Network (AssistiveTech Network):
A Community of Practice on Assistive Technology

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Project Number: 90DPGE0015
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 20 $499,999; FY 21 $499,985; FY 22 $499,970

Abstract: This project creates the Assistive Technology Network (ATNetwork), an online community of practice connecting people with disabilities and older adults, assistive technology (AT) providers and social service case managers, and AT industry representatives. Operating as a social media platform moderated by project staff, the community encourages interactive multi-media dialogues on AT discovery, selection, application, customization, and training. The ATNetwork catalogues existing resources and information on AT products and technical information, as well as new information developed throughout the grant cycle. Retrospective analysis of partner service databases prioritize informational resources development for the most-used AT. Participatory action research methods identify technology needs, and the community’s functions and features desired by the stakeholder group. Cross-referencing product information, technical assistance, and discussion threads using standard terminology facilitate community navigation. The 500-member community assists in beta testing of the proof-of-product platform over a 15-month period. Exploration and discovery research quantitatively and qualitatively analyze community members’ activities to identify unique needs that further technology could address, as well as education and training needed for AT users and service providers. Additional research activities quantify changes in self-advocacy and comfort with using new technologies. The community benefits AT users in geographically isolated areas, and those at risk for infectious disease and who wish to practice social distancing. This project is a partnership of The Georgia Institute of Technology and the Assistive Technology Industry Association, with collaboration from the AT Act Programs from Alaska, Georgia, Guam, Montana, and Texas, and the Association of Programs for Rural Independent Living.
Disability and Rehabilitation Research Projects (DRRPs)
Massachusetts

CARE Study: Community Access Through Remote Eyesight

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Project Number: 90DPGE0012
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 19 $444,341; FY 20 $444,443; FY 21 $440,515

Abstract: Community Access Through Remote Eyesight (CARE) Study is a randomized clinical trial evaluating the efficacy of novel mobile application technologies (including Seeing AI, Aira, and Supervision+) to improve quality of life in older adults with low vision by expanding community access and providing assistance with activities of daily living. Aira provides real-time remote personal assistance through a sighted Aira agent supplying direct feedback to assist with visual tasks. Seeing AI provides optical character recognition allowing any text to be read aloud, color identification, bar code reading, scene description, and facial recognition based on stored photos. Supervision+ allows one to use the phone as a magnifier, providing magnification and contrast enhancement using the camera of the mobile phone. This study seeks to understand the potential of these technologies to improve daily activities, community participation, independence and self-sufficiency in this group by examining a technological approach, which has not yet undergone rigorous investigation in a diverse population of older adults with visual impairment. Project objectives are to evaluate mobile applications in a wide range of visual disability, categorized into three groups: (1) mild to moderate visual acuity loss, (2) severe to profound visual acuity loss, and (3) legal blindness secondary to visual field loss. Participants are randomized to one of three intervention groups: (1) Supervision+ application, (2) Aira application, or (3) Seeing AI application for a period of 6 months. For the Aira intervention group, participants are assigned either with ‘restricted’ access (current open access areas plus 30 minutes/month anywhere), or ‘unrestricted’ access (700 minutes), for a period of 3 months with a 3-month cross-over period. Outcome measures include assessment of changes at three- and six-months post-intervention for: visual ability, health state (including depression), self-efficacy, loneliness, life space, distances traveled from the home, and types of services obtained. This project is conducted at two sites: New England College of Optometry and the University of California Los Angeles.
Lightweight and Affordable Soft Knee Exoskeletons to Enhance Independent Living for Broad Lower-Limb Disability Populations

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Project Number: 90DPGE0011
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 19 $1,331,544

Abstract: This project develops soft wearable exoskeletons and assistive control algorithms to monitor, augment, and compensate for the loss of gait function of people with lower limb disabilities to promote independent living. In contrast to conventional exoskeletons that are typically heavy, bulky, expensive, limited in clinic-settings, and primarily suitable for paraplegic individuals with little to no remnant voluntary movement, this soft exoskeleton is lightweight, compact, and affordable to enhance mobility assistance in community settings for people without or residual movement. Project objectives are to: (1) optimize lightweight and affordable exoskeletons as personal mobility assistance devices; (2) evaluate robust gait detection algorithms for real-world activities of daily living of older adults with lower limb impairments; (3) develop assistive control strategies for walking, stair ascending/descending, and sit-to-stand assistance, and a mobile app based software interface; and (4) assess safety and suitability for clinical use. The project includes video-based training materials for stakeholders developed in collaboration with the National Center for Aging and Disability and Independent Living Research Utilization at TIRR Memorial Hermann.
Project Open: Improving In-Person Expressive Communication with Open Source Technologies

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Project Number: 90DPCP0007
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 20 $499,494; FY 21 $499,773; FY 22 $499,759; FY 23 $499,217; FY 24 $499,772

Abstract: This goal of Project Open is to improve the expressive communication of individuals with complex communication needs (CCN) using augmentative and alternative communication technologies (AAC-T) during in-person conversations and interactions. To accomplish this goal, the University of North Carolina at Chapel Hill partners with the University of Buffalo to engage in a series of investigations and development activities. Researchers investigate in-person conversation of individuals with CCN using AAC-T with focus on three populations: (1) adults with amyotrophic lateral sclerosis, (2) adolescents and adults with cerebral palsy, and (3) adolescents and adults with intellectual and developmental disabilities. Following this investigation, researchers develop an open source AAC-T research and development platform and test prototype user interfaces. Outcomes include: (1) increased understanding of the problems individuals with CCN face when using AAC-T during in-person interactions; (2) increased involvement of expert users of AAC-T in research and development; and (3) increased research and development of novel AAC-T features and novel combinations of existing features. Products include a searchable catalog of the problems people with CCN experience using AAC-T, a fully accessible project website, numerous publications and dissemination products, and an open-source development platform complete with documentation and prototype user interfaces.
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; FY 18 (No-cost extension through 9/29/2019); FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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.
DRRP on Robotics and Automation for Inclusive Transportation

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Project Number: 90DPE00003
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.
Autonomy, Safety, and Social Integration via Smart Technologies (ASSIST)

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Project Number: 90DPGE0010
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 19 $1,333,027

Abstract: The goal of this project is to develop and evaluate an evidence-based model for delivering mainstream smart-home technologies as assistive technology (AT) to support independent living and community integration of people with physical disabilities who are at risk of institutionalization. Project objectives include: (1) developing a comprehensive technology intervention ASSIST (Autonomy, Safety, and Social Integration via Smart Technologies), and refining this intervention through repeated trials with a small cohort of participants who are eligible for Medicaid Home and Community-Based Services (HCBS) waiver programs due to a physical disability; (2) evaluating ASSIST in a prospective six-month pilot study using a single-group pre/post mixed-method design standard for a matched usual care cohort by age, gender, and level of care needed; and (3) evaluating the financial impact of ASSIST through cost-tracking and analysis of intervention data, and formal/informal care data. Outcomes include a comprehensive technology-based intervention with emphasis on smart home technologies to support people with physical disabilities who are at risk of institutionalization to live more independently, be more connected within their communities, and have great choice and self-determination over their lives. The expected product includes a service delivery model for mainstream smart home technologies as AT, the intervention manual for ASSIST, training materials for professionals and users/families, and a document describing the unmet needs and barriers encountered.
Disability and Rehabilitation Research Projects (DRRPs)
Virginia

Assistive Wearables to Support Self-Regulation for Neurodiverse Postsecondary Students

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Project Number: 90DPGE0009
Start Date: September 30, 2019
Length: 36 months

NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 19 $712,774

Abstract: This project develops and evaluates an assistive smartwatch application that supports the self-regulation of young adults with intellectual and developmental disabilities in independent living. The goal of this project is to improve the self-regulation skills for neurodiverse individuals following a postsecondary inclusive special education program. The objectives are: (1) to formally characterize the assistance process and elicit requirements for implementing the application; (2) to design, develop, and test an interactive application for smartwatches according to individual’s needs for self-regulation; and (3) to assess the impact of the assistive technology on self-regulation skills of neurodiverse individuals following the postsecondary education program. The technology proposed offers direct support to neurodiverse individuals and their assistants. The smartwatch application serves as a tool to facilitate the intervention process with a less obtrusive approach. The ultimate goal of the project is to allow neurodiverse individuals to acquire or to improve their self-regulation skills and allow assistants to also gain a better understanding of the interventions. Other special education programs can reuse and refine the application to conduct future interventions. In addition to scientific articles describing the research findings, the products and publications of this project include documentation, specification, code and training materials about the application, as well as design guidelines and implications for assistive smartwatches for self-regulation of young adults with intellectual and developmental disabilities.
Disability and Rehabilitation Research Projects (DRRPs)
Wisconsin

Home Evaluation App for Community Independence:
HESTIA-NextGen

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Project Number: 90DPGE0016
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Timothy Beatty

NIDILRR Funding: FY 20 $500,000; FY 21 $500,000; FY 22 $500,000

Abstract: This project uses expert practitioner and computer predictive modeling to create the HESTIA-NextGen app, built to assist persons with disabilities (PwDs), novice practitioners, and paraprofessionals in developing high quality evaluation reports and intervention plans that include assistive technology for the home. PwDs and their care partners are increasingly encouraged to succeed at home after a hospitalization or significant health related event; however, designing good home interventions is daunting for many PwD, care partners, and rehabilitation service providers. This project partners with the Texas Woman’s University, Columbia University, Marquette University, and with IndependenceFirst to develop a state-of-the-science home evaluation mobile application (app) called HESTIA to help novices collect comprehensive home evaluation data. Project objectives include: (1) Develop and test a HESTIA-NextGen app suite: (a) refine and test the HESTIApro app as an intervention planning tool for rehabilitation service providers, and (b) create and pilot myHESTIA as an app for PwD and care partners; and (2) implement a comprehensive knowledge translation plan. Products include: HESTIA-NextGen mobile apps ready for beta testing, deployment of expert performance and accountability reporting, content and technical development with collaborative partners, and comprehensive evaluation by an advisory board. Project outcomes result in the facilitation of successful independent living by optimizing the integration of assistive technology into the independent living of PwD with a simple-to-use set of apps for rehabilitation providers, PwD, and care partners resulting in successful community and independent living outcomes for PwD.
Disability and Rehabilitation Research Projects (DRRPs)
Wisconsin

Multifunctional Robotic Assistive Arm (mR2A) for Activities of Daily Living Assistance

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Project Number: 90DPGE0018
Start Date: September 01, 2020
Length: 36 months

NIDILRR Officer: Thomas Corfman

NIDILRR Funding: FY 20 $498,321; FY 21 $498,037; FY 22 $495,422

Abstract: The goal of this project is to assist elderly individuals and/or individuals with upper/lower extremities dysfunctions (IwULEDs) to live independently and safely at home and provide activities of daily living (ADL) assistance, and mobility assistance. Therefore, the objectives of the project are to develop a minimum viable product prototype of a multifunctional robotic assistive arm (mR2A) that can be mounted on any mobile base, such as on a wheelchair, or any fixed base, with a set of grippers to provide (a) ADL assistance such as feeding, opening a door, picking an object from out of reach; (b) mobility assistance; and (c) remote ADL/technical assistance and performance tracking of such IwULED. This innovation provides independence, thus significantly improving the quality of life of the IwULEDs; reduces dependence on caregivers and lowers cost burden accordingly; and improves the physical and mental status of both IwULED and their family caregivers. It is anticipated that the mR2A will lead to the advancement of multidisciplinary (assistive robotics, design, and control) engineering knowledge. This project fills the gaps between the unmet needs (self-care, ADL/mobility assistance) of the IwULEDs and the approaches/technologies currently being used to satisfy their needs and forms a symbiotic relationship to overcome a critical barrier to advancing the field of assistive robotics. This project is a partnership between the BioRobotics Lab at the University of Wisconsin Milwaukee, Ubicomp Lab, Marquette University, Milwaukee VA Medical Centre, and other key stakeholders.
Field Initiated Projects (FIPs)
Alabama

Artificial Intelligence Assisted Inclusive Diabetes Telecoaching Self-Management Program

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Project Number: 90IFDV0013
Start Date: September 30, 2019
Length: 36 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 19 $199,998; FY 20 $199,910; FY 21 $199,820

Abstract: The University of Alabama at Birmingham in partnership with the Lakeshore Foundation develops and pilot tests the feasibility of an accessible and inclusive artificial intelligence (AI) assisted telecoaching platform for people with disabilities and type 2 diabetes (T2DM) with the goal of creating an online diabetes self-management program that is accessible, inclusive, scalable, and sustainable. Project objectives are to: (1) develop an AI-assisted, individualized, family-focused, lifestyle modification telehealth intervention (Artificial Intelligence for Diabetes Management - AI4DM) for T2DM participants with disabilities using a participatory design approach; and (2) evaluate the feasibility (i.e., process, resource, management, and scientific feasibility), acceptability, and preliminary efficacy of AI4DM in adults with T2DM and permanently-impaired mobility. Anticipated outcomes include: (1) a robust telecoaching platform for T2DM participants; (2) establishing preliminary efficacy of the intervention (program, content, and technology); (3) instituting a technology transfer plan to begin offering this program beyond the research setting; (4) identifying areas needing further refinement and research; and (5) developing a sustainability plan to support the project in the future. Products include a complete inclusive T2DM management program including a library of videos; a telecoaching platform to deliver the program featuring separate mobile health apps for participants and caregivers, Amazon Alexa, food recommender system (like Netflix), and context-aware physical activity suggestions; a coaching manual; and various publications.
Comparative Effectiveness of Off-the-Shelf (OTS) Versus Custom-Made Ankle-Foot Orthosis in Individuals with Stroke

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Project Number: 90IFRE0017
Start Date: September 30, 2018
Length: 36 months

NIDILRR Officer: Thomas Corfman

NIDILRR Funding: FY 18 $200,000; FY 19 $200,000; FY 20 $200,000

Abstract: This project compares the effectiveness of two commonly used ankle-foot orthoses (AFOs) types: (1) prefabricated, off-the-shelf (OTS) semi-rigid polypropylene, and (2) a custom-made polypropylene articulating AFO with a dorsiflexion stop and dorsiflexion spring assistance (DS/DA) for individuals with intermediary deficits in walking function post-stroke. AFOs are frequently prescribed for patients with hemiplegia to enhance walking function. Project objectives are to: (1) identify the biomechanical mechanisms underlying improvements in walking in an OTS and custom-made AFO; (2) compare the effects of OTS and custom-made DS/DA AFOs on self-reported measures of satisfaction and daily stepping activity with the AFO; (3) determine if effectiveness of the OTS and custom-made DS/DA is dependent upon clinical measures of muscle strength, range of motion, and sensation and/or spasticity; (4) determine the threshold levels of clinical and functional measures necessary to benefit from the semi-rigid OTS AFO; and (5) determine the rate of abandonment with OTS and custom-made DS/DA AFOs. Outcomes include: (1) criteria for prescribing the most appropriate AFO for the middle functioning group of persons after stroke, (2) threshold levels of clinical and functional measures that indicate whether an OTS semi-rigid or custom-made DS/DA AFO is most appropriate, (3) rate of abandonment of prescribed AFOs, and (4) a cost-effective AFO prescription for persons with hemiplegia from stroke using an evidence-based patient-centered decision-making guideline. Dissemination products include peer-reviewed publications, presentations, training materials, guidelines for optimal AFO prescription, and a mobile application.
Field Initiated Projects (FIPs)
California

Cross-Sensory Digital Map Project Development

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Project Number: 90IFDV0020
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 20 $199,975; FY 21 $199,537; FY 22 $199,830

Abstract: This project develops a cross-sensory digital web-based map component that can be inserted into any webpage and viewed equally visually and in audio. The goal of this project is to address the lack of nonvisual digital maps by developing an accessible system for blind and visually impaired (BVI) individuals to view, create, and share digital spatial maps; these individuals currently have extremely limited access to map information (e.g., turn-by-turn directions on a navigation app or, more rarely, a tactile map). The specific objectives are to: (1) create a multimodal map editor that can be used to create and edit maps; (2) create a system that can manage and distribute maps; and (3) create a multisensory map component businesses and government institutions can embed in their website. Outcomes for BVI individuals include: (1) ability to independently create digital maps; (2) ability to view digital maps; (3) increased community living and participation in map related activities in school, at home, and at work; (4) increased independent map access and access to map data; (5) ability to independently create tactile maps from the Tactile Map Automated Production system (TMAPs) from the LightHouse for the Blind and Visually Impaired in San Francisco; and (6) increased independence and confidence when traveling. The expected products are a map creation tool, a system for sharing and creating maps, a multimodal web map component, an integration with TMAPs, marketing materials, and training materials. This project is a partnership of The Smith-Kettlewell Eye Research Institute and the LightHouse for the Blind and Visually Impaired in San Francisco.
Driving Performance of People with Parkinson’s Using Autonomous Vehicle Technologies

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Project Number: 90IFRE0035
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 20 $199,998; FY 21 $199,999; FY 22 $199,998
Abstract: This project examines and quantifies the impact of autonomous in-vehicle (AV) technologies on the driving performance of people with Parkinson’s (PD). The primary objective is to evaluate the impact of autonomous in-vehicle technologies on driving errors measured using a standardized road course. Participants include those with mild or moderate disease severity with younger onset (ages 35-65) and later onset (ages 65-85). The goal is to improve the driving performance of people with PD, to stay on the road longer and safer via in-vehicle information systems (IVIS), and advanced driver assistance systems (ADAS), integrated into an on-road test vehicle. Outcomes include decrease in driving errors with use vs. non-use of AV technology as assessed during on-road driving. Project outputs include recommendations for the consumer, clinical, advocacy, policy, and transportation communities, and dissemination to industry via structured networking and conferences. Recommendations will address the benefits (as well as challenges) related to use of AV technology for drivers with PD. This project is a collaboration of the University of Florida (UF) Institute for Mobility, Activity and Participation, UF Fixel Center for Movement Disorders and Neurorestoration, and the UF Department of Industrial and Systems Engineering, with stakeholders including drivers with PD, caregivers, community advocates, and transportation officials.
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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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 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.
Assessing the Mechanical Efficiency of Manual Wheelchairs Using Robotic Propulsion

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Principal Investigator: Stephen H. Sprigle, PhD
Public Contact: 404/385-4302

Project Number: 90IFRE0036
Start Date: September 01, 2020
Length: 24 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 20 $199,936; FY 21 $199,946
Abstract: This project improves the state of the knowledge about the work required to propel manual wheelchairs by studying the propulsion cost of manual wheelchairs during over-ground maneuvers using a wheelchair-propelling robot. Given the breadth of wheelchair designs, frame materials, wheel and tire options, and axle positions, users (and their clinicians) can benefit from scientific measurements of how these options impact the effort required to propel their wheelchairs. The selection of wheelchair type, components, and configurations involves negotiating a series of compromises, because these choices have trade-offs in performance, function, cost, complexity, and a host of other factors. By understanding the impact that certain configurations have on mechanical efficiency, users become more empowered to make choices reflective of their needs and desires. The project deploys four separate assessments, comparing propulsion costs between (1) lightweight and high strength lightweight wheelchairs, (2) casters and drive wheels on high strength lightweight wheelchairs, (3) rigid and folding ultra-lightweight wheelchairs before and after simulated use, and (4) energy absorbing components used on ultra-lightweight wheelchairs. The outcomes of this project include new information that is useful to the key stakeholders of this research: wheelchair users, clinicians, manufacturers, and insurance carriers.
Field Initiated Projects (FIPs)  
Illinois 

Improving Electronic Written Communication in Persons with Aphasia: A Clinical Trial

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clinicaltrials.gov/ct2/show/NCT03773419

Principal Investigator: Leora R. Cherney, PhD  
Public Contact: 312/238-1117

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; FY 20 (No-cost extension through 9/29/2021)

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.
Timing of Transcranial Direct Current Stimulation (tDCS) Combined with Speech and Language Therapy (SLT): An Intervention Development Study for Aphasia

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Principal Investigator: Leora R. Cherney, PhD
Public Contact: 312/238-1117

Project Number: 90IFRE0020
Start Date: September 30, 2018
Length: 36 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 18 $199,613; FY 19 $199,821; FY 20 $199,872

Abstract: This study focuses on the timing and use of transcranial direct current stimulation (tDCS) in speech and language therapy for people with aphasia and/or communication disabilities. There is little research on the precise application of tDCS therapy, a noninvasive, safe, low-cost form of brain stimulation. This project systematically investigates whether it is optimal for tDCS to be administered before, after, or simultaneously with speech and language therapy. Individuals with chronic aphasia are randomized to one of four groups in which the tDCS or a sham tDCS is combined with speech and language therapy in a different sequence, with treatment lasting three weeks. The speech and language therapy is a scripted training and delivered via computer, and the tDCS provides cathodal stimulation to the lesioned left side of the brain. Language and communication skills are evaluated pre-treatment, immediately post-treatment, and at two and six weeks after the end of treatment to assess maintenance effects. Additionally, EEG measures of brain activity are taken on some of the treatment days. Determining the optimum timing of tDCS relative to speech and language therapy is an essential step in standardizing the use of tDCS as an adjuvant in aphasia therapy. Results may have important implications for the costs, delivery, and outcome of rehabilitation services to individuals with aphasia, including optimizing language recovery and enhancing their quality of life.
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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Principal Investigator: Jane Huggins, PhD; Katya Hill, PhD
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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; FY 20 (No-cost extension through 9/29/2021)

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.
Field Initiated Projects (FIPs)
New Jersey

Development of a Virtual Reality Spatial Retraining Therapy to Improve Neglect in Stroke Survivors

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kesslerfoundation.org/research/studies/development-virtual-reality-spatial-retraining-therapy-improve-neglect-stroke

**Principal Investigator:** Peii Chen, PhD
**Public Contact:** 973/324-3574

**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; FY 20 (No-cost extension through 9/29/2021)

**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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Principal Investigator: Peter Barrance, PhD
Public Contact: 973/324-3550

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); FY 18 (No-cost extension through 9/29/2019); FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 3/31/2021)
Abstract: This project aims to refine 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. In a sample of people with symptomatic, predominantly medial compartment knee osteoarthritis, this project investigates 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.
The Next-Generation Public Charging Infrastructure and Cyber-Information Network for Enhanced Inclusion and Independent Living of Power Mobility Device Users

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Project Number: 90IFDV0017
Start Date: September 01, 2020
Length: 36 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 20 $200,000; FY 21 $199,994; FY 22 $199,996

Abstract: This project pilots a public charging infrastructure and cyber-information system to support the outdoor use of power mobility devices (PMDs), to improve the mobility and inclusion of their owners. People with disabilities use PMDs such as power wheelchairs and electric scooters to improve their mobility, but users and caregivers consistently report the energy constraints of batteries as one of the main reasons for limited away-from-home mobility. The project objectives are to: (1) design, develop, and test a pilot public physical charging network accessible for PMD charging; (2) make the charging stations real-time Internet of Things (IoT)-connected through Google Maps services; (3) build smart energy monitoring hardware to track the PMD energy consumption; (4) develop a cloud-based, energy consumption prediction algorithm to enable route planning; (5) write a Best Practice Protocol to enable the charging network scaling up; and (6) increase the awareness of the general population regarding the needs of people with disabilities and aging adults. The outcomes are: (1) the PMD users will be able to successfully use public charging stations and charging apps; (2) increase the overall distance traveled by PMD users by 10%; (3) increase the average participation of outdoor miles in total traveled distance; and (4) the life-time of PMD batteries will increase. Project outputs include: (1) a pilot charging infrastructure in Chapel Hill, (2) a charging app for managing the charging process, (3) cloud-located AI-based software for PMD energy consumption estimation, and (4) Best Practice Protocol to guide charging network expansion.
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; FY 20 (No-cost extension through 9/29/2021)

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.
**Field Initiated Projects (FIPs)**
Wisconsin

**Community Participation Through Personalized Accessibility Information: The Access Ratings NextGen App**

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**Project Number:** 90IFDV0006
**Start Date:** September 30, 2018
**Length:** 36 months

**NIDILRR Officer:** William V. Schutz, PhD, MSW, MPH
**NIDILRR Funding:** FY 18 $200,000; FY 19 $200,000; FY 20 $200,000

**Abstract:** While the Americans with Disabilities Act (ADA) has substantially improved community accessibility there are many community buildings that remain inaccessible or only partially accessible to people with disabilities (PwDs). This project develops and evaluates the Access Ratings for Buildings NextGen (ARB-NextGen) application across three stakeholder groups (PwDs, proprietors of buildings, and rehabilitation professionals); and substantially advances tools for measuring, labeling, and informing PwDs about accessing the built environment. Research and development activities include: (1) working with focus groups, community agencies, and rehabilitation professional programs to advance the ARB-NextGen application suite; (2) populating a building barriers database; and (3) evaluating development processes and outcomes with stakeholder groups. The project produces four products: (1) AccessTools, a mobile application suite to quantify building accessibility; (2) AccessPlace, a consumer rating and integrated report platform for personalized accessibility information; (3) Access Ratings Training System; and (4) the ARB research database. Outcomes include increasing the quality of life of PwDs by predicting barriers they may encounter, improving the tools used by expert assessors to evaluate public buildings, and creating a research database on built environment accessibility.
Transition Adventure – An Interactive Fiction Game for Visually Impaired Students to Improve Pre-Employment Skills

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Project Number: 90BISA0035
Start Date: September 01, 2020
Length: 6 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 20 $98,750

Abstract: This SBIR project develops and evaluates an interactive fictional text-adventure game—Transition Adventure—for students with visual disabilities to practice and improve pre-employment skills including independent living, social, and problem-solving skills. IDEA and the Rehabilitation Act require all students with visual disabilities receive pre-employment transition skill training. This specialty instruction may be limited by academic resources (i.e., teacher shortage, funding) resulting in poor outcomes. Transition Adventure offers students an opportunity to improve their skills between sessions with their teachers thus promoting self-efficacy and improving transitional outcomes. Project activities include establishing pre-employment transition skill requirements and developing and evaluating the efficacy of the interactive fiction text-adventure game—Transition Adventure—with the target population (i.e., students with visual disabilities). This project partners with the Carroll Center for the Blind; and receives support from the Massachusetts Commission for the Blind, Florida Division of Blind Services, and the American Foundation for the Blind.
Small Business Innovation Research (SBIR), Phase I
Maryland

Kinetic Braille Keyboard Adapter

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Project Number: 90BISA0041
Start Date: September 01, 2020
Length: 6 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 20 $99,225

Abstract: This project develops and evaluates a prototype of the Kinetic Braille Keyboard Adapter, a non-electronic keyboard that mounts on any size iPad to improve input of braille directly into a smartphone or tablet. Currently, to enter braille directly into a smart tablet, braille writers’ tap fingers against the small keyboard displayed on the smooth glass, resulting in fingers breaking contact with the screen as they type. This can be particularly troublesome for novice users as they may lose orientation and tap outside the small keyboard region of the corresponding keys causing errors and interruptions. The Kinetic Braille Keyboard Adapter allows users to maintain continuous contact with all of the keys, so orientation is never lost thus eliminating errors caused by shifting finger positions. As users press down on the nine spring-loaded keys, conductive finger-tip sized pegs protruding from the underside of the keys strike the touchscreen, creating electrical pathways between the user’s fingers and the touchscreen surface, to activate on-screen virtual buttons. When finger pressure is reduced, the spring-loaded keys move back to the “up” position, breaking contact with the screen, to produce the desired letter. This project conducts a field test with eight teachers of students with visual disabilities who write and read braille. Researchers measure students’ speed and accuracy in typing words and phrases in braille using the Kinetic Braille Keyboard Adapter mounted on an iPad Mini compared to equivalent tasks using an iPad with a virtual braille keyboard only. Expected outcomes include commercial development of the Kinetic Braille Keyboard Adapter prototype that may be mounted to any iPad to improve the typing speed and accuracy of novice braille writers and promote self-efficacy of individuals who are blind or have low vision.
Wireless Moisture Sensing Brief for Non-Invasive Monitoring of Adult Incontinence

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Project Number: 90BISA0039
Start Date: September 01, 2020
Length: 6 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 20 $99,830

Abstract: This project develops and evaluates the Smart Brief™, a sensor-enabled “smart” medical product that incorporates a wireless moisture detection sensor into incontinence briefs allowing caregivers to non-invasively determine if an individual’s brief is soiled. Project activities include optimizing sensor and reader design to maximize sensitivity, specificity, and read range of the system to reliably detect an incontinent event and report it to caregivers and/or healthcare providers. The Smart Brief™ eliminates the need for unnecessary check and change procedures each day and promotes better quality and more economic healthcare by freeing staff to perform other duties. Project outcomes include an optimized and commercially viable sensor suitable for integration into incontinence briefs and a simple, portable, reader/antenna system that reliably communicates with the Smart Brief™. This product ultimately helps to preserve privacy and dignity, allows for fewer disruptions of daily activities, and facilitates longer periods of uninterrupted sleep for individuals with disabilities and/or who use incontinence briefs.
Small Business Innovation Research (SBIR), Phase I
New York

Capti-Record: Improving Reading Fluency in Students with Reading Disabilities

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Project Number: 90BISA0036
Start Date: September 01, 2020
Length: 6 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 20 $100,000

Abstract: The goal of this SBIR I project is to research, develop, and evaluate the feasibility of the Capti-Record assistive reading technology to help students with reading disabilities to improve their reading fluency. The Capti-Record enables students to listen to any text narrated by text to speech or by their teacher, providing a model for fluent reading. Students can record their own voice-over for that text individually or by roles. Students are able to listen to themselves read and follow along with a text highlighter. Project objectives include: (1) implementing an automatic audio-text alignment algorithm; (2) developing voice-over recording, storage, and playback functionality; (3) creating a user interface for recording/replaying of voice-overs; (4) creating a user interface for analytics; and (5) evaluating the Capti-Record in school settings. Anticipated project outcomes include the Capti-Record aligning audio to text as well as recording, storing, and playing back voice-over audio; the ability for students to record voice-over to any text; and the ability of teachers to access and review students’ voice-overs and analytical data to make targeted instructional decisions resulting in improved literacy for students with reading disabilities. This project is developed with assistance from Education Testing Service and Benetech/Bookshare, as well as consultants from Universities of Buffalo and Memphis.
Small Business Innovation Research (SBIR), Phase I
New York

Human Factors Validation of the CathBuddy Cleaning and Sterilizer Operation Procedures

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Project Number: 90BISA0040
Start Date: September 01, 2020
Length: 6 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 20 $100,000

Abstract: This SBIR project validates the operability of the CathBuddy Reusable Urinary Catheter System by end users as a safer, more cost-effective alternative to the currently available single-use intermittent urinary catheters. Currently, intermittent catheterization is practiced by millions of individuals in the U.S. to manage conditions such as neurogenic bladder and lower urinary tract symptoms. While this practice enables individuals to reliably empty their bladders, it is associated with a high incidence of urinary tract infections (UTIs) even when single-use catheters are used. Safer closed catheter systems or no-touch catheters help reduce incidence of UTIs; however, they are cost-prohibitive and rarely covered by insurance. The CathBuddy system is an affordable alternative comprised of a reusable intermittent catheter, a removable catheter insertion aid, and an at-home sterilizer. This project conducts formative functional design testing with 20 CathBuddy system end users, where the users are tasked with cleaning and sterilizing CathBuddy catheters and insertion aids using a laboratory-verified protocol. Researchers evaluate end users’ ability to understand and implement the protocol instructions as well as remotely observe end users to assess the completeness of the protocol steps, the number of failed steps, and the objective cleanliness of the catheters following protocol completion. Project outcomes include a modified CathBuddy system that reduces UTI incidence relative to the existing standard of care, reduces plastic waste generated annually by catherization, and provides end users with a consistent and safer catherization system for day to day use that lowers UTI incidence resulting in improved user health and fewer secondary complications for individuals who use catherization systems.
Development of a Myoelectric Implant for Intuitive Prosthesis Control

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Project Number: 90BISA0038
Start Date: September 01, 2020
Length: 6 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 20 $99,870

Abstract: This project builds on previous research to further develop an implantable myoelectric device that significantly improves upper-limb prosthesis control for amputees with upper-limb prosthesis. In previous studies, researchers created an implantable sensor that listens to muscles from the amputated limb that once controlled arm motions allowing users to control their prostheses similar to an intact limb. During this current project researchers establish focus groups and consult with both clinical and patient end users to draft design input requirements for software development. Outcomes include the successful development of software that allows for an intuitive, simultaneous, multi-joint prothesis control of the implantable myoelectric device significantly improving the quality of life of individuals with upper limb amputation.
Improving Rehabilitation and Reducing Re-Occurrence of Diabetic Foot Ulcers by Shifting Plantar Pressure with Exo-Tendon and Exo-Skeletal Footwear Systems

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Project Number: 90BISB0011
Start Date: September 30, 2018
Length: 24 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 18 $298,294; FY 19 $276,700; FY 20 (No-cost extension through 9/29/2021)
Abstract: This Phase II project brings novel exoskeleton footwear towards commercialization which reduces plantar loading, accelerates and improves rehabilitation after diabetic foot ulcer, and minimizes its reoccurrence to help people resume activities of daily living, maintain full employment and function, and prevent amputation. Project objectives include: (1) optimizing the performance of off-loading/pro-pulsive exoskeleton footwear based on in-depth human factors analysis; (2) biomechanical performance testing of the refined footwear in both non-diabetic, healthy volunteers and diabetic patients; and (3) evaluating and validating deployed prototypes in the patients’ home environment. Outcomes focus on human factors in (1) establishing new qualitative metrics that illuminate factors which influence patients long-term adherence with assistive and prophylactic footwear based on in-depth in-home patient interviews, (2) biomechanical performance testing results, (3) in-home evaluation results to better understand and maximize adoption and long-term adherence by the end user, and (4) optimized design specifications for exoskeletons/products to benefit patients, researchers, orthotics and prosthetics companies, and footwear companies.
T3 Platform: The Next Generation Tactile Tablet

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Project Number: 90BISB0012
Start Date: September 30, 2019
Length: 24 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 19 $274,522; FY 20 $274,470

Abstract: This project introduces T3, a system for creating, distributing, and consuming touch-responsive, audio-embedded tactile graphic maps, games, puzzles, and interactive lessons. Based on the successful but outdated Talking Tactile Tablet (TTT) paradigm, this new approach solves several shortcomings of earlier products, and seeks to reach new markets beyond the original target of students who are blind or visually impaired. The T3 Platform allows users to drop a tactile overlay sheet onto a large Android tablet computer fitted with a plastic T3 Frame, then explore tactile figures and Braille with both hands, tapping and swiping to trigger spoken descriptions and explanations of content. Phase II research addresses issues with overlay sheet identification eliminating the requirement that the user finds and presses five different locations each time a new overlay is put in place and allows the application to query the cloud server for data on the currently-mounted sheet in an automatic process that is transparent to the user. The result is a smoother, faster sheet change sequence, and no more sheet misidentifications that were the biggest source of frustration for users of the TTT. T3 adds on the option to use voice commands, providing a more efficient user experience that allows users to maintain contact with both hands on the Braille or tactile content on which they are focused in lieu of finding and pressing tactile buttons to control the system.
High-Energy, Light-Weight Battery to Power Next Generation Wearable Assist Prosthetics

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Project Number: 90BISB0018
Start Date: September 01, 2020
Length: 24 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 20 $276,508; FY 21 $298,488

Abstract: This Phase II SBIR project builds upon previous research to develop an increased life cycle, high-energy, lightweight, cost-efficient 1 Ah prototype battery designed specifically to support the next generation of powered prosthetic devices. Currently, prosthetic power supplies are not specifically designed for these applications and present a major hurdle for prosthetic design engineers. The Giner lithium sulfur (Li-S) prototype battery addresses range anxiety—or the fear that a battery will run out of power before reaching a destination—by increasing the life cycle, extending the range, and reducing battery weight. During Phase II, researchers collaborate with manufacturers of powered mobility devices to validate the new technology in actual operating prosthetics. Researchers focus on scaling up, fabrication, and testing of customized prototype pouch cells for extensive evaluation in real-world operational conditions for wearable assist powered prosthetic (WAPP) devices. The end-product consists of small, lightweight, and low-cost batteries which reduce unnecessary bulk while powering a range of prosthetics for an entire day of activity. The resulting technology facilitates the commercialization of high-energy density Li-S batteries with increased cycle life to improve the quality of life for individuals with battery control prostheses and mobility devices.
Small Business Innovation Research (SBIR), Phase II
Minnesota

Improving Hearing Aid Satisfaction Through Remote Feedback and Settings Adjustments

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Project Number: 90BIB0006
Start Date: September 30, 2017
Length: 24 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 17 $259,594; FY 18 $315,385; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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 percent 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.
Small Business Innovation Research (SBIR), Phase II
Ohio

The Bimodal Ankle for Mobility and Stability of Prosthesis Users

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Principal Investigator: Matthew Wernke, PhD
Public Contact: 740/869-3377

Project Number: 90BISB0010
Start Date: September 30, 2018
Length: 24 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 18 $295,633; FY 19 $279,302; FY 20 (No-cost extension through 9/29/2021)

Abstract: This Phase II project further develops and evaluates a prototype of the Bimodal Ankle Prosthesis (BAP) with the goal of improving balance and balance confidence of persons with lower-extremity amputations by developing a prosthetic ankle that has biomimetic modes for walking and standing. BAP provides flexibility for walking mobility and rigidity for standing stability. The objectives are to: (1) Develop (design and fabricate) a complete prototype incorporating a hydraulic actuator developed in Phase I that allows movement for walking and restricts movement for standing, (2) perform engineering verification of the BAP, and (3) perform controlled laboratory and field-use of the BAP with users of lower-extremity prosthesis. Anticipated outcomes include: (1) a BAP prototype that passes international standards, (2) clinical evidence supporting the effectiveness of the BAP features, and (3) commercialization by The Ohio Willow Wood Company.
Small Business Innovation Research (SBIR), Phase II
Washington

Smart Ankle-Foot Orthosis (SMART AFO) for Improved Stroke Outcomes

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Project Number: 90BISB0019
Start Date: September 01, 2020
Length: 24 months
NIDILRR Officer: Thomas Corfman
NIDILRR Funding: FY 20 $287,562; FY 21 $286,477

Abstract: This SBIR Phase II project develops and validates a novel, wireless, smart ankle-foot orthosis (Smart AFO) system aimed at improving the functional walking outcome measures in individuals affected by stroke who use custom AFOs. Technical objectives include: T1 – Upgrade and optimize the Smart AFO design in preparation for clinical trial and commercialization, T2 – Enhance the Smart AFO mobile application software to facilitate automated real-time gait data analysis and optimize usability, and T3 – Evaluate the Smart AFO system with clinical orthotists and post-stroke individuals to validate and optimize effectiveness of the system compared to current clinical practice. Project outcomes include: a commercial-ready, clinically tested Smart AFO system composed of an instrumented AFO sensor device which wirelessly communicates information to a mobile software application, and executes an algorithm based on the AFO parameters. The Smart AFO enables clinicians to make better informed decisions on AFO adjustments and maximizes walking safety and efficiency for post-stroke individuals.
Small Business Innovation Research (SBIR), Phase II
Wisconsin

Take on Training with Attainment: A Video Training App to Foster Independence at Work for Individuals with Intellectual Disability

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Project Number: 90BISB0013
Start Date: September 30, 2019
Length: 24 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 19 $250,528; FY 20 $324,430
Abstract: This project researches and develops a mobile application (app), Take on Training, to provide direct services workers (DSWs), including job coaches, with on-demand instruction by way of short vignettes to promote the maximum level of independence for people with disabilities at work. Objectives for this Phase II project are to produce a commercially available, mobile, cross-platform app for job coaches with a complementary app for workers with intellectual or developmental disabilities (IDD) accompanied by a national network of job coach expertise. This project conducts a single subject protocol with an early beta version of the app in Year One, and a longitudinal-repeated measure randomized control design protocol with multiple subjects using a full beta version of the app in Year Two. The Take on Training app is anticipated to impact more than 50,000 job coaches and workers with IDD, optimizing the maximum level of independent employment for individuals with disabilities.
Knowledge Translation

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 as well as other settings 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.

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Rehabilitation Research and Training Centers (RRTCs)
Illinois

Home and Community-Based Services Person-Centered Outcomes and Measurements

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Project Number: 90RTGE0004
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 20 $875,000; FY 21 $875,000; FY 22 $875,000; FY 23 $875,000; FY 24 $875,000

Abstract: The goal of this five-year project is to accelerate the development and application of non-medical, person-centered outcome measures that inform the design, implementation, and continuous improvement of Federal and State home and community-based services (HCBS) programs, policies, and interventions. The objectives are to: (1) Identify and test promising measures and measure sets; (2) identify promising HCBS practices and requisite service-delivery competencies; (3) develop and pilot test an intervention for HCBS using manualized training materials that support person-centered care delivery and coordination; and (4) work closely with NIDILRR and other ACL centers to ensure the RRTC’s activities are informing and informed by other HCBS quality initiatives, particularly regarding strategies that increase the utilization of HCBS outcome measures. This RRTC utilizes both qualitative (focus groups, key informant interviews, systematic literature synthesis) and quantitative methods (delivery of manualized training, collection of HCBS outcome measures). Outcomes include improved understanding of HCBS person-centered outcome measures, best practices, and competencies; an intervention ready for intervention efficacy evaluation; increased capacity to conduct research on HCBS topics; and greater collaboration among Federal, State and private stakeholders serving persons receiving home and community-based services. Products include a quarterly newsletter; policy briefs, social media activities; articles in peer-reviewed journals; and a help desk to provide technical assistance. Training activities include webinars, podcasts, workshops, and training for two post-doctoral fellows. A multi-stakeholder Advisory Committee composed of an HCBS Participant Council and an Implementation and Adoption Council provide input on key decisions and support the Center’s research and knowledge translation activities. Project partners include RTI International, ADvancing States, HCBS Strategies, Support Development Associates, and FEI Systems.
Disability and Rehabilitation Research Projects (DRRPs)
District of Columbia

Model Systems Knowledge Translation Center (MSKTC)

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www.youtube.com/user/MSKTCtv

Principal Investigator: Steven Garfinikel, PhD; N. Lynn Gerber, MD 919/918-2306 (Garfinikel); 703/993-1940 (Gerber)
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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 $791,996; FY 19 $791,970; FY 20 $791,987

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.
Disability and Rehabilitation Research Projects (DRRPs)  
District of Columbia

Traumatic Brain Injury (TBI) Resource Bundle for American Indians

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Project Number: 90DPKT0008  
Start Date: September 01, 2020  
Length: 60 months  
NIDILRR Officer: Pimjai Sudsawad, ScD  
NIDILRR Funding: FY 20 $200,000; FY 21 $200,000; FY 22 $200,000; FY 23 $200,000; FY 24 $200,000

Abstract: This project develops a traumatic brain injury (TBI) resource toolkit in collaboration with the Great Plains Tribal Chairmen’s Health Board (GPTCHB) with the goal to increase awareness, knowledge, and health behaviors leading to improved health and function outcomes for American Indians with TBI and their families. In close collaboration with an advisory council of TBI stakeholders, technical experts in TBI, CARF International, large TBI organizations, and tribal artists, the AIR/GPTCHB team conducts research to understand the needs of American Indians and uses research findings and needs assessment results to guide product development, dissemination, utilization, and evaluation activities. The AIR/GPTCHB team applies culturally appropriate knowledge translation (KT) strategies to adapt existing TBI resources developed under the NIDILRR-funded Model Systems Knowledge Translation Center. The resulting resource toolkit emphasizes the importance of culturally appropriate stories and/or images through info-comics (short stories illustrated with pictures, like comic strips, which both inform and entertain); short videos; infographics (presentations of data using visual images rather than focused only on numbers); storybooks for children; and/or songs. The AIR/GPTCHB team also provides training to tribal health care providers as knowledge brokers to promote adoption and utilization of resources while following indigenous ways of conducting research and the National Congress of American Indians guidelines to ensure cultural sensitivity and optimize success.
Disability and Rehabilitation Research Projects (DRRPs)
Illinois

DRRP on KT to Promote Patient-Centered Care Through Use of Standardized Assessments

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Project Number: 90DPKT0007
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 20 $200,000; FY 21 $200,000; FY 22 $200,000; FY 23 $200,000; FY 24 $200,000

Abstract: The goal of this project is to employ knowledge translation (KT) principles to develop materials for patients and care partners and enhance resources for clinicians regarding standardized assessments. Standardized assessment is the core of evidence-based rehabilitation practice. Patients may have limited knowledge and understanding of how clinicians use standardized assessments to monitor progress and not all clinicians and organizations routinely use them. This project leverages the Rehabilitation Measures Database (RMD) developed under previous NIDILRR funding as a KT resource to provide clinicians with summaries of assessment instruments. Project objectives based on identified KT needs include: (1) Improving patients’ and care partners’ understanding of standardized assessments, (2) increasing students’ readiness and ability to incorporate standardized assessments into practice, (3) promoting rehabilitation clinicians’ routine use of standardized assessments, and (4) dissemination of information on standardized assessments to patients, care partners, students, and clinicians. Researchers work in partnership with graduate programs to involve faculty and students in the development of enhanced resources for the target populations—patients and care partners, students, and rehabilitation clinicians—as well as adding new instruments to the RMD related to function, disability, and health; and in producing new instrument summaries in peer-reviewed journals. Project outcomes include improved patient understanding of standardized assessments and increased use of standardized assessments in rehabilitation practice. Research results are disseminated to all stakeholders through the RMD and at professional association conferences. Products include a comprehensive, enhanced RMD; educational webinars; and KT strategies to promote knowledge and confidence in assessment use.
The Online and Applied System for Intervention Skills (OASIS) -
Scaling-Up!

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Project Number: 90DPKT0003
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 19 $199,996; FY 20 $199,997; FY 21 $199,997; FY 22 $199,995; FY 23 $199,997

Abstract: This project follows standard implementation guidelines to scale-up Online and Applied Systems Intervention Skills (OASIS) to the broader community. OASIS is a program that uses a Research-to-Practice Outreach Training model to teach parents of children with an autism spectrum disorder (ASD) how to implement empirically based interventions with their children. During this project, previous NIDILRR-funded OASIS service providers learn how to train others (train-the-trainer) to effectively use the OASIS model to teach parents to improve the child’s level of independence and overall well-being within the community.
Center on Knowledge Translation on Employment Research (CeKTER)

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Project Number: 90DPEM0004
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 20 $499,898; FY 21 $499,698; FY 22 $499,466; FY 23 $499,533; FY 24 $499,697

Abstract: The goal of this project is to establish the Center on Knowledge Translation on Employment Research (CeKTER) and to generate new materials and methods for greater utilization of knowledge translation in services and policies to successfully promote employment outcomes for people with disabilities. The Center utilizes the expertise of an advisory council comprised of professionals in implementation science, representatives of national associations of people with disabilities, as well as prominent NIDILRR disability employment researchers. Center research activities include: (1) conducting a scoping review of NIDILRR employment research, (2) comparatively testing the effectiveness of dissemination modalities, (3) developing and evaluating a capacity building strategy to strengthen knowledge translation expertise, (4) delivering this strategy for broader utilization, (5) co-producing numerous and varied informational products with researchers and stakeholders, (6) broad dissemination of these products, and (7) conducting communities of practice with NIDILRR employment research grantees.

Outcomes of these research activities include: (1) increased expertise among NIDILRR grantees in using knowledge translation strategies to improve adoption and use of disability employment research; (2) increased readiness for person, program, or policy changes that support disability employment; (3) increased shared knowledge among NIDILRR grantees; and (4) improved employment outcomes among people with disabilities. Center products include: research syntheses and briefs; plain language summaries; best practice guidelines; varied information products including tip sheets, briefs, webinars, TED talk, and Ask the Expert sessions; CeKTER website; a technical assistance portal; a tailored strategy for developing expertise in knowledge translation strategies and a resulting toolkit and coaching guide; a knowledge translation training academy; and a web-library of courses on knowledge translation.
Disability and Rehabilitation Research Projects (DRRPs)
Massachusetts

The Rural Youth Apprenticeship Development Project

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Project Number: 90DPKT0006
Start Date: September 01, 2020
Length: 60 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 20 $200,000; FY 21 $200,000; FY 22 $200,000; FY 23 $200,000; FY 24 $200,000

Abstract: This project supports state vocational rehabilitation agencies (SVRAs) and American Indian Vocational Rehabilitation Services (AIVRS) to develop and advance apprenticeship programs for youth with disabilities in underserved rural communities. The goal of this project is to improve employment outcomes for youth with disabilities in rural communities through building the capacity of SVRAs to lead the creation of apprenticeship programs in collaboration with local businesses and workforce system partners. The objectives are to: (1) Develop a Rural Youth Apprenticeship Development (RYAD) Toolkit with rural-specific apprenticeship tools and resources; (2) support the development of apprenticeship programs for youth in several VR agencies; (3) establish a learning collaborative to facilitate peer-to-peer mentorship, subject matter expert support, and partnerships for apprenticeship programs; and (4) embed the VR Program Evaluation Coach tool to evaluate apprenticeship program design and systems changes. Anticipated outcomes include: (a) increased use and adoption of NIDILRR- and RSA-sponsored practices, products, and tools that promote the creation of apprenticeship programs for youth in rural communities; (b) build capacity of SVRAs to evaluate the impact of new apprenticeships programs; and (c) generate new knowledge about best practices in employment service delivery and enable future research. The products are a RYAD Toolkit, an active online evaluation tool, and an expanded ExploreVR.org web portal for widespread dissemination. This project is a partnership of the Institute for Community Inclusion, the Montana Rural Institute for Inclusive Communities, Arkansas Career Development Center, Arkansas Rehabilitation Services, Mathematica Policy Research, and key stakeholders.
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; FY 20 $0 (No-cost extension through 9/29/2021)

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 two states 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 educa-
tion outcomes for students with EBD. This project is led by the University of Massachusetts Medical
School’s Transitions to Adulthood Center for Research (formerly the Transitions Research and Training
Center) and the Implementation Science and Practice Advances (iSPARC) 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)
Montana

Rural Community Living Development Peer Mentoring: A Strategy for Knowledge Translation

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Project Number: 90DPKT0005
Start Date: September 30, 2019
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 19 $188,900; FY 20 $198,572; FY 21 $199,839; FY 22 $194,676; FY 23 $199,817

Abstract: This project implements the Rural Community Living Development (RCLD) mentoring program to address the needs of people with disabilities in unserved and underserved rural communities. Project objectives include: (1) using Participatory Curriculum Development to develop Peer Mentoring training materials; (2) implementing RCLD processes with CIL staff and identify contextually appropriate NIDILRR-funded products for rural application; (3) collaborating with partners across all phases of the project to develop mentoring as a strategy for sustainable knowledge translation; (4) evaluating the RCLD process using participatory evaluation strategies (e.g., Photovoice) to understand how successfully adopted products in rural places are used by communities; and (5) disseminating a variety of products and strategies, including rural appropriate NIDILRR-funded products, RCLD and peer mentoring program strategies, the RCLD training model, products for supporting stakeholders’ communication of their needs and impacts. Outcomes include: (1) increased rural stakeholder adoption of NIDILRR-funded findings and products; (2) increased CIL capacity to reach consumers in their underserved and unserved rural areas; (3) increased awareness of rural disability needs in the NIDILRR research community; (4) increased disability awareness and collaboration in RCLD communities; and (5) adoption of RCLD mentoring program strategies. Project products and dissemination include ready-to-use NIDILRR products, RCLD peer mentoring training model, peer reviewed publications, project reports, consumer and service-provider oriented materials, and presentations. This project partners with the Association of Programs for Rural Independent Living (APRIL) and the Research and Training Center on Place-Based Solutions for Rural Community Participation, Health, and Employment (RTC:Rural).
Disability and Rehabilitation Research Projects (DRRPs)
Pennsylvania

Translating Transfer Training and Wheelchair Maintenance into Practice

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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; FY 20 $0 (No-cost extension through 9/29/2021)

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)
Pennsylvania

Initiative to Mobilize Partnerships for successful Assistive teChnology Transfer (IMPACT)

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Principal Investigator: Jonathan L. Pearlman, PhD; Mary R. Goldberg, PhD; 412/648-1343
Public Contact: Kim Robinson 412/648-1332

Project Number: 90DPKT0002
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 18 $924,266; FY 19 $924,202; FY 20 $919,779; FY 21 $924,915; FY 22 $920,109

Abstract: This project addresses the barriers, facilities, and factors associated with assistive technologies (ATs), and successful AT technology transfer (ATT). ATs are needed by an estimated one billion individuals worldwide to participate fully in society and live active, independent lives; without them, individuals are often excluded from society, do not have access to basic opportunities such as education and jobs, and are at a higher risk of being poor and unhealthy. There is a need and marketing opportunity to address a poorly defined and fragmented markets, lack of clear regulations, and informal service provision channels that lead to barriers to successful ATTT. This project develops tools and approaches to streamline and improve the efficiency of ATTT for people with disabilities in the US and worldwide. Specifically, this project conducts research and development projects to comprehensively understand barriers and facilitators to successful ATTT, track the activities regarding the ATTT success rate of NIDILRR-funded projects, and raise awareness and increase capacity of NIDILRR grantees to perform successful ATTT.
Translating mHealth Technology to a Community Service Organization Providing Long Term Services and Supports

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Project Number: 90DPKT0004
Start Date: September 30, 2019
Length: 60 months

NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 19 $198,927; FY 20 $199,838; FY 21 $198,710; FY 22 $197,488; FY 23 $197,721

Abstract: This project builds on previous research and development of the mobile health (mHealth) system, Interactive Mobile Health and Rehabilitation System (iMHere 2.0), to provide support delivery of long-term services and supports (LTSS) to individuals with disabilities in the community with the goal of utilizing knowledge translation methods to create a new service delivery model in partnership with a community-based organization that provides LTSS. Research participants include relevant stakeholders involved in the implementation of the mHealth systems such as consumers, family caregivers, health services workers, care coordinators, and case managers. Objectives of this project are to: (1) evaluate the feasibility of implementation of the iMHere 2.0 system in a new community-based service delivery model, and (2) understand the barriers to and facilitators of implementing the system in that model. Outcome measures include effective implementation (i.e., reach, acceptability, adoption, costs, and feasibility), barriers, facilitators, and the various stakeholders who may potentially benefit from the mHealth system. Project activities include the delivery and deployment of technology products in similar, real-world settings, as well as publications, and consumer-friendly materials.
A Multidisciplinary Approach to Translating New Knowledge into Practice to Promote Health and Well-Being After Spinal Cord Injury

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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; FY 19 $0 (No-cost extension through 9/29/2020); FY 20 $0 (No-cost extension through 9/29/2021)

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

Center on Knowledge Translation for Employment Research

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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; FY 20 $0 (No-cost extension through 2/28/2021)

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

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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
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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; FY 20 $0 (No-cost extension through 9/29/2021)

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.
National Data and Statistical Center for the Burn Model Systems

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Project Number: 90DPGE0004
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 18 $350,000; FY 19 $350,000; FY 20 $350,000; FY 21 $350,000; FY 22 $350,000

Abstract: The purpose of the National Data and Statistical Center for the Burn Model Systems (BMS-NDSC) is to (a) maintain and enhance a longitudinal database following individuals with burn injury, (b) provide access to BMS data, (c) promote inclusion of participants from minority backgrounds in BMS data collection efforts, (d) provide statistical support to NIDILRR Burn Model Systems Centers (BMS Centers), (e) conduct research utilizing the BMS National Database (NDB) while supporting burn injury research conducted by both researchers in the BMS Centers and external to the BMS Centers, (f) provide administrative support for BMS activities, and (g) provide training and technical assistance to BMS Centers. The BMS-NDSC introduces various products to increase the utility and visibility of the BMS NDB, including: (1) an interactive web-based data dictionary, (2) data visualizations, (3) interactive features for online surveys, (4) publicly available annual reports, and (5) database summaries. 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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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.
Traumatic Brain Injury Model Systems
Colorado

Traumatic Brain Injury Model Systems
National Data and Statistical Center

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Project Number: 90DP0084
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: 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.
ADA National Network
Washington

ADA Network Knowledge Translation Center

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Project Number: 90DP0086
Start Date: September 30, 2016
Length: 60 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 16 $850,000; FY 17 $850,000; FY 18 $850,000; FY 19 $850,000; FY 20 $850,000

Abstract: The goal of the Americans with Disabilities Act National Network Knowledge Translation Center (ADAKTC) is to facilitate coordination, organization, and collaboration among the ADA National Network (ADANN) grantees and to generate new knowledge about optimal methods to enhance stakeholder’s use of knowledge about their rights and responsibilities under the ADA. To achieve this goal, the ADAKTC is optimizing the efficiency and impact of the ADANN’s outreach, training, technical assistance, information dissemination, and capacity building activities by (1) maintaining and further developing the ADANN’s document portal, (2) enhancing our system for sharing training and technical assistance materials, (3) continuing the joint development of products with the ADANN, and (4) supporting the annual meetings of the ADANN. We are increasing the awareness and use of ADA-related research findings and ADA-related information with appropriate ADA stakeholder groups by (1) conducting research on knowledge translation, (2) using findings from our systematic review of the ADA to develop and disseminate research briefs, (3) enhancing our knowledge translation efforts to reach broader audiences, and (4) organizing an ADA research conference in Year 5. Finally, we are improving understanding of ADA stakeholders’ need for and receipt of ADANN services over time by (1) maintaining and increasing the quality and efficiency of the Outcome Measurement System (OMS); (2) increasing data quality, monitoring those improvements, and providing training and technical assistance on use of the database; (3) conducting a needs analysis of the OMS data to identify emerging issues related to stakeholders rights and responsibilities under the ADA; (4) producing an annual report based on OMS data; and (5) extending and enhancing the measurement of ADA implementation outcomes.
National Rehabilitation Information Center (NARIC)

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Project Number: GS-06F-0726Z
Start Date: September 28, 2015
Length: 60.5 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; FY 20 $843,552
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.
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 entities that provide public accommodations. NIDILRR has funded a network of grantees to provide information, training, and technical assistance to individuals and entities who have rights 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.
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 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.
ADA National Network
Region III - DC, DE, MD, PA, VA, and WV

Mid-Atlantic ADA National Network Regional Center - Region III

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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: 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, ADA Live!, Tax Access with community non-profit partners, continued improvement of online courses, and a webinar series; (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 website portals for stakeholders; (4) implementation of PAR research model: evaluate and increase access to financial institutions; develop a Quality Indicators Financial Inclusion Tool (QI-FIT) 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 and Spelman College, Bluegrass ADA Employment Consortium; Association of People Supporting Employment First (APSE); Best Buddies Jobs, and Financial Research Advisory Group. This center serves Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.
Great Lakes ADA National Network Regional Center - Region V

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Project Number: 90DP0091
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
Other Funding: FY 19 $48,000 US Access Board; FY 20 $52,000 US Access Board

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.
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www.rockymountainada.org/news/blog
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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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Principal Investigator: Erica C. Jones, MPH, Project Director
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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.
ADA National Network
Region X - AK, ID, OR, and WA

Northwest ADA National Network Regional Center - Region X

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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 stakehold-
ers of their rights and responsibilities under the ADA, including addressing established ADA require-
ments 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 re-
ceipt 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 is-
ues 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.
Americans with Disabilities Act Participation Action Research Consortium (ADA PARC): Advancing Participation Equity for People with Disabilities

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Independent Living Research Utilization (ILRU)
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Principal Investigator: Lex Frieden, LLD; Joy Hammel, PhD, OTR/L 713/520-0232, ext. 124 (Frieden); 312/996-3513 (Hammel)
Public Contact: 713/520-0232; Fax: 713/520-5785

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.
Capacity Building for Rehabilitation Research and Training

In addition to supporting research and development, NIDILRR also aims to provide for the training of the next generation of researchers in the disability field. NIDILRR funding supports programs to build researchers’ 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 a Research Fellowship Program and an Advanced Rehabilitation Research Training Program where emerging talent and leadership are developed and fostered. 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: 90RTST0001
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 18 $875,000; FY 19 $875,000; FY 20 $875,000; FY 21 $875,000; FY 22 $875,000

Abstract: This project engages minority entities (MEs)/minority-serving institutions (MSIs) to generate new knowledge leading to improved outcomes for persons with disabilities from traditionally underserved racial and ethnic populations and enhanced research capacity and infrastructure at MEs and MSIs. The RRTC works with various MSIs (i.e., historically Black colleges and universities [HBCUs], Hispanic serving institutions, Tribal colleges/universities and Asian American and Native American Pacific Islander-serving institutions) to enhance their faculty scholars’ and students’ research skills and address research infrastructure challenges such as library research resources, office of sponsored program and Institutional Review Board operations, invisible research center findings, and seed monies to jump-start research. Scientific panels mentor pre-doctoral, doctoral, post-doctoral, faculty, and research center Fellows, and visiting investigators in the development of research projects to be submitted to professional journals, and, where appropriate, a research grant proposal to be submitted to NIDILRR for funding consideration. The RRTC conducts eight major studies and numerous capacity-building activities informed by Citizen Scientists of Color with Disabilities and guided by National Advisory Panel Members that address the following themes: (1) field-testing and testing an emerging (i.e., Peer Multiple Mentor Model [PMMM]) and promising (i.e., Peer-to-Peer Mentor Research Team Model [PMRTM]) RCB approach, respectively; (2) exploring impacts of opioid use disorder on employment prospects among people with disabilities from racially and ethnically diverse backgrounds; (3) field-testing an emerging State Vocational Rehabilitation Agency (SVRA) and Veterans Affairs (VA) Co-Service Partnership Model; (4) pilot-testing an emerging American Indian Vocational Rehabilitation Program (AIVRP) and Veterans Affairs (VA) Co-Service Partnership Model; (5) exploring barriers that prevent HBCU-based science, technology, engineering, and mathematics (STEM) research scientists and faculty members, and small African American-owned technology firm engineers from participating optimally in the federally assistive technology research and development enterprise; (6) examining factors that challenge federally-sponsored MSI-based research centers in producing highly visible research findings that
advance the disability/rehabilitation and health science and literature; (7) evaluating an emerging Early Intervention Disability, Rehabilitation, and Health Research Careers Pathway Model (EIRCPM) that mentors MSI-based pre-doctoral and doctoral Fellows; and (8) longitudinally testing an Institutional Research Capacity-Building and Infrastructure Model (IRCBIM) across five different MSIs. A State-of-the-Science Conference is planned during the third year of the grant cycle on the research topics identified.
Participation of Students with Chronic Pain in Post-Secondary Education: A Grounded Theory Investigation

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Project Number: 90SFGE0023
Start Date: September 01, 2020
Length: 12 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 20 $80,000

Abstract: The goal of this project is to understand the lived experience of postsecondary students with chronic pain with the aim of supporting their success. Among traditional aged college students, prevalence rates for chronic pain have been estimated to be anywhere from 7.6 to 14.3 percent. Conditions with symptoms of chronic pain seen in college students include rheumatoid arthritis, spinal cord injury, cerebral palsy, musculoskeletal disorders and injuries, multiple sclerosis, fibromyalgia, Chron’s disease, and chronic migraines. Postsecondary education can prepare students with chronic pain for professional careers with medical benefits, careers where work activities, environments, and policies are more conducive to both pain management and employment success. However, students with chronic pain have functional limitations such as fatigue and memory and concentration problems that can interfere with academic and social participation, consistent attendance, and interactions with professors outside of the classroom—all factors that have been associated with persistence to degree or certificate completion. Students with chronic pain may also need to temporarily stop-out of college for surgical or other medical procedures, and when this occurs, it can create anxieties about re-entering programs of study. Compounding these problems is the stigma associated with chronic pain. In this project, a grounded theory approach is used to understand the lived experiences of 25 to 30 postsecondary students with chronic pain. In-depth interviews with the research participants lead to: (a) gaining a better understanding of how chronic pain influences and is influenced by participation in postsecondary education, (b) determining what misperceptions about chronic pain interfere with full participation, (c) identifying services and supports that facilitate active participation in postsecondary education, and (d) considering how chronic pain factors into decisions about academic majors. These narratives enable universities to consider how to best support students with chronic pain to maximally benefit from all the experiences of being college students, reduce stigma associated with chronic pain, persist to degree completion, and envision futures in which they achieve their self-determined career goals.
Advancing Evidence-Informed Responses to Intimate Partner Violence Among Women with Disabilities

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Principal Investigator: Michelle S. Ballan, PhD
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Project Number: 90SFGE0019
Start Date: September 01, 2020
Length: 12 months
NIDILRR Officer: A. Cate Miller, PhD
NIDILRR Funding: FY 20 $80,000

Abstract: The primary research objective of this project is to refine and pilot test The Empowerment Focused Intervention, an intervention for female survivors of intimate partner violence (IPV) with disabilities. Women with disabilities face unique risk factors for IPV and experience higher rates of abuse than women without disabilities, yet research on the problem is limited and services tailored to their diverse needs are scarce. The health-related risks of IPV are of particular concern for women with disabilities, who are at risk of sustaining additional chronic injuries and debilitating conditions as a result of abuse. IPV degrades the health and well-being of women with disabilities across the lifespan and diminishes their ability to fully participate in society, maintain gainful employment, live independently, and achieve economic and social self-sufficiency. The Empowerment Focused Intervention is a novel, IPV intervention that addresses the complex interplay of health-related, social, and vocational factors impacting women with disabilities. The intervention aims to: (1) improve the health and function of women with disabilities; (2) promote independence and self-sufficiency; (3) increase abuse awareness and safety planning skills; and (4) facilitate interdependence by increasing social and community contacts. The project’s goal is to develop an evidence informed IPV intervention that has the potential to reach a large number of women with disabilities, is low effort in nature, is cost-efficient, and can be replicated at domestic violence agencies. The Empowerment Focused Intervention is piloted with women with physical disabilities and pain conditions to support further refinement of the intervention content, with the goal of ultimately informing the design of a study to test the efficacy of the intervention and disseminate it widely.
Fellowships (Distinguished)
South Carolina

Centers for Independent Living and Transition Collaboration:
Examining Roles, Communication, and Collaborative Structure to
Enhance Youth Outcomes

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Project Number: 90SFGE0025
Start Date: September 01, 2020
Length: 12 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 20 $80,000

Abstract: The purpose of this two-phase study is to examine Center for Independent Living (CIL) professionals’ perceptions of their understanding of and collaboration with school-based transition professionals. Specifically, the study explores role understanding, frequency of communication, as well as perceptions of how CIL and Local Education Agencies transition can be enhanced. Phase 1 includes semi-structured interviews with CIL professionals and school-based transition specialists to describe and attempt to better understand the collaboration process and gain a deeper understanding on the specific roles and activities CIL professionals participate in while working with school-based professionals. Additionally, this phase explores CIL professional perceptions on how role understanding and communication frequency can be improved. Phase 2 examines the key roles that CIL and school-based transition professionals are performing. Additionally, this phase examines the relationship between perceived understanding of stakeholder roles in the transition planning process, frequency of communication among each of the stakeholders, and the impact of role and communication on levels of collaboration among transition professionals.
Targeting the Gut Microbiome to Improve Insulin Resistance in SCI

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Project Number: 90SFGE0018
Start Date: September 30, 2019
Length: 12 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 19 $70,000; FY 20 (No-cost extension through 9/29/2021)

Abstract: This project investigates whether insulin resistance is associated with gut dysbiosis in individuals with long-standing spinal cord injury (SCI) and explores the relationship between serum microbial metabolites and the gut microbiome composition in individuals with SCI. The escalating prevalence of metabolic disorders in individuals with long-standing SCI highlights the urgent need for discovering potential contributors to metabolic impairment. Accumulating evidence in individuals without disabilities who are obese and insulin-resistant suggests a potential causal impact of the gut microbiome composition, specifically gut dysbiosis, on host insulin resistance mediated by circulating microbial metabolites. SCI induces a state of gut dysbiosis that closely resembles that observed in individuals with obesity and insulin resistance. In this study, researchers enroll 60 individuals with SCI and evaluate the relationship between the gut microbiome, metabolomics, and insulin resistance cross-sectionally. This study is the first step in identifying potential gut microbial targets involved in the development of insulin resistance in individuals with SCI. Data from this work offers a scientific foundation for the development of dietary and/or drug interventions that target the gut microbiome to ameliorate the insulin resistance epidemic in the SCI population.
Fellowships (Merit)
Colorado

Implementation of a Sensor Platform for Multi-Day Measurement of Manual Wheelchair User Mobility Patterns in Real-World Environments to Inform Clinical Training and Improved Contexts for Research

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Project Number: 90SFGE0021
Start Date: September 01, 2020
Length: 12 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 20 $70,000

Abstract: The goal of this project is to validate and implement a sensor platform that serves as a clinical assessment and research tool by characterizing multi-day, real-world mobility patterns of manual wheelchair users (MWUs). Modern decision-making around manual wheelchair training interventions and manual wheelchair prescription is largely a clinical art that leans heavily on self-reported data and trial-and-error. Furthermore, the body of research in this area, like many disciplines of clinical science, struggles with extending controlled laboratory findings to real-world representation. The key element missing is a clinician-accessible means of collecting objective data on the mobility patterns of each unique MWU, as the real-world user needs and habits best dictate the training interventions and equipment that should be prescribed. This project leverages existing sensor technology and wheelchair monitoring methodologies to optimize a combined sensor platform based on performance metrics critical to multi-day measurement of wheelchair kinematics and surface slope (e.g. sensor placement, accuracy, drift). This sensor platform is reviewed by 2 focus groups of 5 clinicians to identify desirable data outputs, and concurrently validated against camera recordings of drive wheel motion during Wheelchair Skills Test (WST) propulsion tasks performed by 12 MWUs across a wheelchair skills course. In addition, researchers collect 12 MWUs’ wheelchair kinematic data across 7-10 days in their real-world environments, apply machine learning clustering to identify the predominant bouts of movement, and compare the maneuvers that comprise the identified bouts with those described in the WST. Outcomes include initial, clinically useful insights into how MWUs navigate their environments, as well as a potential clinical research/assessment tool for customizing MWU training and informing improved ecological validity in the design of future manual wheelchair research studies.
Determining the Optimal Brain Site for tDCS in Persons with Aphasia

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Project Number: 90SFGE0014
Start Date: September 30, 2019
Length: 12 months
NIDILRR Officer: Theresa San Agustin, MD
NIDILRR Funding: FY 19 $70,000; FY 20 (No-cost extension through 9/29/2021)

Abstract: This project investigates the use of transcranial direct current stimulation (tDCS) for people with aphasia, an acquired disturbance of language that typically results from damage to the left-hemisphere language areas of the brain. People with aphasia need treatment that results in better language outcomes. Although speech-language therapy has demonstrated efficacy in treating persons with aphasia, long-term effectiveness has not been established. Thus, there is a critical need for novel treatments that can enhance speech and language therapy outcomes for persons with aphasia. The highly “plastic” nature of the brain makes it ideal for cortical stimulation since cortical stimulation can directly boost underlying plasticity to supplement the rehabilitation process from speech-language therapy. tDCS is the method of cortical stimulation that has the most potential for clinical use in view of its non-invasive application, portability, ease of administration, and relatively low cost. This study investigates whether it is optimum for HD-tDCS (focal tDCS) to be administered to the left angular gyrus, the left motor cortex, and the right cerebellum. This study combines tDCS with a treatment that focuses on connected sentences and assesses the impact of tDCS on daily-life communication. Determining the optimum site for tDCS stimulation is an essential step in standardizing the use of tDCS as an adjuvant in aphasia therapy. Results will have important implications for improving community living and participation for the persons with aphasia.
Evaluating the Efficacy of a Group Intervention to Improve Workplace Soft Skills for Transition-Aged Youth with Psychiatric Disabilities

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Project Number: 90SFGE0020
Start Date: September 01, 2020
Length: 12 months
NIDILRR Officer: Hugh Berry, EdD
NIDILRR Funding: FY 20 $70,000

Abstract: The purpose of this study is to evaluate the effectiveness of a social skills intervention, Skills to Pay the Bills, to improve workplace socialization skills for transition-aged youth with psychiatric disabilities. Although individuals with psychiatric disabilities have a strong desire to work, their employment rates are unacceptably low and declining. These low employment rates can be attributed to ineffective vocational rehabilitation services, public policy barriers, and social stigma, in addition to poor social effectiveness. There is a direct relationship between social effectiveness and vocational recovery. The ability to manage social interactions is key to many milestones and achievements, such as self-efficacy, academic success, psychological well-being, physical health, participation and community integration, and competitive work placement. Therefore, increasing workplace socialization skills could play a significant role in improving vocational recovery for people with psychiatric disabilities. Despite the various social skills interventions available for individuals with psychiatric disabilities, none directly address the issue of workplace socialization skills toward vocational recovery often encountered by individuals with psychiatric disabilities. The Office of Disability Employment Policy (ODEP) created Skills to Pay the Bills: Mastering Soft Skills for Workplace Success, with the purpose of improving work-related social skills in high school students with disabilities. The study evaluates Skills to Pay the Bills in a randomized controlled trial research design in which participants with psychiatric disabilities are randomly assigned to the treatment or waitlist control group and researchers compare the experimental and control groups on pretest and posttest outcome measures.
Understanding Sexuality and Community Participation in Adults on the Autism Spectrum

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Project Number: 90SFGE0022
Start Date: September 01, 2020
Length: 12 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 20 $69,723

Abstract: Autistic adults are more likely to identify as lesbian, gay, bisexual, transgender, queer, intersex, asexual, or other (LGBTQIA+). Individuals who identify as autistic and LGBTQIA+ live at the intersection of two groups that have experienced discrimination in community living and participation. Therefore, this research aims to describe community participation among LGBTQIA+ autistic adults and develop an approach or support congruent with their perceived needs. Specifically, the project uses an inclusive, qualitative research design to: (a) describe how LGBTQIA+ autistic adults perceive their identity (i.e. autistic and LGBTQIA+) and how these identities influence the nature and extent of community living and participation, (b) identify the perceived barriers and supports to inclusion for LGBTQIA+ autistic adults, and (c) develop and refine a proposed approach or support that is acceptable to LGBTQIA+ autistic adults to address identified barriers to full inclusion. Project results may inform a research agenda including future directions for feasibility testing of new approaches or supports identified through this study and may inform health policy for LGBTQIA+ autistic adults.
Fellowships (Merit)
Massachusetts

Trauma-Informed Care in Centers for Independent Living

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Project Number: 90SFGE0026
Start Date: September 01, 2020
Length: 12 months
NIDILRR Officer: Pimjai Sudsawad, ScD
NIDILRR Funding: FY 20 $70,000

Abstract: This research project aims to improve outcomes for people with disabilities who have experienced trauma by developing a framework for trauma-informed independent living systems and services, using knowledge gained through an in-depth ethnographic study of a Center for Independent Living (CIL). The study uses the Trauma-Informed Care (TIC) model developed by the Substance Abuse and Mental Health Administration (SAMHSA) as a starting framework and explores the ways it can be adapted and enhanced by incorporating CIL philosophy, policies, and practices to promote full inclusion for people with disabilities. Distinct from trauma-specific interventions, TIC is a multi-level systems approach to making an organization safer, more empowering, and more welcoming to trauma survivors, who make up at least half the general population and an even greater proportion of people with disabilities. Given the high prevalence of trauma among people with disabilities, it is important that disability-focused programs recognize the effects of trauma and work to remove barriers that may prevent people with trauma histories from fully engaging with services. This project begins with the premise that the independent living movement’s core philosophy is consistent with trauma-informed care. Both identify the problem in disempowering systems and environments, and the solution in such principles as consumer choice, empowerment, and peer support. This project uses these models and ethnographic approaches to review and analyze current CIL policies/practices, explore and describe the perspectives of CIL consumers, and explore and describe the experiences and perspectives of CIL staff. This research leads to a set of recommendations for how CILs can adopt principles of trauma-informed care. A secondary outcome is to generate knowledge about how TIC frameworks in other systems can be made more disability aware, accessible, and inclusive.
Biofeedback Gait Retraining for Stiff Knee Gait Correction:
Multi-Joint Adaptation in Children with Cerebral Palsy

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Project Number: 90SFGE0016
Start Date: September 30, 2019
Length: 12 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 19 $70,000; FY 20 (No-cost extension through 9/29/2021)

Abstract: This project builds on research to develop a visual kinematic biofeedback system which is designed to help children with hemiplegic cerebral palsy (CP) correct a pattern of reduced knee extension in terminal swing and early stance. CP attributed to non-progressive disturbances in the brain occurring early in development, is the most common cause of motor disability in childhood. Among gait deviations that limit motor performance and development in children with CP, stiff knee gait (SKG) is one that can be difficult to correct even after surgery or pharmacologic management of spasticity and contracture. Real-time biofeedback training has shown potential in motivating participants to correct gait deficits by matching their movement patterns with targets. The visual kinematic biofeedback system provides real-time feedback on the knee angle pattern or hip angle pattern when children walk on a treadmill. This study tests ten children with CP who have SKG and examines their short-term adaptations of two types of kinematic feedback training: (1) sequential switched feedback training on the knee and hip, and (2) feedback training on the knee alone. This project addresses the question of whether a training design with feedback on both the knee and hip joints would reduce the tendency to generate unintended changes in hip joint motion, and in doing so also improve convergence to the intended knee joint pattern. The results from this study inform the extent to which multi-joint adaptation should be considered in feedback training design according to the relative phase of the adjacent joints related to a specific gait deficit pattern. Understanding multi-joint adaptations can help physicians and therapists to establish appropriate goals and effective protocols for gait retraining on pediatrics with specific motor deficits.
Measuring Posttraumatic Growth in Caregiving Family of Acquired Brain Injury Survivors: A New Scale

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Project Number: 90SFGE0013
Start Date: September 20, 2019
Length: 12 months
NIDILRR Officer: Kenneth D. Wood, PhD
NIDILRR Funding: FY 19 $70,000; FY 20 (No-cost extension through 9/29/2021)
Abstract: This project develops and evaluates a new rehabilitation outcome measure, the Posttraumatic Growth Scale in Caregiving Families of Persons with Acquired Brain Injury (ABI). This self-administered clinical and research tool is intended to fill a gap in the assessment of family caregivers of adults with ABI by measuring the psychosocial and behavioral functioning of the caregivers. Caregivers’ emotional and family functioning have been found to impact greatly on social participation after post-acute rehabilitation for persons with ABI. Literature has focused primarily on the burden of caregiving and how it is often accompanied by high levels of stress for both individuals with ABI and their family members. However, the caregiver ability to respond positively to their new dual role of being both a family member and caregiver has been associated with improved social participation for the patient and quality of life in both the patient and the caregiver. Developing an instrument that measures the caregivers’ positive responses to the impact of a brain injury on the ABI survivor and the family unit can enable clinicians to track the psychological effects of the brain injury on the caregiving family over time and identify ways to helpfully intervene. The development of this instrument is based on previous work that resulted in the creation of an instrument that measures personal growth in caregiving partners of persons with multiple sclerosis. The ultimate goals of this research are to better quantify and understand the experiences of family caregivers of persons with ABI, promote and guide the care provided by the family caregivers, and thereby increase the social participation of the individuals with ABI. Following the establishment of this instrument, a subsequent goal is to promote its use as an assessment tool in future longitudinal rehabilitation outcome studies and in different settings for both rehabilitation services and community support programs.
Fellowships (Merit)
New York

Characterizing Patterns of Depression, Community Mobility, and Social Engagement in Sub-Acute Spinal Cord Injury

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Project Number: 90SFGE0024
Start Date: September 01, 2020
Length: 12 months
NIDILRR Officer: Brian Bard
NIDILRR Funding: FY 20 $70,000

Abstract: During subacute spinal cord injury (SCI), individuals reengage in or redefine their community participation roles, but their efforts can be thwarted by new or worsened psychosocial distress. The aims of this research study are to (1) investigate the patterns of depression, community mobility, and social engagement via digital methods, and determine the time-dependent interactions between these patterns over four months of community living among adults with subacute SCI; and to (2) examine the impact of minimally-obtrusive smartphone-based feedback on psychosocial wellbeing in adults with subacute SCI. This project collects fine-grained, in-situ measurements of depression, community mobility, and social engagement through twice-weekly surveys on personal smartphones and daily objective behavioral data from smartphone sensors, i.e. mobility via GPS and engagement via phone use logs. This study also analyzes the social network as a potential moderator of the relationships between depression severity and community participation indicators. The first two months of study involve measurement through the smartphone research platform, and in the latter two months study participants receive informative feedback about their psychosocial wellbeing and can electronically share results with clinicians or personal supports. This novel application of digital phenotyping in subacute SCI enhances knowledge of time-dependent patterns in depression and community participation and informs personalized digital health tools that intervene before psychosocial distress develops or worsens.
Using GIS and GPS Techniques to Understand Meaningful Participation for Adults with Autism Spectrum Disorder

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Project Number: 90SFGE0008
Start Date: September 30, 2018
Length: 12 months
NIDILRR Officer: William V. Schutz, PhD, MSW, MPH
NIDILRR Funding: FY 18 $70,000; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

Abstract: The purpose of this study is to use innovative Global Positioning Systems (GPS) and Geographic Information System (GIS) measures to systematically assess the community participation of adults with autism spectrum disorder (ASD) and investigate critical environmental and personal factors associated with participation. The primary goal of this project is to advance the understanding of where and how adults with ASD spend their time, how they interact with their community, and what resources or supports promote community participation. Participants use GPS trackers to capture time away from home, distance traveled, and locations visited for seven days. GIS technology integrates GPS travel data to create maps of activity locations and assess environmental accessibility related to service use and participation by creating maps of available community features (ex. transportation networks, community centers) around one’s home. Follow-up qualitative interviews assess the importance of community activities and feelings of belonging and social connectedness from the individual’s perspective, which is missing from the current literature. Researchers combine these results with adult outcome survey data to examine the role of person factors such as skill level (ex. communication, vocational, social, and daily living skills), living situation (independently, with family, group home), and employment status (full time, part-time, unemployed) on community participation. Community participation outcomes are analyzed in relation to both GIS community accessibility measures and person factors, collected through survey data. Study findings will be used to make recommendations for both community-based and person-based interventions seeking to improve participation and integration and guide the development of more meaningful assessment measures of participation for this population in the future.
Advanced Rehabilitation Research Training Projects (ARRTs)
California

Advanced Rehabilitation Research Training in Neuromuscular and Neurodevelopmental Disorders

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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 Projects (ARRTs)
Connecticut

Yale Post-Doctoral Research Training Program to Advance Competitive Integrated Employment for People with Psychiatric Disabilities

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Project Number: 90AREM0002
Start Date: September 01, 2019
Length: 60 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 19 $149,737; FY 20 $149,916; FY 21 $149,147; FY 22 $147,217; FY 23 $138,029

Abstract: This center provides postdoctoral training in recovery-oriented research to advance competitive integrated employment among persons with psychiatric disabilities. The program provides training and mentoring to researchers from a variety of fields and includes those with lived experience of psychiatric and other disabilities. Participating researchers learn how to design, conduct, and disseminate rigorous, innovative, scientifically meritorious, and influential research on effective strategies for successfully employing persons with psychiatric disabilities in competitive integrated work settings. To achieve these goals, the program addresses the following objectives: (1) developing an advisory board; (2) involving persons with psychiatric and other disabilities; (3) conducting ongoing evaluations of activities; (4) recruiting qualified applicants from diverse cultural backgrounds from across the country; and (5) developing, implementing, and evaluating a comprehensive plan for training and mentoring selected postdoctoral fellows. During their two-year training period, each fellow develops and completes an original, outstanding research project that will help establish their research careers while advancing the field of psychiatric rehabilitation. As a result, this program prepares three aspiring investigators, especially including persons with lived experience of psychiatric and other disabilities, to become highly qualified, productive, and influential recovery-oriented researchers dedicated to advancing competitive integrated employment among persons with psychiatric disabilities.
Advanced Rehabilitation Research Training Projects (ARRTs)
Georgia

Advanced Rehabilitation Research Training (ARRT):
Inclusive Technology and Policy Design Research Fellowship

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Project Number: 90ARPO0002
Start Date: June 01, 2020
Length: 60 months
NIDILRR Officer: Stephen Bauer, PhD
NIDILRR Funding: FY 20 $199,857; FY 21 $199,145; FY 22 $199,192; FY 23 $199,522; FY 24 $199,670

Abstract: The goal of the Advanced Rehabilitation Research Training (ARRT): Inclusive Technology and Policy Design Research Fellowship is to train four postdoctoral fellows in the area of advanced disability and accessible technology policy related to community participation and employment, and information and communications technology (ICT) policy pertaining to accessibility and usability for individuals with disabilities. This project develops a targeted recruitment program to train two cohorts of four postdoctoral candidates over a five-year period and partners with the Rehabilitation Engineering Research Center on Wireless Inclusive Technologies (Wireless RERC) to provide mentorship and guidance through participation in the Wireless RERC research, training, and dissemination projects as well as associated research activities of the Wireless RERCs home unit, the Center for Advanced Communications Policy. The outcome of this project results in greater capacity building through advanced training of researchers to inform policy processes related to technology access for individuals with disabilities.
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; FY 20 (No-cost extension through 9/29/2021)

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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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; Megan McHugh, PhD; Kathleen Pike, PhD; Harold Pincus, MD
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Project Number: 90ARPO0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Anne Ordway, 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 and Training (ARRT) Program: Northwestern University Advanced Rehabilitation Research Training

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Project Number: 90ARHF0003
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 18 $150,000; FY 19 $150,000; FY 20 $150,000; FY 21 $150,000; FY 22 $150,000

Abstract: This project provides an integrated, interdisciplinary, collaborative training program to five post-doctoral fellows focusing on skill development for research careers in rehabilitation-related health services research. Mentors 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 focusing on the effectiveness, measurement, organization, provision, and financing of health care services for populations with functional limitations. During this program, five post-doctoral fellows develop new skills through didactic course work, original research, grant writing, and scientific publishing over a two-year period with the goal of a research career in rehabilitation-related health services research.
Advanced Rehabilitation Research Training (ARRT) Program - Employment

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Project Number: 90AREM0003
Start Date: June 01, 2020
Length: 60 months
NIDILRR Officer: Amanda Reichard, PhD
NIDILRR Funding: FY 20 $200,000; FY 21 $200,000; FY 22 $200,000; FY 23 $200,000; FY 24 $200,000

Abstract: The goal of this project is to prepare seven post-doctoral fellows for research career opportunities in disability-related employment research, building capacity in the field of disability and employment and enhancing employment opportunities for persons with disabilities. This project provides formal instructional and experiential training to a team of researchers from diverse scholarly and clinical backgrounds and implements research methods and analytic approaches to address current evidence-based practice for clinical stakeholders and policymakers in the field of disability and employment. Project activities include the recruitment of at least seven post-doctoral fellows, completion of mentorship and fellowship program requirements, and successful placement in academic, research, and other relevant career opportunities. Expected post-doctoral fellowship products include successfully completing formal coursework, conducting research projects, submission of at least one small research grant application, and submission of at least three first-authored manuscripts for peer review publication.
Advanced Rehabilitation Research Training Projects (ARRTs)  
Illinois

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

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Project Number: 90ARCP0004  
Start Date: June 01, 2020  
Length: 60 months  
NIDILRR Officer: Kirstin Painter, PhD, LCSW  
NIDILRR Funding: FY 20 $199,999; FY 21 $199,999; FY 22 $199,999; FY 23 $199,999; FY 24 $199,999

Abstract: This interdisciplinary postdoctoral training program actively engages scholars in research designed to improve the community living and participation outcomes for persons with disabilities; specifically, sub-populations of persons with disabilities that are more likely to encounter barriers to community living participation including minorities, persons with intellectual and developmental disabilities, and persons with severe physical disabilities. The postdoctoral training program recruits and enrolls up to six highly qualified postdoctoral fellows from a variety of disciplines with a focus on postdoctoral trainees with disabilities as well as those with ethnically diverse backgrounds. The advanced training program provides instructional training, close mentoring by highly qualified researchers, immersion in ongoing research, and field placement in carefully selected programs or organizations that serve the target populations. Trainees are matched with faculty mentors conducting research on community living and participation. Each trainee’s program is individually designed to ensure access to the most rigorous and relevant concepts and research methodologies in knowledge translation and community living to address environmental and social barriers to community living and participation. The training program prepares post-doctoral fellows to conduct research with real-world impact that directly improves services, programs, policies, and societal attitudes toward people with disabilities.
Advanced Rehabilitation Research Training Projects (ARRTs)
Maryland

University of Maryland Advanced Neuromotor Rehabilitation Research Training (UMANRRT)

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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 Psychiatric Vocational Rehabilitation and Employment Research

The Trustees of Boston University
Center for Psychiatric Rehabilitation
940 Commonwealth Avenue West
Boston, MA 02215-1203
zlatka@bu.edu
cpr.bu.edu/research/postdoctoral-research

Principal Investigator: Zlatka Russinova, PhD; E. Sally Rogers, ScD
Public Contact: 617/353-3549; Fax: 617/353-7700

Project Number: 90AREM0001
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Kirstin Painter, PhD, LCSW
NIDILRR Funding: FY 18 $149,848; FY 19 $149,966; FY 20 $149,811; FY 21 $149,814; FY 22 $149,745

Abstract: This advanced rehabilitation research training project (ARRT) recruits and trains four post-doctoral fellows through a two-year training program in the area of psychiatric vocational rehabilitation and employment of persons with psychiatric disabilities. The training program is implemented in two consecutive cycles with two full-time fellows in residence. The program is designed to provide state-of-the-art didactic experience, intensive research practicum, and opportunities for collegial collaboration relevant to psychiatric vocational rehabilitation and employment research. 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 independent research study design and methodology, grant and professional writing, and conference presentations with the goal to expand current practices in the field and improve the lives of persons with psychiatric disabilities.
Advanced Rehabilitation Research Training Projects (ARRTs)
Massachusetts

Health and Function Postdoctoral Fellowship

Brandeis University
The Heller School for Social Policy and Management
415 South Street
Waltham, MA 02453-2728
mmitra@brandeis.edu
lurie.brandeis.edu/research/postdoc%20.html

Principal Investigator: Monika Mitra, PhD 781/736-3807
Public Contact: 781/736-2693

Project Number: 90ARHF0005
Start Date: June 01, 2020
Length: 60 months
NIDILRR Officer: Shelley Reeves
NIDILRR Funding: FY 20 $199,663; FY 21 $199,735; FY 22 $199,788; FY 23 $199,532; FY 24 $199,573

Abstract: This advanced research and training program increases research capacity by recruiting and training six postdoctoral fellows in conducting intersectional disability and health research with a focus on community stakeholder engagement and knowledge translation. The training program provides an individualized and structured program with a cascading mentorship approach. Postdoctoral fellows complete an individual development plan to serve as a road map for a professional development program that includes: biweekly meetings and applied research experience with primary mentor; support and guidance from quarterly meetings with two secondary mentors; coursework in advanced research methods and health services research; participation in a weekly seminar; research on independent projects; guidance and community learning with Community Advisory Board; and mentorship of an undergraduate research fellow. Postdoctoral fellows develop their research expertise through the following activities: (1) authoring at least four papers for peer-reviewed journal articles (two as co-author and two as first author), (2) presenting at least four national scientific conferences, (3) developing and submitting one extramural grant proposal as principal investigator, (4) presenting findings in the disability community, (5) and producing two knowledge translation products. Post-doctoral fellows are supported by an accomplished team of primary and secondary mentors from a range of disciplinary, racial, ethnic, and disability backgrounds and a Community Advisory Board of community leaders, independent living experts, and disability rights advocates to promote community stakeholder engagement and knowledge translation related to health and function and people with disabilities.
Advanced Rehabilitation Research Training Projects (ARRTs)  
Michigan

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

The Regents of the University of Michigan
Department of Physical Medicine and Rehabilitation
325 East Eisenhower Parkway, Suite 300
Ann Arbor, MI 48108
sumurphy@umich.edu
medicine.umich.edu/dept/pmr/education-training/fellowships/advanced-rehabilitation-research-training-program-community-living-participation-u-m-arrtp-cp

Principal Investigator: Susan Murphy, ScD, OTR; Anna Kratz, PhD; 734/936-2123
Public Contact: 734/963-5600; Fax: 734/936-7048

Project Number: 90ARCP0003
Start Date: September 01, 2019
Length: 60 months
NIDILRR Officer: Timothy Beatty
NIDILRR Funding: FY 19 $149,812; FY 20 $149,967; FY 21 $149,950; FY 22 $149,870; FY 23 $149,948

Abstract: The goal of this program is to prepare six postdoctoral fellows to advance the rehabilitation field in community living and participation, promoted by embracing community-based approaches. The training program’s overall objectives are to: (1) provide competency-based, person-centered, community-engaged research training in community living and participation in persons with disabilities; (2) provide instruction in state-of-the art measurement and assessment methods to generate new understanding that promotes community living and participation; (3) prepare rehabilitation researchers to conduct research in real-world community-based settings, including home, school, and other environments; (4) foster professional development to prepare fellows for independent rehabilitation research careers; and (5) build productive multi-disciplinary collaborations that lead to successful careers to address the critical shortage of qualified rehabilitation scientists. Training in methods focus on diverse community-based research approaches designed to capture community living and environmental, social, and situational contextual factors. Core didactic training complements hands-on immersive research and community engagement experiences; and includes courses, seminars, and workshops to train fellows in both qualitative and quantitative research methods. Additional opportunities include independent research projects, attendance at national conferences, and networking and career development activities. This program is a collaborative effort among academic researchers at the University of Michigan (UM), the Community Engagement Program at the Michigan Institute for Clinical Health Research (MICHR), the School of Public Health, and their partners at community-based organizations.
Advanced Rehabilitation Research Training Projects (ARRTs)
Minnesota

Advanced Rehabilitation Research Training (ARRT) on Community Living and Participation

The Regents of the University of Minnesota
The Institute for Community Inclusion
204 Pattee Hall
150 Pillsbury Drive, SE
Minneapolis, MN 55455-0223
hewit005@umn.edu
ici.umn.edu/projects/view/215

Principal Investigator: Amy K. Hewitt, PhD
Public Contact: 612/625-1098; Fax: 612/625-6619

Project Number: 90ARCP0002
Start Date: September 30, 2018
Length: 60 months
NIDILRR Officer: Dawn Carlson, PhD, MPH
NIDILRR Funding: FY 18 $150,000; FY 19 $150,000; FY 20 $150,000; FY 21 $150,000; FY 22 $150,000

Abstract: The goal of the Advanced Rehabilitation Research Training on Community Living and Participation (ARRT/CLP) program is to provide post-doctoral fellows with research training and experience as well as knowledge translation opportunities focused on community living and participation of persons with disabilities. ARRT/CLP provides post-doctoral participants (approximately 5-7 fellows) an opportunity to join an interdisciplinary team by matching participants with faculty mentors with shared topical and methods interests to guide their learning experience. Training opportunities include seminars, coursework, and direct hands-on training relevant to career development including, but not limited to, observational and survey research methods and programs, and the latest approaches to primary and secondary data analysis, policy analysis, program evaluation, and measurement development. Participants are supported in authoring research focused grants, peer-reviewed journal articles, and translational materials targeted to non-technical audiences, and in identifying research to policy and practice opportunities.
Advanced Rehabilitation Research Training Projects (ARRTs)
New Jersey

Advanced Rehabilitation Research Training in Rehabilitation Neuroscience and Engineering

Rutgers, The State University of New Jersey
Kessler Foundation
185 South Orange Avenue
Newark, NJ 07103
gyue@kesslerfoundation.org

Principal Investigator: Guang Yue, PhD
Public Contact: 973/324-3539

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 improves 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 facilitates 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

New York University School of Medicine
Department of Rehabilitation Medicine
Rusk Rehabilitation
240 East 38th Street
ACC 17-73
New York, NY 10016
joseph.rath@nyulangone.org
med.nyu.edu/ruск/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 in psychology (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 Projects (ARRTs)
North Carolina

Combined Human and Rehabilitative Machine System (CHARMS)

North Carolina State University
Joint Department of Biomedical Engineering
4402C Engineer Building III
Raleigh, NC 27695
dgkamper@ncsu.edu

Principal Investigator: Derek Kamper, PhD
Public Contact: 919/515-4411

Project Number: 90ARHF0004
Start Date: September 01, 2019
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 19 $150,000; FY 20 $150,000; FY 21 $150,000; FY 22 $150,000; FY 23 $150,000

Abstract: The goal of this Advanced Rehabilitation Research Training program is to develop postdoctoral fellows positioned to lead the creation of human-machine systems for rehabilitation. From smartphones to cars, the relationship between humans and technology is becoming increasingly integrated. The interactions have become symbiotic, in which the device adapts to the user, while the user also adapts to the device, in order to maximize performance. For many, the device seems a natural extension of themselves. Unfortunately, this level of utility and acceptance has not been achieved with rehabilitation technology, much of which sits underutilized or even abandoned. Recent advances in computing, sensor technology, and actuators hold promise for the development of smart rehabilitative devices that can respond to the needs of the user even as the user learns to optimally manipulate the device. Program fellows receive individualized, monitored mentoring in the three critical thrust areas of mechanics, control, and perception in the context of human-device interaction, building the skills and experience to be future leaders in rehabilitation.
Advanced Rehabilitation Research Training Projects (ARRTs)
Oklahoma

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 to 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 increases 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 employment support.
interventions and/or participate in structured community-based settings with organizations 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)  
Oklahoma

Solutions-Focused Translational Research to Improve Employment Outcomes and Experiences Among Individuals with Disabilities from Traditionally Underserved Racial and Ethnic Populations

Langston University  
Department of Rehabilitation Counseling and Disability Studies  
6700 North Martin Luther King Avenue  
Oklahoma City, OK 73111  
clmoore@langston.edu

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

Project Number: 90ARST0001  
Start Date: September 30, 2018  
Length: 60 months

NIDILRR Officer: Shelley Reeves

NIDILRR Funding: FY 18 $150,000; FY 19 $150,000; FY 20 $150,000; FY 21 $150,000; FY 22 $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 project’s objectives are to: (1) implement a recruitment strategy to attract four to six well-qualified MSI-based fellows for advanced research training, including individuals with disabilities, interested in pursuing research careers in the rehabilitation of individuals with disabilities; (2) provide fellows with a multidisciplinary training program that includes didactic research coursework and classroom instruction offered through alternative technological platforms (including online) that increases 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), Jackson State University (HBCU); and the Kessler Foundation; (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 employment support interventions and/or participate in structured community-based settings with organizations 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.

NIDILRR Program Directory FY 2020 - Capacity Building for Rehabilitation Research and Training  
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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,
the Human Engineering Research Laboratories, and the
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; FY 19 (No-cost extension through 9/29/2020); FY 20 (No-cost extension through 9/29/2021)

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 under-
standing 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 interdis-
ciplinary 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 inde-
pendent 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-cen-
tered (clinical and psychosocial), research, communication, innovation, and leadership skills. The train-
ing 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)
Virginia

Advanced Rehabilitation Research Training Projects

Virginia Commonwealth University
Department of Physical Medicine and Rehabilitation
1314 West Main Street
PO Box 980542
Richmond, VA 23298-0542
jeffrey.kreutzer@vcuhealth.org
pmr.vcu.edu/education-and-training/fellowships/advanced-rehabilitation-research

Principal Investigator: Jeffrey S. Kreutzer, PhD
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; FY 20 (No-cost extension through 9/29/2021)

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

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
www.chril.org/chrilf

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

Project Number: 90ARCP0001
Start Date: September 30, 2017
Length: 60 months
NIDILRR Officer: Anne Ordway, 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, Therapists, and Engineers

Marquette University
Orthopaedic and Rehabilitation Engineering Center (OREC)
1515 West Wisconsin Avenue, Suite #323
Milwaukee, WI 53201-1881
mary.wesley@marquette.edu
www.orec.org

Principal Investigator: Gerald F. Harris, PhD, PE 414/288-1586
Public Contact: Mary Wesley, Project Administrator 414/288-3375; Fax: 414/288-0713

Project Number: 90ARHF0006
Start Date: September 29, 2020
Length: 60 months
NIDILRR Officer: Anne Ordway, PhD
NIDILRR Funding: FY 20 $150,000; FY 21 $150,000; FY 22 $150,000; FY 23 $150,000; FY 24 $150,000

Abstract: This ARRT develops a training program to advance education, experience, and training in pediatric mobility for physicians, therapists, and engineers with the goal to improve rehabilitative and orthopedic care of children with mobility challenges. Over the course of five years, physicians, therapists, and engineers gain advanced skills training in pediatric mobility research. Fellows training is measured by their ability to: (1) conduct high quality research, (2) successfully complete the course of didactic and research training, and (3) secure academic and/or clinical positions in rehabilitation research. Fellowship outcomes include: (1) successful completion of fellowship training; (2) obtaining an appropriate rehabilitation research position related to this field of study; (3) conducting and disseminating results of high-quality research through publication, presentation and program funding; and (4) improving pediatric mobility outcomes for children with mobility challenges through precision diagnoses, improved care, and targeted interventions. ARRT fellows research contributions include research publications, presentation of evidence-based research at conferences and meetings, and an increased number of rehabilitation-trained physicians, therapists, and engineers in the field of pediatric mobility. This project is a collaboration between Marquette University, the Medical College of Wisconsin; and Shriners Hospitals for Children, Chicago.
Grantees
CreateAbility Concepts, Inc.
Indianapolis, IN
90BISB0014 .....................................................3-94

Dara V. Chan, ScD
Chapel Hill, NC
90SFGE0008 ....................................................8-17

dfusion, Inc.
Scotts Valley, CA
90BISA0037 ....................................................2-36

Dicapta Foundation Corporation
Winter Springs, FL
90IFDV0004 ....................................................3-70

Elizabeth Koss Schmidt, PhD, OTR/L
Allston, MA
90SFGE0022 ....................................................8-12

Gallaudet University
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Giner, Inc.
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Hannah Warner Mercier, PhD, OTR/L
Stony Brook, NY
90SFGE0024 ....................................................8-16

HeiTech Services, Inc.
Landover, MD
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Icahn School of Medicine at Mount Sinai
New York, NY
90DPTB0009 ....................................................3-60
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Illinois Institute of Technology
Chicago, IL
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Innovation Research and Training, Inc.
Durham, NC
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Innovative Chemical and Environmental Technologies Inc.
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Innovative Design Labs, Inc.
Minneapolis, MN
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Lesley University
Cambridge, MA
90IFRE0023 ....................................................1-39

Live & Learn, Inc.
Morro Bay, CA
90IFDV0016 ....................................................1-28
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Lynn C. Koch, PhD
Fayetteville, AR
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Milwaukee, WI
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Mayo Clinic
Rochester, MN
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Medical University of South Carolina
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MedStar Health Research Institute
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Meeting the Challenge, Inc.
Colorado Springs, CO
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Mercy College
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Michelle S. Ballan, PhD
Stony Brook, NY
90SFGE0019 ....................................................8-6

Mississippi State University
Mississippi State, MS
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A-5
Morris Huang, PhD
Denver, CO
90SFGE0021 ...................................................... 8-9

National Disability Institute
Washington, DC
90DPCP0003 ...................................................... 2-12

New England College of Optometry
Boston, MA
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New Jersey Institute of Technology
Newark, NJ
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New York University School of Medicine
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Raleigh, NC
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Northern Arizona University
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NYU Langone Health
New York, NY
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Objective Ed, Inc.
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Public Health Institute
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