FY 2019–2020 Organization Highlights

The National Institute on Disability, Independent Living, and Rehabilitation Research
Administration for Community Living
US Department of Health and Human Services

The National Institute on Disability, Independent Living, and Rehabilitation Research

Mission

The Administration for Community Living's National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR) was established by Congress to conduct research that would lead to improved health and function, employment, and community living outcomes of individuals with disabilities. NIDILRR's mission 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. NIDILRR achieves this mission by:

- Supporting research, development, capacity-building, knowledge translation, and related activities to maximize the full inclusion and integration of individuals with disabilities of all ages into society, employment, independent living, family support, and into economic and social self-sufficiency.
- Promoting the transfer of, use, and adoption of rehabilitation technology for individuals with disabilities in a timely manner.
- Ensuring the widespread distribution, in usable formats, of practical scientific and technological information to advance policy, practice, and services to improve outcomes for people with disabilities.

NIDILRR organizes its activities around three major outcome domains — community living and participation, health and function, and employment — and addresses a wide range of disabilities and impairments across populations of all ages.

How Is NIDILRR Funding Used?

NIDILRR addresses a broad scope of research, capacity-building, and knowledge translation activities related to disability, rehabilitation, and independent living. This report provides an overview of the distribution of NIDILRR's funding and highlights grantee activities in fiscal years (FY) 2019 and 2020. These projects reflect the breadth of disability research within the agency's outcome domains of community living and participation, health and function, and employment.

How is NIDILRR Research Making a Difference?

NIDILRR research is designed to generate new knowledge and technologies and stimulate change in programs, practices, and public policies to the benefit of Americans with disabilities and their families. Selected grantees from FY 2019 and 2020 are highlighted throughout this report to illustrate the variety of NIDILRR grantee activities and

achievements that are improving the lives of people with disabilities. NIDILRR's grant programs vary in purpose, scope, duration, size, and outcome area.

Through its grant programs, NIDILRR also invests in the following areas to promote positive community living and participation, employment, and health and function outcomes among people with disabilities:

- Technology for Access and Function
- Disability Demographics
- Knowledge Translation
- Capacity-Building for Rehabilitation Research and Training

NIDILRR Outcome Areas:

1. Community Living and Participation
2. Employment
3. Health and Function

Products of NIDILRR Grants

The summaries that follow, organized by funding mechanism, highlight examples of grantee activities and achievements. Grantees employ an assortment of methodologies to conduct research and develop new products and technologies, including randomized controlled trials, longitudinal studies, qualitative studies, and intervention studies. NIDILRR grantees produce an assortment of output types, from the more traditional category of peer-reviewed publications, to such outputs as technological devices, prototypes, special software, and new physiologic measurement tools, as well as audiovisual materials and intervention curricula.

NIDILRR Resources on Disability Policy, Assistive Technology, and Disability Research

NIDILRR supports the Americans with Disabilities Act (ADA) National Network, AbleData, and the National Rehabilitation Information Center (NARIC), which help the public find and use current information about disability policy, assistive technology (AT), and disability research. Results from NIDILRR funded projects help to inform policymakers by highlighting key findings affecting the broader disability community. Specific examples of these findings informing policy work are included below.

ADA National Network

NIDILRR sponsors and oversees the ADA National Network, which conducts research and provides technical assistance, training, and information resources related to the ADA. The ADA is a comprehensive civil rights law designed to guarantee people with disabilities equal opportunity in employment, public accommodations, state and local government services, transportation, and telecommunications. The ADA Network (http://adata.org) includes 10 regional centers and the ADA Knowledge Translation Center. Together, they serve local, regional, and national stakeholders to foster ADA implementation. These 10 centers conducted 1,103 training

activities during 2019 and 184 during 2020, including customized training presentations, training courses, and conferences. The Network responded to more than 80,000 inquiries in FY 2019 and more than 17,000 inquiries in FY 2020 by phone, email, ADA center website, or in person.

The ADA Participation Action Research Consortium complements the Network's activities through research on factors influencing the community living of citizens with disabilities, as well as through assessments of promising practices at state, regional, and community levels. The following are examples of ADA National Network activities and achievements reported to NIDILRR:

ADA, Disability, and COVID-19 Resources Portal (2020) — Grant # 90DP0090
The Southeast ADA Center, located in Atlanta, Georgia, serves a vast array of ADA stakeholders across the eight-state Southeast Region, comprised of Alabama, Florida, Georgia, Kentucky, North Carolina, South Carolina, Mississippi, and Tennessee. The Center's activities are guided and implemented by an extensive range of 78 partner organizations. The Center is a project of Burton Blatt Institute at Syracuse University, which allows for significant leveraging of diverse project resources by: (1) enhancing technical assistance, training, knowledge translation (KT), and dissemination through legal analyses of materials and development of case law alerts and briefs, providing diverse and accessible information dissemination channels and access to the Legal Team's recognized advanced knowledge of the ADA and disability-related laws; (2) expanding scientific quality and scope of research projects; and (3) enabling access to Syracuse University's extensive alumni base of 21,000+ in the Southeast who represent all ADA stakeholder groups.

The Center recently collaborated with 10 ADA Centers to develop the ADA, Disability, and COVID-19 Resources Portal (https://www.adacovid19.org/) to provide the disability community with information about their rights under the ADA and how they apply to the COVID-19 pandemic. The portal contains links to resources posted by the ADA National Network, 10 regional ADA Centers, and more than 450 resources from trusted national, federal, and state sources. Resources are arranged by topics, including: state and region; people with disabilities; counseling and support; emergency preparedness; employment; health care; money, taxes, and benefits; plain language and visual supports; schools and education; travel and transportation; and workplace and business.

Digital Access and Title III of the ADA (2020) — Grant # 90DP0086
The ADA Knowledge Translation Center published a research brief entitled *Digital Access and Title III of the ADA*. This brief highlights the impact of the digital divide that exists for people with disabilities and discusses digital accessibility issues. It highlights how the digital divide is an issue for businesses, agencies, and organizations considered public entities under Title III of the ADA. The brief outlines how people with disabilities have less access to and benefit less from technology when compared to their peers without disabilities. It highlights

the continued issues with web accessibility and suggests ways developers can enhance access and usability by creating accessible technology and widening their customer base.

AbleData

NIDILRR supported AbleData, an information center hosting an extensive database of AT products and resources to increase awareness of and access to assistive devices. More than 60 percent of patrons are people with disabilities, their families, and friends. In FY 2019, AbleData responded to 736 information requests and created 12 new informational products. AbleData hosted 426,960 visitors from 214 different countries. Special emphasis was placed on growing AbleData's social media presence. FY 2020 was a year of milestones and transitions for AbleData. AbleData's Information and Referral Center responded to 444 information requests, had 229,111 visitors from 202 countries and published 11 information products, two of which were in Spanish. AbleData officially launched its Pinterest page and expanded its social networking presence via YouTube, Twitter, and Facebook, including posting the At Home blog series, which explored different leisurely activities people could participate in while at home using various AT products. AbleData is no longer supported by NIDILRR. As part of AbleData's decommissioning, the website contents were provided to several non-governmental entities for future research and related activities.

National Rehabilitation Information Center

NARIC is an information resource center funded by NIDILRR to disseminate information about disability, independent living, and rehabilitation research to the public. NARIC services are available through its website, social media, and other outreach avenues. During this reporting period, NARIC received more than 224,000 visitors on its website, had more than 8,600 social media followers, and connected with users via presentations and exhibits at various in-person and virtual conferences with more than 10,000 attendees combined. In addition to these, NARIC reached more than 10,000 readers through their weekly distribution of the News and Notes newsletter and the monthly release of the REHABDATA Literature Awareness service.

Field-Initiated Projects (FIP)

FIPs are investigator-initiated research or development projects drawn from a pool of applicants proposing a wide variety of target populations and research and development aims. These projects generate new knowledge through research or development on a smaller scale relative to Disability and Rehabilitation Research Projects (DRRP) and Center grants. All FIP grantees must carry out research or development projects to improve outcomes of people with disabilities in the health and function, employment, or community living and participation domains. FIP awards are typically 3 years in duration. The following are examples of FIP activities and achievements reported to NIDILRR:

Community Living and Participation

***GoCC4All Emergency Notification System (2020) — Grant # 90IFDV0004***
The Dicapta Foundation's project aims to enhance community living and
participation for individuals who are deaf-blind by bringing them access to TV
information (including local emergency information through their mobile
devices and braille displays) that is widely available to any other citizen. The GoCC4All
website, social media, and emergencies functionalities officially launched. Some features of
GoCC4All include: (1) emergency alerts on mobile devices or braille displays; (2) access to
local emergency alerts; (3) the ability to automatically send a user's location information to a
primary contact in emergency situations; (4) the ability to send a user's location information
to a primary contact whenever the user chooses; (5) access to captions of selected television
programming; (6) the ability to customize the size of characters on the user's mobile device;
(7) compatibility with different braille displays that allows for changing the speed at which
TV captions are shown; and (8) compatibility with both iOS and Android operating systems.
To learn more, visit the GoCC4All website: https://gocc4all.dicaptafoundation.org/.
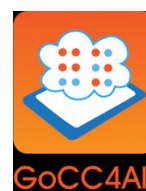
Health and Function

Seated Buttocks Anatomy and Its Impact on Biomechanical Risk (2020) —
Grant # 90IF0120
Pressure ulcers are a critical problem with negative consequences for the health, activities of
daily living, employment, and quality of life of wheelchair users. The evidence to date
supports the hypothesis that internal tissue deformation is the primary factor in pressure ulcer
development. Therefore, understanding how individuals' tissues deform is key to identifying
high-risk patients and informing personalized interventions. In 2020, Georgia Tech Research
Corporation published an article providing quantitative evidence that biomechanical risk, or
the intrinsic characteristic of an individual's soft tissues to deform in response to extrinsic
applied forces, is greater in individuals at greater risk for pressure ulcers.

Link: https://www.sciencedirect.com/science/article/pii/S0965206X19301172
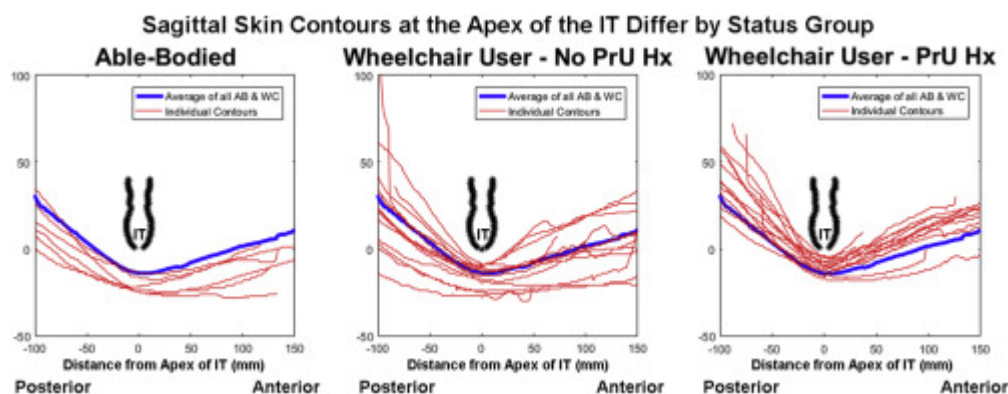
Small Business Innovation Research (SBIR)

The intent of NIDILRR's SBIR program is to help support the development of new ideas and products 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 eligibility criteria to participate: the company must be American-owned and independently operated, it must be for-profit, employ no more than 500 employees, and the principal researcher must be employed by the business. During Phase I, NIDILRR-funded firms 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 commercialization. The following are examples of SBIR activities and achievements reported to NIDILRR:

Technology for Access and Function

Production 3D Printed Cochlear Electrode Arrays (2020) — Grant # 90BISA0021
MEMStim LLC's project is in SBIR Phase I. Its goal is to determine the feasibility of producing 3D-printed cochlear electrode arrays that meet the requirements of surgical compatibility, biocompatibility, and durability necessary for Food and Drug Administration approval and use in commercial cochlear implant prosthesis. Their novel 3D printing process will enable the next generation of cochlear electrode arrays to be developed. Such future electrode arrays could be smaller and more flexible. Smaller arrays lead to increased residual hearing preservation, which allows for the combined use of cochlear implants and hearing aids through electrical acoustic stimulation. This type of stimulation has been shown to improve word recognition by as much as 30 percent in quiet and 72 percent in noisy environments. It also extends cochlear implant technology to the severely to profoundly deaf population, who are presently ineligible due to potential loss of residual hearing. This subset accounts for nearly 90 percent of the severely to profoundly deaf community.

As a result of this work, the grantee learned that 3D printing of cochlear electrode arrays is quite feasible. Robust medical-grade materials can be printed in micro-feature sizes; nanoparticles can be manipulated to create novel inks; and micro molding of silicone carriers can be used to produce a surgically compatible device. They also learned that the ultimate completion of such devices requires a high degree of tool characterization and customization. It also requires a well-defined set of design rules to ensure repeatability and reliability.

200 µm
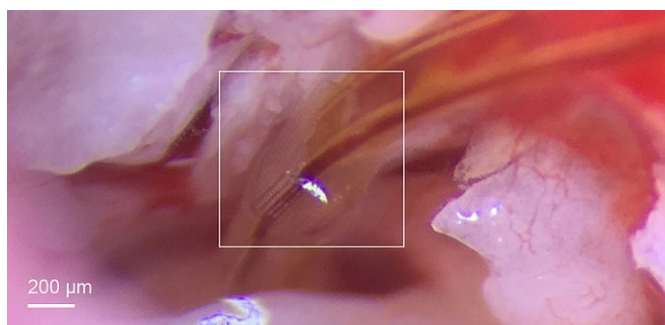
Employment Outcomes

WhenWear Advisor: A Cloud-Based Tool to Help Supervisors Increase Employment Options for Workers with Intellectual Disabilities (2020) — Grant # 90BISB0009

CreateAbility Concepts Inc. developed the WhenWear Advisor system, in SBIR Phase II, which assists employees with intellectual disabilities to independently and successfully accomplish vocational tasks when provided with the proper automated prompts. COVID-19 created unique opportunities for this project due to its remote support capabilities. Using Centers for Disease Control and Prevention guidelines for prevention, cleaning, and exposure risk assessment, WhenWear delivered customizable task instructions at different levels of detail. If the individual was isolated in a group home and needed detailed video-modeling instructions, WhenWear would show detailed step-by-step procedures on how to clean their TV remote, hand rails, microwave and fridge handles, etc. At the end of the day, these task prompts would shift to a quick assessment of their exposure risk and symptom assessment. Alternatively, if the individual needed simple talking picture examples of these tasks, this was selectable by an operator in the cloud. A video describing the WhenWear Advisor system is available at https://www.youtube.com/watch?v=I7FE7x9ct8Q.

Model Systems

NIDILRR's Model Systems programs in spinal cord injury (SCI), traumatic brain injury (TBI), and burns provide coordinated systems of rehabilitation care and conduct research on recovery and long-term outcomes. These centers serve as platforms for collaborative, multisite research, including research on interventions using randomized controlled trials.

Founded in 1973, the National SCI Database has collected injury follow-up data through a total of 29 funded centers. Fourteen funded centers, plus an additional five unfunded centers, actively collected SCI follow-up data in 2019 and 2020. Their actions contributed to the collection of SCI data from 62,593 individuals as of the end of FY 2019 and 49,743 individuals as of the end of FY 2020. Nineteen centers contributed data to the TBI Model System (TBIMS) National Database in 2019 and 2020. Their efforts have collected information on 17,317 individuals admitted for inpatient acute TBI rehabilitation as of FY 2019 and 18,487 individuals as of FY 2020. The Burn Model System collected data from four centers in FY 2019 and 2020.

Studies using these databases have provided researchers opportunities to explore the social and environmental factors influencing the community living and participation of individuals affected by these injuries, best clinical practices for screening and treatment, physiological

aspects of the conditions, and long-term outcomes. The following are examples of Model Systems activities and achievements reported to NIDILRR:

Health and Function

New Clinical Practice Guidelines and Minimum Competency Recommendations for Programs that Provide Rehabilitation Services for People with Severe TBI/Disorders of Consciousness (2020) — Grant # 90DPTB0011

The Spaulding-Harvard TBIMS Center is a national leader in TBI research and care and works to improve care for patients with severe acquired brain injury and to be on the cutting-edge of TBI research. During this funding year, the Spaulding-Harvard TBIMS Center created two important publications/tools: (1) the publication of evidence-based practice guidelines, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6139814/, for the diagnosis and treatment of persons with severe TBI/disorders of consciousness; and (2) a June 2020 position statement, https://www.sciencedirect.com/science/article/pii/S0003999320300939, on the recommendations for essential staff, knowledge, skills, and services required to manage persons with severe TBI. The position statement discusses practice guidelines and minimum competencies of the clinical programs for the treatment and support of individuals with disorders of consciousness. The recommendations fall into several categories: diagnostic and prognostic assessment, treatment, transitioning care/long-term care needs, and management of ethical issues. This most recent consensus statement marks a significant step forward in establishing a clinical standard for treatment that will improve outcomes for persons with severe TBI. Summary fact sheets for families and providers were developed and can be found at https://www.aan.com/Guidelines/home/GuidelineDetail/926.

Link: https://www.sh-tbi.org/

A Cross-Sectional Study to Investigate the Effects of Perceived Discrimination in the Health Care Setting on Pain and Depressive Symptoms in Wheelchair Users with SCI (2019) — Grant # 90SI5014

The University of Pittsburgh Model System Center for SCI provides comprehensive, multidisciplinary services to individuals with SCI from the time of injury through recovery. In addition, this Center educates patients, families, care providers, and the public about the natural course of SCI and disseminates new knowledge about innovative evidence-based interventions that improve health and function, community living and participation, and employment post SCI. In 2019, the Center published an article,

https://pubmed.ncbi.nlm.nih.gov/31421092/, that examines whether participant characteristics are associated with greater discrimination in the health care setting for wheelchair users with SCI. This publication also viewed how discrimination in the health care setting related to overall health outcomes of pain and depressive symptoms.

Link: http://www.upmc-sci.pitt.edu/

Employment Outcomes

Post-Burn Injury Employment (2020) — Grant # 90DPBU0004
The Northwest Regional Burn Model System Center at the University of Washington-Seattle provides comprehensive, multidisciplinary services to individuals with burn injuries from the time of injury through recovery. In addition, the Center educates patients, families, care providers, and the public about the natural course of burn injury and disseminates new knowledge about innovative evidence-based interventions that improve health and function, community living and participation, and employment after burn injury. In 2020, the Center published an article, https://pubmed.ncbi.nlm.nih.gov/31626744/, examining patient and injury characteristics that affect employment for individuals after burn injury using the multicenter Burn Model System national database. The results of this study found that the most significant predictor for post-burn employment was preinjury employment.

Link: https://burnrehab.washington.edu/

Disability and Rehabilitation Research Projects (DRRP)

The DRRP funding program supports projects that carry out one or more of the following activities: research, development, training, dissemination, utilization, and technical assistance. The purpose of the DRRP program is to plan and conduct research, training, and related activities to develop methods, procedures, and rehabilitation technology that maximize the full inclusion and integration of individuals with disabilities into society, employment, and independent living and to promote economic and social self-sufficiency and improve the effectiveness of services authorized under the Rehabilitation Act.

Employment Outcomes

Successful Employment and Quality Work Life After Severe Disability Due to SCI (2020) — Grant # 90DP0050
The Medical University of South Carolina's DRRP examines employment and quality work-life outcomes after severe disability from SCI occurs. This project has produced two recent

publications. The first recent publication, https://doi.org/10.1177/0034355219848493, from this project found that older age at severe SCI onset was associated with lower odds of employment. The same study also found that non-Hispanic Blacks with severe SCI had lowers odds of employment and that those who were employed earned $12,058 less than non-Hispanic Whites with severe SCI. This study found that people with bachelor's or postgraduate degrees had higher odds of employment and higher earnings when compared to peers who had a high school certificate or lower. The second recent publication, https://doi.org/10.1038/s41393-019-0374-1, found that the presence of significant pain and use of either prescription pain medications or nonprescription opioids had a significant adverse effect on the probability and quality of employment for people with severe SCI.

Health and Function

iMHere 2.0: An Adaptive Mobile Health System to Support Self-Management for Persons with Chronic Conditions and Disabilities (2020) — Grant # 90DP0064

The University of Pittsburgh's mobile health (mHealth) project develops and implements mHealth tools to support self-management and aid youth with brain and spinal anomalies in their transition to adulthood. The mHealth system incorporates mechanisms for caregiver and family involvement as well as peer support. The project develops educational support and implements the mHealth-supported self-management program in a community-based setting for people with disabilities. People with disabilities who have impairments in self-management skills are susceptible to secondary conditions, such as wounds (pressure ulcers) and urinary tract infections. Many secondary complications are preventable with appropriate self-management. 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. The technology in this project is based on the success with a self-management pilot project that produced remarkably improved outcomes for medical complications and health care utilization measures. The mHealth approach allows for expansion of the program to serve a larger number of people with disabilities, making the wellness program not only cost-effective but also scalable.

The iMHere system includes a smartphone app with several modules that allow people with disabilities to manage their own self-management routines, a smartphone app for a family or professional caregiver, a web-based portal for a case manager or coordinator, and two-way communication connecting the two. The smartphone app functionality includes medication management, the ability to set reminders, secure messaging with the case
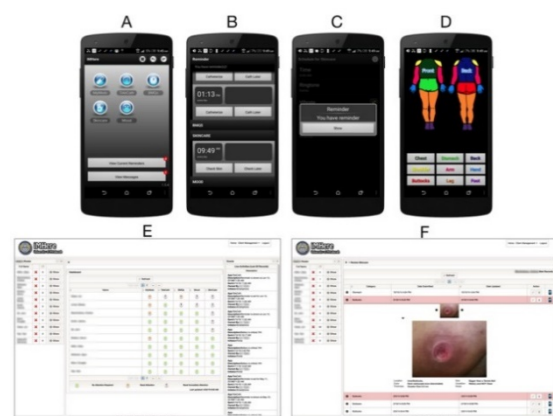
manager, symptoms surveys and reporting, and the ability to submit photos of conditions like pressure injuries. The system is continually updated and improved across different platforms.

Link: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6737885/

Rehabilitation Engineering Research Centers (RERC)

The purpose of the 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 providers of rehabilitation technology. Awards are normally made for a 5-year period.

Technology for Access and Function

Amazon Sunnyvale Campus Interactive Touch Model (2020) — Grant # 90RE5022

For people with disabilities, finding one's destination inside buildings and on sites is often impossible without assistance. The main product development project of the RERC on Universal Design and the Built Environment at the University at Buffalo has been the development of touch-responsive models. These are 3D representations of buildings and plans, and these models incorporate innovative digital fabrication techniques, materials, and software to enhance utilization of buildings and sites by people with disabilities using universal design principles that can also benefit other users. While the touch models were initially installed in various schools for the blind, they are now being commercialized and installed in locations that attract a more diverse population. In the current RERC universal design cycle, there was external adoption of the touch model. A tabletop wayfinding and orientation system was produced for Amazon's Silicon Valley R&D Center. Users hear names and descriptions of streets, buildings, outdoor amenities, and other features when they touch this physical model.

YouDescribe Video Descriptions System Utilization and Improvements (2020) — Grant # 90RE5024

The goal of the RERC to Develop and Evaluate Rehabilitation Technology and Methods for Individuals with Low Vision, Blindness, and Multiple Disabilities at the Smith-Kettlewell Eye Research Institute is to impact numerous current barriers to opportunity faced by individuals who are blind, have low vision, and

have multiple disabilities. The Center aims to develop and apply new scientific knowledge

and practical, cost-effective devices to understand and address the real-world problems of consumers who are blind, visually impaired, and deaf-blind. One recent project of the Center is YouDescribe, a project designed to enhance access to videos for blind and visually impaired persons. The system makes it easy for anyone, anywhere (teachers, family members, friends, and alternative media specialists), to add descriptions to online videos. YouDescribe is available as a downloadable application for mobile devices, and it allows the volume of the narration to be adjusted. You can view a sample YouDescribe video at https://youdescribe.org/video/0glagEn5-g4?ad=5db0d170e8154725b70c27c3.

Link: https://www.ski.org/center/rehabilitation-engineering-research-center

Tactile Maps Automated Production (TMAP): Utilization and Updates (2020) — Grant # 90RE5024
The goal of the RERC on Low Vision and Blindness at the Smith-Kettlewell Eye Research Institute is to impact numerous current barriers to opportunity faced by individuals who are blind, have low vision, and have multiple disabilities. The updated Tactile Maps Automated Production (TMAP) system provides free and low-cost maps to the blind and visually impaired community. It has revolutionized tactile map production and availability, allowing the production of high-quality, on-demand, tactile street maps, embossed to a scale suitable for exploration of the surrounding neighborhood. This TMAP 2.0 version builds on the knowledge gained and lessons learned in the earlier prototype TMAP 1.0 system to produce well-formatted, tactile street maps of any location in the world using an extensible, open-source web interface that complies with World Wide Web Consortium accessibility guidelines.

Link: https://lighthouse-sf.org/tmap/

Community Living and Participation

Innovative Solutions for Universal Design™ – Hampton Inn by Hilton Receives Universal Design Certification (2020) — Grant # 90RE5022
The RERC on Universal Design and the Built Environment uses a Knowledge-To-Action Model to advance accessibility and universal design in the four domains of the built environment: (1) housing; (2) commercial and public buildings; (3) community infrastructure; and (4) transportation. A second test case of Innovative Solutions for Universal Design™ started in 2018 when Uniland Development Company came to the IDEA Center for consultation on a new Hampton Inn by Hilton hotels. "As the first hotel in the country to
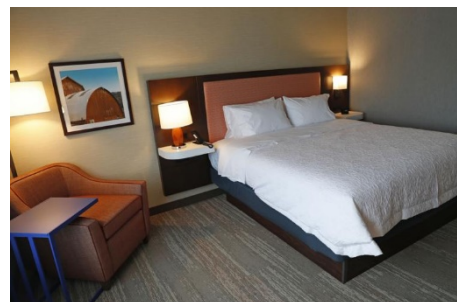
embrace Universal Design, our new Hampton by Hilton at the Northtown Center will offer guests 'the best experience possible,'" said Kellena Kane, Uniland Director of Development.

Link: https://uniland.com/nations-first-universally-designed-hotel/

Rehabilitation Research and Training Centers (RRTC)

RRTCs conduct coordinated, integrated, and advanced programs of research, training, and information dissemination in topical areas that are specified by NIDILRR. Areas of focus include the improvement of rehabilitation methodology and service delivery systems; the improvement of health and functioning; and the promotion of employment, independent living, family support, and economic and social self-sufficiency for individuals with disabilities. RRTCs provide training, including graduate, pre-service, and in-service training, to build capacity for disability and rehabilitation research. They also serve as centers of national excellence in rehabilitation research. Awards are normally made for a 5-year period.

Employment Outcomes

How to Talk about Mental Health: Addressing Misunderstandings about Mental Health in the Media (2020) — Grant # 90RT5031

The Learning and Working during the Transition to Adulthood RRTC at the University of Massachusetts Medical School 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 among 14–30-year-olds with SMHCs. Research is conducted in real-world settings in partnership with Y&YAs with lived experience and informed by family input to address three critical areas: (1) identifying the range of paths in the transition to employment and the factors that contribute to the variability in educational and working success of Y&YAs with SMHCs; (2) continuing to develop and test interventions with preliminary evidence of efficacy; and (3) continuing to examine the ways in which state VR, 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 research increases capacity-building for service providers and the movement of findings into practice and policy. The Center provides national leadership in this area and shares developing knowledge with key stakeholders, including Y&YAs, their families, researchers, policymakers, and practitioners.

HOW TO TALK ABOUT MENTAL HEALTH
Like everyone, people with mental health conditions need to be treated and referred to with dignity and respect.

"She was acting like such a psycho." → CORRECTION → **"She was really upset and was shouting at him."**
- The word "psycho" is an offensive term referring to a person who experiences psychosis. Just because someone is angry does not mean they are psychotic."
- Using this term in this way implies that a person with psychosis is dangerous or violent, neither of which are necessarily true.

"I'm so OCD about keeping my room clean." → CORRECTION → **"It's really important to me that I keep my room neat and organized."** -from a person that doesn't have obsessive-compulsive disorder (OCD)
- It's not okay to borrow a condition you know you don't truly have. OCD, or any mental health condition, is not something cool, quirky or unique to claim you have if you are not actually living with the condition.

"He's a schizo." → CORRECTION → **"A person diagnosed with schizophrenia."**
- Use "person-first language" when speaking. A person is more than their diagnosis.
- *Person-first language* means that when writing or talking about someone you recognize the person first and then the condition or disability.

"How do you deal with a bipolar person?" → CORRECTION → **"How do you support a person living with bipolar disorder?"**
- Use positive, strengths-based language when discussing recovery from mental health conditions.

The Center created a tip sheet that clears up common misunderstandings about mental health conditions and provides strategies to talk about mental health in a more accurate and helpful way. It was written to erase stigma around mental health conditions and is targeted to Y&YAs. The tip sheet offers resources and to fight misconceptions in order to better educate the general population. The tip sheet is available online at: https://escholarship.umassmed.edu/cgi/viewcontent.cgi?article=1136&context=pib.

Individual Placement and Support (IPS) Fidelity Scale for Transition-Aged Youth and Young Adults (2019) — Grant # 90RTEM0005

The Learning and Working during the Transition to Adulthood RRTC at the University of Massachusetts Medical School develops and shares new knowledge about core concepts, interventions, and policies to greatly improve the transition to employment for Y&YAs ages 14 to 30 with SMHCs. The Center uses research and KT to help ensure that policies, programs, and supports for transition-age Y&YAs with SMHCs 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 SMHCs; (3) provide national statistics on how Y&YAs with SMHCs and their vulnerable subgroups are faring in education and employment; and (4) explore barriers and facilitators to access that Y&YAs with SMHCs have to Workforce Innovation and Opportunity Act-mandated services for students with disabilities and Perkins Act-mandated Career and Technical Education. Through state-of-the-science KT processes, the RRTC speeds capacity-building for service providers and the movement of findings into practice and policy and prepares the future research workforce in this area. The Center's Individual Placement and Support Fidelity Scale for Transition-Aged Youth and Young Adults was developed to assess whether the practice of Individual Placement and Support adapted to transition-aged youth in programs adheres to manual prescriptions. Use of the scale is to ensure fidelity to the Individual Placement and Support for young adults' model. Specifically, the scale adds items pertaining to supporting education goals, as well as to family involvement, peer support, and youth outreach. Achieving high fidelity means that these practice advances are being made by programs. Further details about the project can be found at: https://ipsworks.org/index.php/study/the-ips-young-adult-project-helping-young-adults-succeed-at-work-and-school-through-ips-supported-employment/.

RRTC on Employment for People with Blindness and Low Vision (2020) —
Grant # 90RT5040

The RRTC on Employment for People with Blindness and Low Vision at the University of Mississippi is the only Department of Health and Human Services-funded center focused on employment outcomes for people with blindness or low vision (B/LV). The goal of this RRTC is to develop new knowledge that improves employment outcomes for people with B/LV, including three specific subpopulations: youth with B/LV, people who are deaf-blind, and people with combined TBI and B/LV. This RRTC began in 2015 and has produced peer-reviewed publications, conference presentations, an app, an intervention manual, policy and practice guides, and online courses. Two peer-reviewed publications on transition-age youth with B/LV were published. One peer-reviewed publication focuses on factors leading to successful employment outcomes for transition-age youth with B/LV. The second peer-reviewed publication focuses on the short-term outcomes associated with a summer work program for transition-age youth with B/LV.

Research summaries of these publications may be found here: (1) *Keys to a Successful Transition: Ensuring Youth with Visual Impairments are Ready for Career and College* and (2) *Short-Term Effects of Job Search Skills Training and a Summer Work Experience Program for Youth*.

More information can be found on the RRTC's website: https://www.blind.msstate.edu/.

Community Living and Participation

Invaluable – The Unrecognized Profession of Direct Support (2020) — Grant # 90RTCP0003

The RRTC on Community Living and Participation at the University of Minnesota conducts advanced research, training, and technical assistance and dissemination activities focused on community living and participation of individuals with intellectual and developmental disabilities. The Center includes seven studies relevant to community living interventions, policy, and outcomes. The Center has developed a documentary film entitled *Invaluable: The Unrecognized Profession of Direct Support* that explores the underappreciated and underfunded work of direct support professionals, the people who support individuals with intellectual and developmental disabilities in living full lives as members of their communities. The film honors the complexity of the work and the immense value it provides to individuals receiving support. Project staff organized film screenings and have developed and maintained a website that features selections from the film. The website also features a "Share Your Story" feature that encourages direct support professionals to

film a short story to share and honor the critical work that they are doing during the COVID-19 pandemic. The website featuring film selections is available at: https://ici.umn.edu/product/invaluable/main.

Knowledge Translation (KT)

KT is an active process of ensuring that new knowledge and products from research and development are used to improve the lives of individuals with disabilities. NIDILRR KT centers support NIDILRR grantees in producing and promoting the use of new knowledge and products among disability stakeholders in a variety of important disability issue areas. As such, NIDILRR requires its grantees to involve stakeholders in the research and development process, translate findings into usable formats, and disseminate information to the community or identify plans to transfer products into the market.

Research-Based Publications Used by State/Local Authorities to Improve Community Living for People with Disabilities (2019) — Grant # 90DPAD0001
A peer-reviewed publication from the ADA Participation Action Research Consortium: Advancing Participation Equity for People with Disabilities called *Satisfaction, Safety, and Supports: Comparing People with Disabilities' Insider Experiences about Participation in Institutional and Community Living* was used by the State of Illinois Department of Human Services to evaluate whether their disability services and delivery systems complied with the Supreme Court's decision in *Olmstead v. L.C.* requiring states to provide services in the most integrated setting and to propose a new system using the methodology in the publication. This publication was also used by the Metropolitan Mayors Caucus of Illinois, which represents more than 250 mayors in Illinois, as part of a targeted series of community forums done with their policy stakeholders. In addition, transit maps and updated transit regional maps are research-based informational products that were used by the Metropolitan Transit Authority of Harris County (Houston, TX) to focus on improving sidewalks around the transit stops that serve people with disabilities. These maps showed where people with disabilities lived as well as the transportation lines and common resources or services that they used.

Pocket Guide Provides Effective Communication Tips for Law Enforcement Personnel When Interacting with Individuals with Intellectual and Developmental Disabilities (2019) — Grant # 90DP0094
The Rocky Mountain ADA National Network Regional Center developed and made available a pocket guide, *Law Enforcement – Interacting with People with Intellectual and Developmental Disabilities*, as part of the information package on police, law enforcement, and individuals with disabilities. This pocket guide contains information and tips for law enforcement personnel when interacting with people with intellectual and developmental disabilities, as well as information on how the ADA applies to law enforcement entities. The need for this guide was identified and content developed based on research findings from their study *Disability and Law Enforcement Personnel: Perceptions from the Rocky Mountain Region of the USA*, which explores the perspectives of law enforcement personnel

regarding interaction and communication with individuals with disabilities in order to enhance training and technical assistance, community stakeholders' input, and partnership with local law enforcement personnel. This pocket guide has been used by law enforcement agencies and other community stakeholders.

Research Capacity-Building Support

NIDILRR's goal is to increase capacity to conduct disability and rehabilitation research and development activities that make positive contributions to the lives of individuals with disabilities. To increase research capacity in the disability and rehabilitation field, NIDILRR supports three research training mechanisms: The Mary E. Switzer Fellowship Program, or Research Fellowship Program, Advanced Rehabilitation Research Training (ARRT) Projects, and Section 21.

Mary E. Switzer Fellowship Program, or Research Fellowship Program

The Switzer Fellowship Program gives qualified individual researchers, including individuals with disabilities, the opportunity to develop new ideas and concentrate on specific lines of research experience. Fellows work for 1 year on an independent research project of their own design. Switzer Fellows are actively engaged in independent research and have gone on to hold prominent positions, primarily on the tenure track in academic research institutions, but also in hospital centers or in the private sector for research and biotechnology companies.

Featured Switzer Fellows

Quotes from Switzer Fellows

"The Switzer Fellowship gave me the funds I needed to get pilot data to establish my major line of research on information processing speed among people with multiple sclerosis. It was fundamental to get the follow-on grant, which was exactly what I needed to establish myself as an independent scientist."

– Silvana Lopes Costa (Grant # 90SF0012)

"The Switzer Fellowship was an amazing jump-start to my work as an early career scholar, and the work continues more than 2 years following my official end date. The Switzer Fellowship was truly an amazing opportunity that has led to a tool that fills an important gap in resources and will aid in the increased coordination and delivery of pre-employment transition services as required under the Workforce Innovation and Opportunity Act of 2014."

– Marcus Poppen (Grant # 90SF0017)

Dr. Jongsang Son (Grant # 90SFGE0005), a Switzer Fellow from 2017–2018, is now a Research Assistant Professor in the Department of Physical Medicine and Rehabilitation at Northwestern University in Chicago, Illinois. His research focuses on motor recovery after stroke. As a Switzer Fellow, Dr. Son investigated *In Vivo Three-Dimensional Changes in Muscle Geometry and Architecture After Stroke*. Dr. Son published two papers in 2019 and two more in 2020. He also received a new award from the Davee Stroke Seed Grant from Northwestern University. More information about his work can be found at: https://www.feinberg.northwestern.edu/faculty-profiles/az/profile.html?xid=45229

Advanced Rehabilitation Research Training (ARRT) Projects

The AART Projects provide funding to institutions of higher education to recruit and provide advanced interdisciplinary research training to qualified postdoctoral Fellows. In addition, research training is a requirement for RRTCs and RERCs. Other grants, such as the Model Systems, also support significant research training. The program supports a diverse cadre of young research professionals. An estimated 52 percent of Fellows in the ARRT funding program in FY 2019 and 44 percent of Fellows in the AART funding program in FY 2020 identify themselves as Latino, African American, American Indian, Asian, or Native Hawaiian. ARRT Fellows have been integral to several key research developments alongside mentors and senior researchers.

Featured AART Fellows

Allison Hernandez, PhD, RN

Dr. Hernandez is a bilingual, bicultural Mexican-American registered nurse. She is trained as a biobehavioral health researcher and has a broad interest in older adult health and longevity. Her current research focuses on improving wellness programming for older adults as it relates to the promotion of exercise, nutrition, social engagement, and happiness. Dr. Hernandez's policy placement was in the Office of U.S. Congresswoman Donna Shalala, where she worked on a variety of health, aging, and disability policy issues.

Ivorie Stanley, MD, MPH
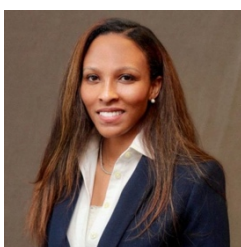
Dr. Stanley is an occupational and environmental medicine physician. With a background in public health and preventive medicine, her research interests broadly center on interactions between employment and health to limit disease and disability in vulnerable populations. She has particular interests in the aging workforce and the impact of occupational and environmental exposures on the health of older adults. Dr. Stanley's policy placement was in the U.S. House Committee on Education and Labor, where she worked on workforce and labor policy initiatives for older adults and people with disabilities.

Section 21 — Traditionally Underserved Populations

Section 21 focuses on research capacity-building for minority-serving institutions, such as historically black colleges and universities and other institutions with significant racial/ethnic minority student populations. Section 21 of the Rehabilitation Act requires that 1 percent of NIDILRR appropriations be used to address traditionally underserved populations. The following are some of the activities and achievements of the Section 21 program:

AT Access and Usage Barriers Among African Americans with Disabilities (2020) — Grant # 90RTST0001
The Langston University RRTC on Research and Capacity-Building for Minority Entities published an article in the *Journal of Applied Rehabilitation Counseling* about the literature on AT access and usage barriers among African Americans with disabilities. This article discusses the access and usage disparities and their impact on employment for African Americans with disabilities. The Center calls for bridging the digital divide through public policy reform, digital literacy awareness, and enhanced capacity-building within vocational rehabilitation (VR) and AT service delivery. This article urges VR counselors in education and practice to examine ways to increase AT access and bridge usage gaps for African Americans with disabilities in public policy, VR service delivery, and institutional infrastructure systems.

Link: https://connect.springerpub.com/content/sgrjarc/51/2/115

Project CLAIM: Social-Cognitive Career Theory Variables for African American College Students with Disabilities (2019) — Grant # 90IF0103
Southern University and A&M College's FIP, Project CLAIM, develops methods and procedures to maximize the full inclusion and integration into society, employment, independent living, family support, and economic and social self-sufficiency of individuals with severe disabilities, especially those from underserved groups. Project CLAIM seeks to improve the effectiveness of services authorized by the ADA via theory-driven research and targeted dissemination for VR clients, their families, communities, practitioners, and employers. In 2019, Project CLAIM published an article on social-cognitive career theory variables as mediators for the relationship between deep learning and goal persistence in African American college students with disabilities. This study examined the social-cognitive career theory of academic barriers, coping self-efficacy, academic milestone self-efficacy, and academic outcome expectancy. In this study, career assessment data was collected from 62 African American college students who self-identified as having a disability. Findings from the study indicate that deep learning is significantly linked to goal persistence. Project CLAIM found that higher levels of deep learning had the benefit of helping African American college students with disabilities develop coping self-efficacy, academic milestone self-efficacy, and academic outcome expectancy, which led to heightened goal persistence.

Link: https://content.iospress.com/articles/journal-of-vocational-rehabilitation/jvr180999

Highlights from Former NIDILRR Grantees

ADA National Network

Just-in-Time Toolkits: Pilot of an Employee Version of the Toolkit — Grant # 90DP0071: 2011–2017

The Yang-Tan Institute on Employment and Disability at Cornell University continues to build on the Just-in-Time toolkits, piloting an employee version of the toolkit. This toolkit was developed in response to requests from the field. The toolkit has been adopted by the National Aeronautics and Space Administration and the Department of Transportation; the latter's toolkit includes additional evaluation tools. The Just-in-Time Toolkit can be found at https://www.disabilitytoolkit.org/.

ADA Trainer Leadership Network Evaluation Tools Available Online — Grant # 90DP0071: 2011–2017

The Yang-Tan Institute on Employment and Disability at Cornell University produced ADA Trainer Leadership Network evaluation tools. These evaluation tools are popular with VR offices across the country and the curriculum is now online so it can be done without traveling. Three regions have built networks around the training, including the Mid-Atlantic ADA Regional Center. It is also used with individuals with intellectual and developmental disabilities in a train-the-trainer setting. These individuals are paired with existing trainers, and together they talk about the program. VR administrators in the State of New York talked about how the ADA Training Leadership Network has enhanced their capacity to serve businesses and educate them about the ADA.

Community Living and Participation

Reducing Disparities Through a Culturally Informed Intervention for Latinx Parents of Children with Autism — Grant # 90IF0072: 2014–2017

The Parents Taking Action intervention has been incorporated into a new FIP under the Minority-Serving Institutions (Section 21) program to further develop the program for Latinx parents of children with autism or social communication deficits. This program developed a culturally competent educational program for parents and evaluated it using a randomized controlled trial. The intervention drew from existing knowledge about autism, treatments, services, and strategies and made it accessible to the Spanish-speaking Latinx

community in a culturally competent and cost-effective way. For example, the curriculum was delivered by community health educators, or promotoras de salud, who themselves were parents of children with autism. Participants were Latinx mothers of children with an autism spectrum disorder or social communication deficit. Participants received 14 weeks of home visits by the promotora, who delivered intervention content using an interactive approach. The first part of the intervention included understanding autism symptoms and diagnosis, evidenced-based interventions, advocacy, reducing stress, and explaining their child's behaviors to others. The second part of the intervention educated parents on how to reduce problem behaviors and improve their child's social and communication skills. Measures of caregiver (family empowerment, caregiver efficacy, and use of targeted intervention strategies) and child outcomes (autism-related symptoms, services received) were collected pre- and post-intervention and at one additional follow-up point. The results from the California arm of the study showed that compared to the control group, the intervention group saw a significant decrease in autism symptoms and an increase in typical and evidence-based services for children. They found significant increases in parent outcomes on knowing their rights, accessing community, overall family empowerment, and efficacy in using strategies. The program's published article, https://doi.org/10.1080/15313204.2019.1570890, contains more detailed information about these results.

Link: https://fsrtc.ahslabs.uic.edu/research/parents-taking-action/

The Game Plan Application — Grant # H133G120091: 2012–2015

Dr. Jessica Kramer was invited to contribute to an international textbook (*Participation: Optimizing Outcomes in Childhood-Onset Neurodisability*) on participation in

pediatric rehabilitation. The invited chapter features Project TEAM (Teens Making Environmental and Activity Modification) as an intervention approach that focuses on participation. Dr. Kramer was also invited to present a series of workshops across Florida for more than 300 occupational and physical therapists working in state schools, discussing the role of these therapies in transition planning. Project TEAM was featured as an evidence-based/research-based approach for this age group. Dr. Kramer continues to receive requests for the intervention from university/academic programs and schools serving youth across the state. In addition, the Game Plan app is in the final stages of development and will be available for beta testing in early 2020.

Link: http://sites.bu.edu/yell/research/project-team/

Employment Outcomes

Expansion of the VR Online Portal — Grant # 90IF0081: 2014–2017

The VR Online Portal developed by Wright State University has been expanded to include two more webcasts, with plans to add at least two more in American Sign Language that will explain the use of behavioral assessments and the O*NET (an occupational interest scale), which is being used to develop 10 online assessment instruments in American Sign Language (GAIN-SS, AUDIT-US, AUDIT-C, DAST, SWLS, RSES, O*NET, PHQ-9, GAD-7, and SBQ-R) under a NIDILRR-funded DRRP. The portal is also used by Dr. Charlie Bernacchio at the University of Southern Maine in his research on counselor education as well as in the rehabilitation counseling education program itself. Dr. Bernacchio has also applied for a FIP grant in which he will collaborate with 12 other rehab counselor education programs to teach grad students to use VR online. The VR Online Portal is also used at the rehabilitation counseling graduate program at Eastern Carolina University. The VR Online Portal is actively promoted through exhibits and presentations at conferences and meetings.

Link: https://connect.springerpub.com/content/sgrjarc/49/2/40

Incorporation of Grant Products at University of California-Davis and Presentation at the College and University Work-Family Association Annual Conference —
Grant # 90IF0051: 2013–2016

In 2019, results from this project at University of California-Davis were included in and informed two publications: a book chapter on bullying and harassment within *Employment and Disability: Issues, Innovations, and Opportunities*, and an encyclopedia entry on workplace bullying and harassment in *Disability in American Life: An Encyclopedia of Concepts, Policies, and Controversies.* Within the organization, results from this project support related research on employment-related decision-making among older health care workers. University of California-Davis has included content from this grant's products and the link to the Work-Life Balance and Disability website in its workplace well-being toolkit for managers. This project has had an influence on policy and practice within organizations, beginning with the University of California-Davis adoption of these resources. In addition, they invited grantee LaWanda Cook to present at the College and University Work-Family Association annual conference in 2019.

Link: https://www.yti.cornell.edu/work/keeping-people-with-disabilities-in-the-workforce-negotiating-work-life-and-disability-work-life-balance

Findings Presented on the Survey on Making VR Work — Grant # 90DP0009: 2010–2016

The Disability subgroup within the Campbell Collaboration is conducting an update of a prior NIDILRR-funded systematic review on interventions to promote the employment of transition-aged youth and young adults who have autism. The Campbell Collaboration's survey, Making VR Work, was adapted as a baseline outcome measure for the current Center on Knowledge Translation for Employment Research, with findings reported in the 2019 State of the Science and in an upcoming webcast. The former principal investigator on this grant, Kathleen Murphy, serves as a member of the KT Advisory Group for Temple University's Collaborative from 2018–present. Another former member of this project, Ann Outlaw, serves on the advisory board for the Residential Information Systems Project at the University of Minnesota's Institute for Community Integration from 2018–present. Gordon Duff directs Australia's National Disability Services and wanted advice about how to infuse the provision of disability services in Australia with research. To advise on this topic, Kathleen Murphy met with Duff twice: once during the Campbell Collaboration Annual Meeting in Melbourne, Australia, in October 2018, when he attended a meeting of the Disability Coordinating Group, and once via teleconference on March 25, 2019, during his year as a Fulbright Scholar from Australia to the U.S.

Health and Function

Development of a New Information Product: Research Alerts — Grant # 90IF0066: 2014–2017

The research team of the Risk of Early Mortality After Spinal Cord Injury project at the Medical University of South Carolina is expanding their original conceptualization to include a larger cohort and a larger dataset. This will allow them to address newer questions and follow up on questions that came out of this study. The study results included important findings about specific risk factors, such as alcohol or opioid use and risk-taking, that are linked to mortality for people with SCI. Work continues on developing and refining the health calculator and risk calculator completed during the study period, and a new unintentional injury calculator is in development. The team developed Research Alert, a new information product

designed to bring attention to an important finding from the study in an actionable format. The alerts describe what the study found about specific behavioral risks for mortality among people with SCI, who is at risk, and what an individual can do to mitigate that risk.

How Does NIDILRR Collaborate?

NIDILRR has an extensive history of collaborating across federal institutions to identify best practices, conduct co-sponsored research, and address shared goals. Well-established partnerships exist both within the Department of Health and Human Services and across the federal government. For example, NIDILRR has working partnerships with the Department of Veterans Affairs (VA), the Centers for Disease Control and Prevention, the Substance Abuse and Mental Health Services Administration, the National Institute of Standards and Technology, the Department of Transportation, the Access Board, and the Federal Communications Commission.

Traumatic Brain Injury

The NIDILRR TBIMS, in collaboration with the Centers for Disease Control and Prevention, conducted a study on return to work and school post TBI. This collaboration used a secondary longitudinal analysis to examine the probability of returning to productivity more than 5 years following moderate to severe brain injury. This study tracked the outcome of participation in productive activity in employment or school, as reported through phone interviews at different time periods post injury. This study was published in 2020 and can be accessed here.

Mental Health

Four RRTCs that focus on mental health receive funds from both NIDILRR and the Substance Abuse and Mental Health Services Administration. These include the RRTC on Transition to Employment for Youth and Young Adults with Serious Mental Health Conditions at the University of Massachusetts Medical School, the RRTC on Community Living and Participation Among Youth and Young Adults with Serious Mental Health Conditions at Portland State University, the RRTC on Improving Employment Outcomes for Individuals with Psychiatric Disabilities at Boston University, and the RRTC on Self-Directed Recovery and Integrated Health Care at the University of Illinois at Chicago.

Transportation

NIDILRR partly funds the Accessible Transportation Technologies Research Initiative (ATTRI), which seeks to enhance the mobility of travelers with disabilities by providing the capability to reliably, safely, and independently plan and execute their travel through integrated solutions and technologies. The initiative is led by the Federal Highway and Federal Transit Administrations and is funded by NIDILRR and the Department of Transportation. ATTRI has made significant headway in documenting travelers' needs and applying multimodal technology, and it is broadening its reach nationally and internationally. ATTRI is currently in the second phase of the project: designing prototypes and standards that build upon user research.

Cloud Computing

NIDILRR, in collaboration with the Rehabilitation Services Administration and the Institute for the Study of Knowledge Management in Education, is developing cloud computing technologies for the personalization of AT user preferences. Activities have included the development of a National Institute of Standards and Technology white paper examining accessibility issues; AT taxonomies; researching opportunities available through cloud computing, and an examination of how personal preferences can be captured quickly and effectively.

Military and Veteran Health

In response to the 2012 Executive Order 13625, *Improving Access to Mental Health Services for Veterans, Service Members, and Military Families*, NIDILRR collaborated with the Department of Defense, VA, and the National Institutes of Health to create a National Research Action Plan, a 10-year blueprint released in 2013 for interagency research to enhance the diagnosis, prevention, and treatment of PTSD and TBI and to improve suicide prevention. Additional research collaborations include work with VA and the Department of Defense to support our nation's service members and veterans with TBI, including, for example, the establishment and expansion of the VA TBI Veterans Health Registry and the VA TBIMS Database. The former includes military personnel with symptoms of TBI who served in Operation Enduring Freedom or Operation Iraqi Freedom and who apply for services or file a disability claim. The latter is the VA equivalent of the NIDILRR TBIMS National Database and includes service members and veterans who are admitted to any of the five VA Polytrauma Rehabilitation Center facilities nationwide and who have sustained a TBI of any severity. The sharing of data, resources, and expertise is helping to track outcomes of civilian and military individuals with TBI and conduct both descriptive and comparative studies.

Interagency Committee on Disability Research (ICDR)

The Interagency Committee on Disability Research (ICDR), a NIDILRR-led federal partnership, promotes a cohesive, strategic federal program of disability, rehabilitation, and independent living research; brokers partnerships; and facilitates coordination and collaboration among federal departments and agencies. NIDILRR's Director serves as the Chair of the ICDR. NIDILRR plans to build upon this leadership role, enhancing its stature as a leading sponsor of disability and rehabilitation research through new and expanding collaborations with federal partners, researchers, and developers, as well as the disability community.

In FY 2019 and 2020, the ICDR devoted much of its effort to planning how to implement specific activities in the approved government-wide strategic plan required by the Workforce Innovation and Opportunity Act. The ICDR hosted a number of meetings, webinars, and

teleconferences related to promoting coordination, collaboration, and partnerships. In FY 2019 and 2020, the ICDR Government-Wide Inventory working group moved forward with developing the database. The National Institute of Neurological Disorders and Stroke, National Center for Medical Rehabilitation Research, and NIDILRR committed funds to this project.