



National Institute on Disability
and Rehabilitation Research



The National Institute on Disability and Rehabilitation Research

FY 2013 Organization Highlights



The National Institute on Disability and Rehabilitation Research...Briefly

The National Institute on Disability and Rehabilitation Research (NIDRR) was established in the landmark Rehabilitation Act of 1973, as amended in 1978. The Rehabilitation Act laid out a groundbreaking perspective on disability and citizenship in the Congressional finding that, "Disability is a natural part of the human experience and in no way diminishes the rights of individuals to...live independently; enjoy self-determination; make choices; contribute to society; pursue meaningful careers; and enjoy full inclusion and integration in the economic, political, social, cultural and educational mainstream of American society." At its core, NIDRR's role is to generate and promote the use of knowledge that contributes to fulfilling the rights recognized by Congress in the Rehabilitation Act. More specifically, as the federal government's primary disability research agency, the Congress has called on NIDRR to:

- "provide for research, demonstration, training, technical assistance and related activities 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...;"
- promote the transfer of, use and adoption of rehabilitation technology for individuals with disabilities in a timely manner...; and
- ensure the widespread distribution, in usable formats, of practical scientific and technological information."

Chart I:A Brief Summary of NIDRR Grants and Contracts in FY 2013

\$104,902,278	Research and Contract Budget
7.7%	Increase in Budget Allocated to Competitive Grants Since 2009
237	Grants and Contracts Supported
34	States with at Least One Grant
32	Grant Competitions Conducted in 2013
277	Peer Reviewers Participating in Application Review
470	Proposals Evaluated
14%	Success Rate of Applicants

NIDRR accomplishes these and other mandates through the funding of scholars, innovators and leaders across the U.S. and beyond. A few summary statistics related to these responsibilities are shown in Chart I.



From the Director



Charlie Lakin, Director of NIDRR

We at NIDRR are pleased to present to the Congress, the Administration and our broader community of stakeholders this summary of our activities and accomplishments in fiscal year (FY) 2013. FY 2013 was a busy year for NIDRR. We published our draft new Long-Range Plan, received over 150 public comments in response to it, and revised and published the final Plan in April 2013. This Plan lays out commitments and procedures for NIDRR to achieve its main goals in FY 2013 and beyond. In broad strokes, these goals are to continuously improve the balance, relevance and quality of the research we fund and to share it and its implications effectively with all who might benefit.

NIDRR has been aided in our long-range planning efforts by the recommendations of a National Academy of Sciences (NAS) review of NIDRR released early in FY 2013. This review was generally positive about the products of NIDRR's funding, finding that the vast majority of those products were of good to excellent quality and in direct alignment with the

purposes for which NIDRR was created. But the review also provided important suggestions for improving NIDRR operations. Building on the NAS review, NIDRR contracted with Abt Associates to develop a 10-year cycle of recurring evaluation activities to make us a more data-driven organization. To assure ongoing scrutiny of the relevance of NIDRR activities, in FY 2013 NIDRR moved forward with the establishment of a Rehabilitation Research Advisory Council (RRAC). This Council is composed of remarkable leaders in research, policy and outreach in government and non-government roles. The Council will be of great value to NIDRR in keeping us informed of emerging trends and needs, enhancing our two-way communication with key constituents and recommending directions to NIDRR for our priorities and operations.

In addition to our efforts to increase our direct engagement with the disability community, in FY 2013 NIDRR sustained existing and established new partnerships with other federal government agencies. NIDRR collaborated with 28 federal agencies from nine different departments, as well as independent agencies like the Social Security Administration, Access Board, Federal Communications Commission (FCC), National Science Foundation and National Council on Disability. These collaborations increase the benefits to other federal agencies of the research and technology that NIDRR finances, as well as making available to them the substantial expertise found within the community of NIDRR grantees.

As I look to FY 2014 and beyond I am optimistic about NIDRR continuing to contribute to the independence, inclusion, productivity and full citizenship of all Americans with disabilities. In part, that optimism derives from the appointment of John Tschida to become the new Director of NIDRR on March 1, 2014. John brings to NIDRR great knowledge, experience and insight that position him well to be an effective leader of NIDRR in the years to come. In an even larger measure, my optimism derives from the fact that John will be supported by the same committed, skilled and exceptionally knowledgeable professional staff with which I have been honored to work.

John Tschida
Director of NIDRR
effective March 1, 2014



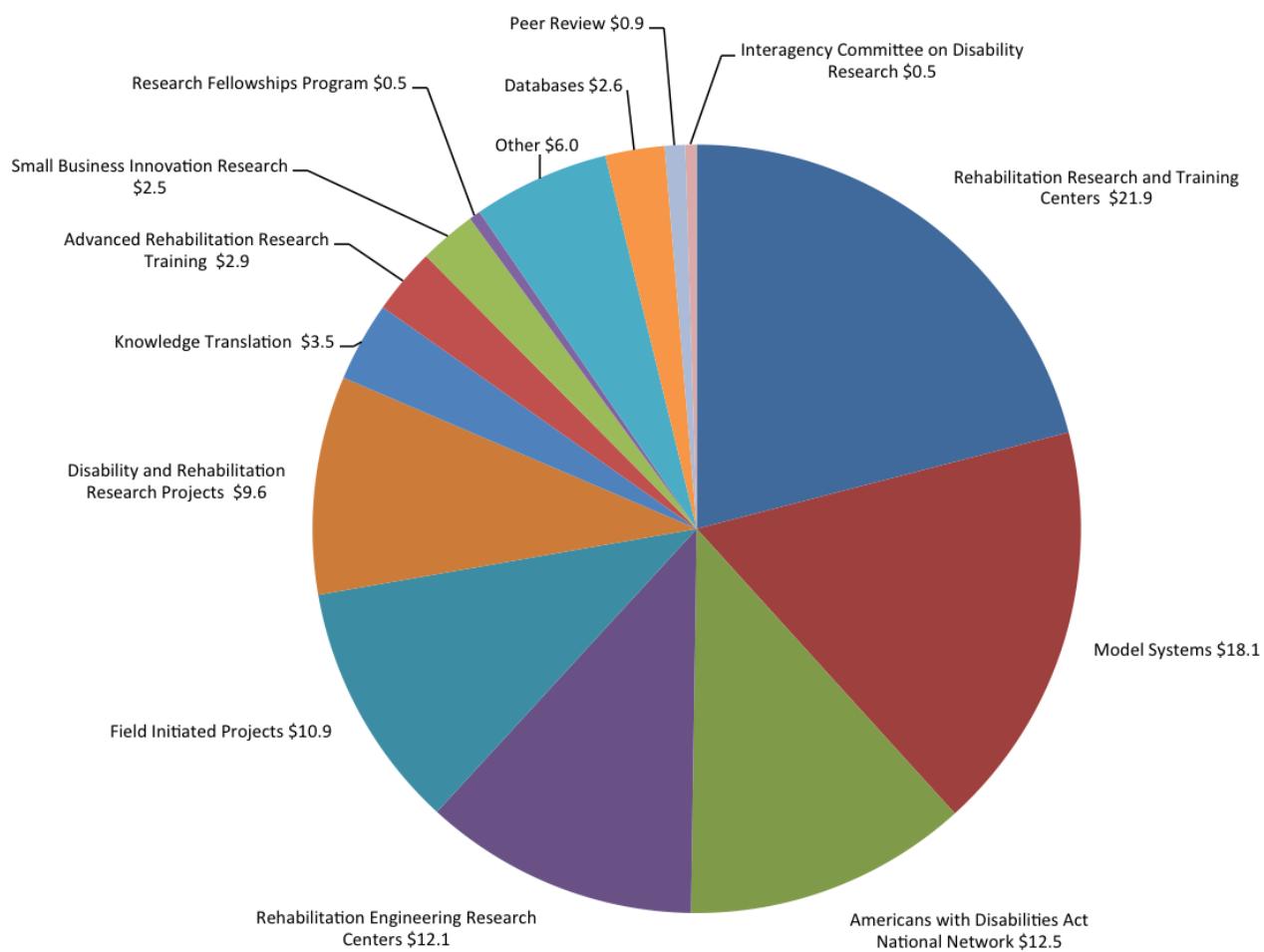
How Is NIDRR Funding Used?

NIDRR addresses a broad scope of concerns related to disability and rehabilitation. The charts and statistics presented below provide an overview of how NIDRR distributed its funds, the kinds of activities its grantees conducted and the types of outcomes produced in FY 2013.

Funding by Major Program Areas in FY 2013

The total NIDRR budget for 2013 was \$104,902,278, provided through direct appropriations and interagency agreements. More than 90 percent of that funding (\$94,812,900) went toward competitive grant activities. The remaining \$10 million was allocated among a variety of administrative and contract activities. These activities included support of the Interagency Committee on Disability Research to coordinate disability research across the federal government; a national database on disability research (NARIC) and a national database on assistive technology products (AbleData); and a contract to support the peer review process. Other activities included contracts to support the Web Accessibility Initiative at the Massachusetts Institute of Technology (now co-funded by IBM, HP, Adobe and the European Commission), program evaluation, management activities, work with the Institute of Medicine and other initiatives. These expenditures are shown in Chart 2.

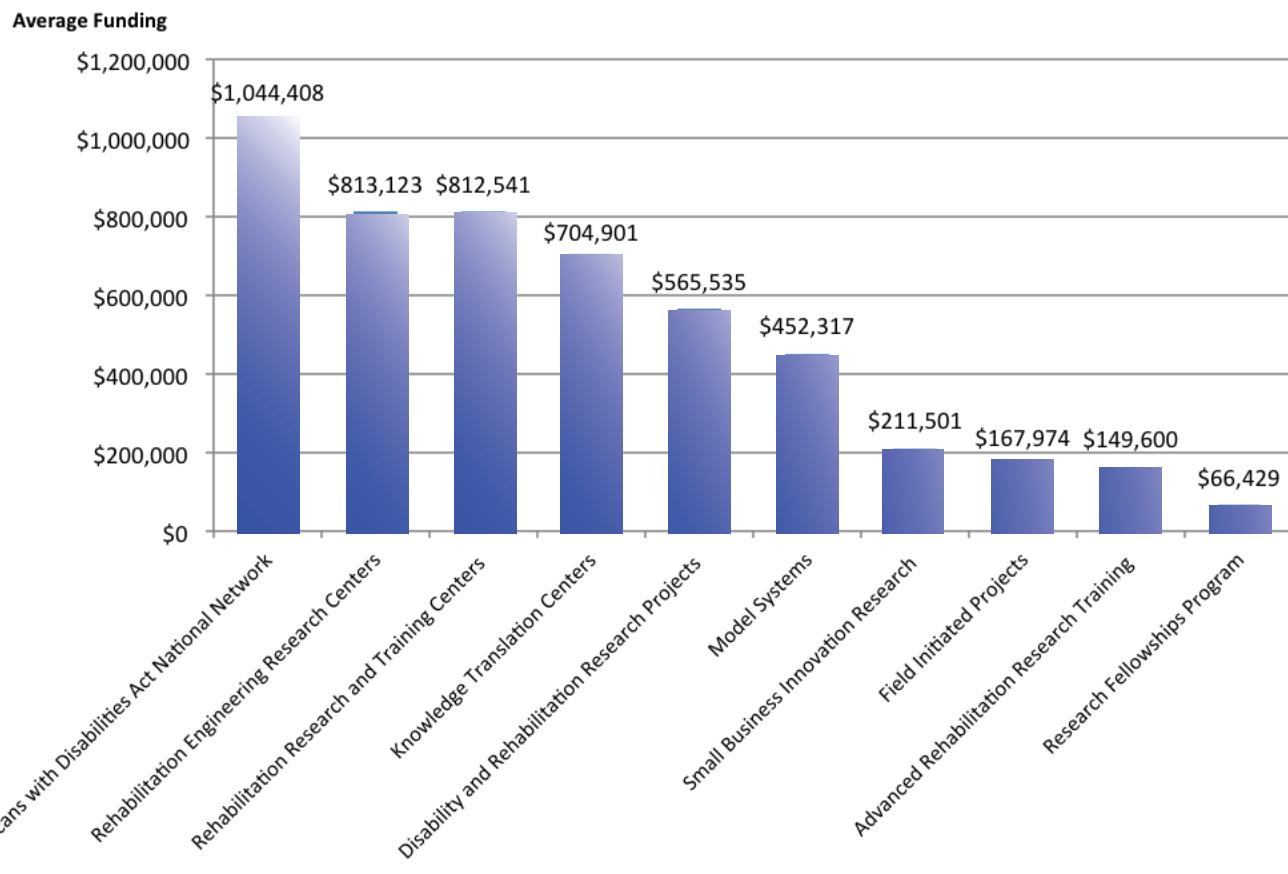
Chart 2: NIDRR's Budget (in millions) by Program Area in FY 2013



Support for Grant Program Areas in FY 2013

NIDRR oversees 10 different grant programs that vary in purpose, scope, duration and size. The average annual funding amounts reflect these variations as shown in Chart 3. The 10 regional Americans with Disabilities Act (ADA) National Network grants have the highest average funding per grant. The Research Fellowships are awarded to individuals to support one year of independent research and have the lowest average funding per grant.

Chart 3: Average Funding per Grant by Program Area in FY 2013





Support for Research Capacity Building in FY 2013

NIDRR funds the training of emerging talent for conducting research, engineering and other development activities. Capacity building is promoted through the Advanced Rehabilitation Research Training program, Research Fellowships (Switzer) and Section 21 of the Rehabilitation Act which requires that NIDRR reserve one percent of its annual appropriation for minority outreach efforts. In 2013, NIDRR devoted \$4.5 million to capacity building grants, including the funding of a new Rehabilitation Research and Training Center (RRTC) on Research and Capacity Building for Minority Entities at Langston University. These expenditures are shown in Chart 4.

Chart 4: NIDRR's Capacity Building Programs in FY 2013

Advanced Rehabilitation Research Training	\$2,841,991
Research Fellowships (Switzer)	\$465,000
Section 21 Minority Outreach	\$1,225,000
Total	\$4,531,991

Support for Knowledge Translation and Dissemination in FY 2013

Knowledge Translation (KT) is the active process of ensuring that new knowledge gained through research ultimately improves the lives of people with disabilities. KT involves knowledge validation, dissemination, utilization and transfer of technology. It recognizes the importance of engaging those potentially affected by

Chart 5: NIDRR's Knowledge Translation Grants in FY 2013

Center on Knowledge Translation for Technology Transfer	\$924,512
ADA Network Knowledge Translation Center	\$850,000
Model Systems Knowledge Translation Center	\$800,000
Center on Knowledge Translation for Disability and Rehabilitation Research	\$750,000
Center on Knowledge Translation for Employment Research	\$650,000
Center for International Rehabilitation Research Information and Exchange	\$399,992
Total	\$4,374,504

research in defining the focus of research and the methods of getting research into the community. As illustrated in Chart 5, NIDRR invested over \$4.3 million for KT projects focusing on different content areas to assist NIDRR grantees in their KT efforts through technical assistance and training.



NIDRR funds the Americans with Disabilities Act (ADA) National Network to conduct ADA-related research and to provide information, training and technical assistance about the ADA to businesses, agencies and the public. Currently NIDRR invests \$12.5 million in its 10 ADA regional centers, one ADA collaborative research center and one ADA knowledge translation center. From June 2012 to May 2013, the ADA National Network responded to 56,688 technical assistance requests and disseminated 505,356 publications and information products to people with disabilities and their family members, businesses, and other stakeholders.



NIDRR supports NARIC (<http://naric.com/>), a research library and information center to promote access to disability and rehabilitation research information. Almost 90 percent of patrons are people with disabilities, family, friends and advocates. In FY 2013, NARIC responded to 1,250 information requests and received 223,000 website visitors who viewed 1.8 million pages.



NIDRR supports AbleData (<http://abledata.com>), an information center hosting an extensive database of assistive technology products and resources to increase awareness of and access to assistive devices. Over 60 percent of patrons are people with disabilities, family and friends. In FY2013, AbleData responded to 2,900 information requests and received about 4.3 million website visitors who viewed over 30.5 million pages.

Employment and Training of Persons with Disabilities

NIDRR encourages all of its grantees to employ and train individuals with disabilities. Chart 6 shows that in 2013, 12.7 percent of NIDRR-supported grant staff, fellows and graduate students voluntarily reported having a disability.

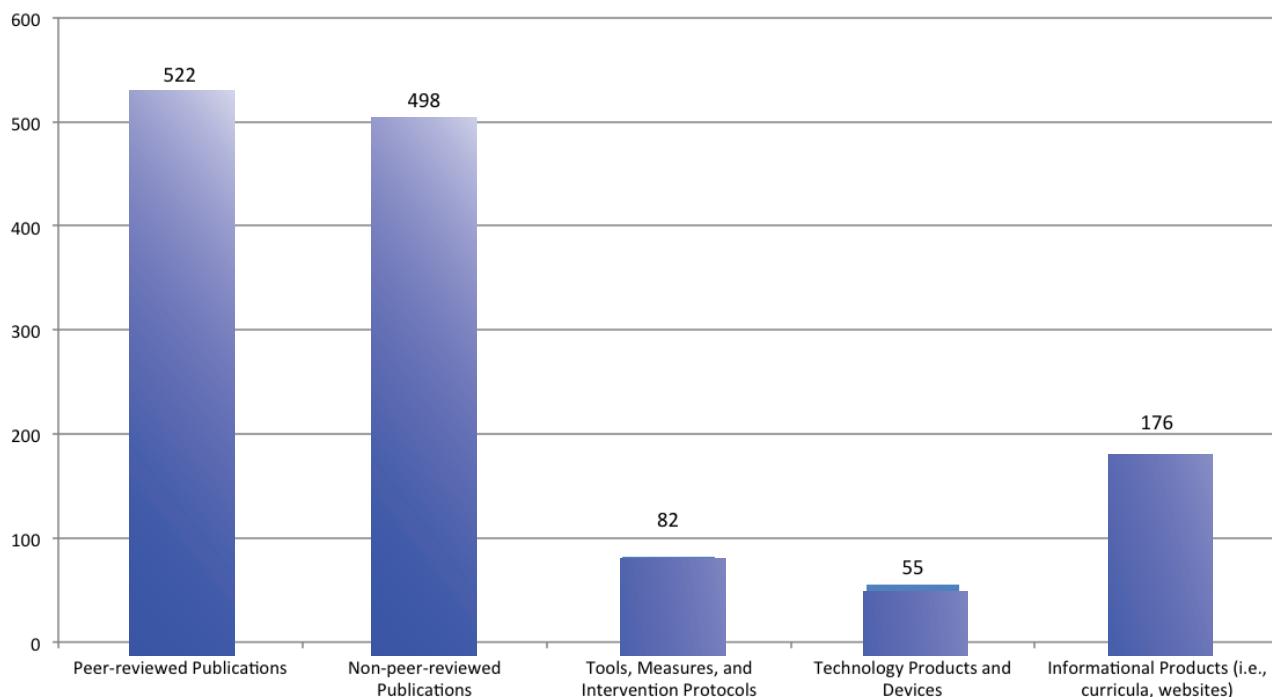
Chart 6: Disability Status of NIDRR-Supported Grant Staff, Fellows and Graduate Students in FY 2013

Position Type	Total Supported	Responded to Voluntary Disability Declaration	Has Declared Disability	Percent with Declared Disability
Grant Staff	3,065	2,845	399	14.0
Fellows	204	195	13	6.7
Graduate Students	527	470	34	7.2
Total	3,796	3,510	446	12.7

Products of NIDRR Grants

NIDRR grantees report annually on the number and type of products they produce. Chart 7 summarizes these data. In 2013, peer-reviewed publications were the most common product generated by NIDRR grants. Of the 55 technology products and devices reported, 21 were products transferred to industry.

Chart 7: The Number of Different Products Generated by NIDRR Grants in FY 2013



How Is NIDRR Research Making a Difference?

Research supported by NIDRR is practical and applied in focus, designed to generate new knowledge and technologies and to stimulate change in programs, practices and public policies to the benefit of Americans with disabilities. Selected grantee accomplishments from FY 2013 are presented below to illustrate the variety of NIDRR grantee activities that are improving the lives of people with disabilities.

National Estimates of Traumatic Brain Injury Reveal TBI as a Chronic Condition

NIDRR has supported the creation and maintenance of a national database for tracking people with traumatic brain injury (TBI) through its TBI Model Systems Centers (TBIMS) program. Now the largest longitudinal TBI database in existence, it is being mined to improve our understanding of the life course of people with moderate or severe TBI from the time of injury until death. Recent studies show that the database represents the U.S. population of people who require inpatient rehabilitation for TBI.

Together with NIDRR, the Centers for Disease Control and Prevention (CDC) and the Department of Veterans Affairs (VA) are leveraging the infrastructure of the TBIMS national database. The VA is sponsoring a parallel database for veterans with TBI that will enable comparisons of outcomes between civilians and veterans. The CDC-sponsored research uses the database to make national prevalence estimates of outcomes. For example, these estimates show that individuals with TBI are more than twice as likely to die compared to individuals of similar age, gender and race, with a reduced average life expectancy of nine years. Among those who went to rehabilitation and survived for at least five years after the injury:

- 12 percent were institutionalized and 50 percent were re-hospitalized at least once;
- 57 percent were moderately or severely disabled overall, 33 percent were not independent in everyday activities and 39 percent showed deterioration in outcomes one or two years post-injury; and
- 60 percent were unemployed at two years post-injury, and about one-third of those who were employed worked part-time.

Studies using this database are contributing to the growing evidence that for some, decline occurs over time following brain injury, and that deterioration necessitates treating brain injury as a chronic health condition. Acknowledgement of chronic brain injury by the scientific community is likely to lead to significant changes in the approaches used by health care and social service providers for treating and managing TBI—changes that hold the promise of improving long-term outcomes for individuals with TBI. Visit The TBIMS National Data and Statistical Center at Craig Hospital (<https://www.tbindsc.org/>) for more information.



Study Supports Promising Employment Model for Youth with Autism Spectrum Disorders

A NIDRR-funded study at Virginia Commonwealth University (VCU) yielded an 87 percent employment rate for youth with Autism Spectrum Disorders (ASD) participating in a promising employment intervention. This exciting finding exemplifies how much more can be accomplished in addressing the persistent challenge of transitioning from school to competitive employment for all youth with disabilities. The project was the first randomized controlled trial to test the effectiveness of the Project SEARCH internship model plus ASD supports on the employment outcomes for youth with significant ASD between 18 and 21 years of age. The intervention is a nine-month immersion program at hospital sites that includes on-site instruction in



Photo Credit: VCU

job, communication and related skills, and three internship rotations in different departments of the hospital. Youth in the experimental group were hired for hospital jobs that paid above minimum wage, such as providing clerical assistance for physicians, stocking linens and medical supply carts, cleaning and stocking isolation carts, and assisting in the pharmacy. In contrast, only about 6 percent of the control group youth who remained in traditional services found jobs. Researchers concluded that the program is successful because of the use of applied behavior analysis, business buy-in, seamless transition to employment and intensive opportunities for work experience that help youth discover which jobs best fit their strengths and personalities. VCU has received a second NIDRR grant for a replication and scaling up of the original study to more sites. Project SEARCH case studies are available online at <http://www.vcu-autism.org/news/index.cfm>.

New Captioning Technologies Advance Media Access

With support from NIDRR, WGBH's National Center for Accessible Media (NCAM) has advanced the accessibility of media on numerous platforms. A series of NIDRR-funded projects has enabled NCAM to bring captioning to movie theaters, online and mobile media, in-flight entertainment and digital TV. The needs of close to 40 million people who are deaf and hard-of-hearing have often been left out of the initial development of new and emerging technologies because they are not viewed as an easily reached market or one that can yield significant returns on investment. NIDRR-funded projects filled this gap, starting with the Motion Picture Access Project (MoPix), which developed the technology and process for providing discrete or hidden captions in movie theaters. By the end of 2014, almost every movie complex in the country will have some form of captioning. As media began to migrate from traditional broadcast to web-based platforms, NIDRR support enabled NCAM's Access to Online Media and Captioning Solutions for Mobile Devices projects to develop the first standards and specifications for captioned online and mobile media and the first do-it-yourself captioning tool, MAGpie. Today, with a wide proliferation of tools and the media industry's acceptance of common practices, captioning of online media is widespread, helped along by the provisions of the 21st Century Communications and Video Accessibility Act. The DTV Access Project developed the user-controllable caption functions of the digital television requirements adopted by the FCC in March 2012, significantly upgrading the look and feel of closed captions for the 21st century. The Access to In-Flight Entertainment project triggered a move by the airline industry and the U.S. Department of Transportation to finally begin equal access to the movies and TV programs available to air travelers. As a result of WGBH's development efforts, the technology is available to make many forms of media accessible to people who are deaf and hard of hearing. In addition, WGBH has stimulated changes in regulations that will promote accessibility in future media technologies. Visit <http://ncam.wgbh.org/> for more information.

Photo Credit: NCAM





Advanced Navigation Tools Developed for Blind Travelers

According to Mike May, a NIDRR researcher who is blind, there are two major challenges facing people who are blind—reading and getting around. Both affect social, family and career development. His company, Sendero Group, has received four grants from NIDRR since 2001 to develop and expand accessible Global Positioning



Photo Credit: Sendero Group

Systems (GPS) to seven platforms and to spawn commercial products. Accessible GPS is more than a convenience for people who cannot see printed street signs or the names of businesses; it is an essential tool for independent navigation. The first Sendero GPS was on a laptop within a backpack, weighing 12 pounds. Seeing Eye GPS™ is the latest Sendero app that uses Apple's VoiceOver screen-reader on the iPhone. This app is regularly updated and is commercially available through iTunes. It is free to download, but requires users to choose a subscription plan for one month, one year or three years when launched. Research and development has also included indoor navigation and crowd sourcing, which Sendero deems "The Blind Army." As a result of the collaboration of Sendero, its blind users and NIDRR, people who are blind now have enhanced opportunities for location literacy, better orientation and mobility, and improved access to jobs. For more information on accessible GPS, visit <http://www.AccessibleGPS.com>. To learn about Mike May, visit <http://www.CrashingThrough.com>.

Employer-Led Research Offers Insights to Improve Employment for People with Disabilities

Since its inception, NIDRR has supported research to address the low employment rates of working age people with disabilities compared to those without disabilities—32.7 percent vs. 73.6 percent in 2012. In recent years, NIDRR initiated research to examine the effect of employer attitudes and needs, corporate culture, organizational behavior and the labor economy on hiring and retention of employees with disabilities. Extending this line of work, the Cornell Rehabilitation Research and Training Center on Employer Practices worked with 16 employers who were members of the Conference Board to explore how to improve employment outcomes for people with disabilities. The group, known as the Conference Board Research Working Group on Improving Employment Outcomes for People with Disabilities, gathered and reviewed research, surveyed employers and participated in meetings and webinars over the course of a year. The major conclusions resulting from the study follow.

- In large part, programs that benefit people with disabilities benefit all employees, and therefore, employers.
- Active recruiting and retention of people with disabilities, including veterans, can significantly expand the pool of talent and create new business opportunities.
- Providing accommodations for disabled employees is generally not expensive.
- A majority of consumers prefer to give their business to companies that employ people with disabilities.
- Employers need to develop improved metrics to further advance the hiring and promotion of people with disabilities.

This unique collaboration between the RRTC and the Conference Board has promulgated insights for employers by employers that may stimulate more real-world change to improve the employment outcomes for people with disabilities. The full report can be found at Cornell's Digital Commons: <http://digitalcommons.ilr.cornell.edu/edicollect/1292/>.



Studies Document Critical Needs Related to Exercise, Obesity and Disability

NIDRR began supporting a program of research on physical activity and disability a decade ago to address the dearth of knowledge in this area. The results of a set of interrelated studies over this period have significantly advanced our understanding of critical health and prevention issues for people with disabilities. Initial studies documented the epidemiology of obesity disparities, finding that obesity rates and rates of chronic health conditions are higher among youth with disabilities than their non-disabled counterparts. Building on these findings, NIDRR-funded researchers developed the first conceptual model highlighting the deleterious effects of physical inactivity and the pathway to obesity. For example, people with neuromuscular disabilities have high rates of sedentary behavior predisposing them to severe deconditioning and significant health risk. Researchers subsequently identified a general disability-associated low energy expenditure deconditioning syndrome.

Taken together, these findings highlighted the urgent need to promote physical activity of light to moderate intensity among people with disabilities. To encourage appropriate physical activity, researchers developed a new methodology and criteria to take existing evidence-based obesity prevention strategies developed for non-disabled populations and adapt them for youths and adults with disabilities. The Guidelines, Recommendations, Adaptations Including Disability (GRAIDs) are now available at <http://www.obesitystrategies.org/strategies.php>.

Related engineering work at the Rectech Rehabilitation Engineering Research Center (<http://www.rectech.org>) continued developing adaptive game controllers for active video games for youth with disabilities, virtual environment exercise devices and the first accelerometer that accurately measures calories expended in manual wheelchair users so they can now track energy intake/energy expenditure to help manage their weight.

Researchers also developed and tested an online system for promoting and monitoring physical activity in children with disabilities in their local communities—the Personalized Online Weight and Exercise Response System (POWERS). A telehealth coach establishes a link between the child/parent and local service provider (for ballet, martial arts, swimming, etc.) and facilitates integration of the child into the program with remote instruction, monitoring and feedback. This telehealth system was subsequently used in a randomized controlled trial study that showed the approach led to weight reduction in people with physical disabilities and was cost-effective. Overall, this program of research has raised awareness of the critical needs of people with disabilities with regard to obesity and exercise and has developed creative and successful strategies to address the disparities.



About NIDRR

The National Institute on Disability and Rehabilitation Research (NIDRR), a component of the U.S. Department of Education's Office of Special Education and Rehabilitative Services (OSERS), is the main federal agency that supports applied research, training and development to improve the lives of individuals with disabilities. NIDRR staff and its grantees are committed to:

- Generating new knowledge and promoting its effective use in improving the ability of persons with disabilities to perform activities of their choice in the community, and
- Expanding society's capacity to provide full opportunities and accommodations for its citizens with disabilities.



Director: Charlie Lakin

URL: <http://www2.ed.gov/about/offices/list/osers/nidrr/index.html>

Main Telephone: 202-245-7640

Email: NIDRR-Mailbox@ed.gov

This report is available on the Department of Education's website at:
<http://www2.ed.gov/programs/nidrr/2013organizationhighlights.pdf>

This report is in the public domain. Authorization to reproduce it in whole or in part is granted. While permission to reprint this publication is not necessary, the citation should be: U.S. Department of Education, Office of Special Education and Rehabilitative Services, National Institute on Disability and Rehabilitation Research, NIDRR FY 2013 Organization Highlights, Washington, D.C. 2014.

