number 1890–0004, an electronic reporting system. Instructions containing annual report requirements will be provided to grantees each year prior to the submission of each year's annual report. Grantees are also strongly encouraged to seek technical guidance as needed from RSA staff to ensure they are meeting specific program goals.

# VII. Agency Contact

#### FOR FURTHER INFORMATION CONTACT:

Theresa DeVaughn, U.S. Department of Education, Rehabilitation Services Administration, 400 Maryland Avenue, SW., room 5045, PCP, Washington, DC 20202–2800. Telephone: (202) 245–7321 or by e-mail: *Theresa.Devaughn@ed.gov.* 

If you use TDD, call the Federal Relay Service (FRS), toll free, at 1–800–877–8339.

#### VIII. Other Information

Accessible Format: Individuals with disabilities can obtain this document and a copy of the application package in an accessible format (e.g., braille, large print, audiotape, or computer diskette) by contacting the Grants and Contracts Service Team, U.S. Department of Education, 400 Maryland Avenue, SW., room 5075, PCP, Washington, DC 20202–2550. Telephone: (202) 245–7363. If you use a TDD, call the FRS, toll free, at 1–800–877–8339.

Electronic Access to This Document: You can view this document, as well as all other documents of this Department published in the Federal Register, in text or Adobe Portable Document Format (PDF) on the Internet at the following site: http://www.ed.gov/news/fedregister.

To use PDF you must have Adobe Acrobat Reader, which is available free at this site. If you have questions about using PDF, call the U.S. Government Printing Office (GPO), toll free, at 1–888–293–6498; or in the Washington, DC, area at (202) 512–1530.

Note: The official version of this document is the document published in the Federal Register. Free Internet access to the official edition of the Federal Register and the Code of Federal Regulations is available on GPO Access at: http://www.gpoaccess.gov/nara/index.html.

Delegation of Authority: The Secretary of Education has delegated the authority to Andrew J. Pepin, Executive Administrator for the Office of Special Education and Rehabilitative Services to perform the functions of the Assistant Secretary for Special Education and Rehabilitative Services.

Dated: May 4, 2009.

#### Andrew J. Pepin,

Executive Administrator for Special Education and Rehabilitative Services. [FR Doc. E9–10651 Filed 5–6–09; 8:45 am] BILLING CODE 4000–01–P

#### DEPARTMENT OF EDUCATION

National Institute on Disability and Rehabilitation Research (NIDRR)— Disability and Rehabilitation Research Projects and Centers Program— Rehabilitation Research and Training Centers (RRTCs) and Rehabilitation Engineering Research Centers (RERCs)

Catalog of Federal Domestic Assistance (CFDA) Numbers: 84.133B Rehabilitation Research and Training Centers and 84.133E Rehabilitation Engineering Research Centers.

**AGENCY:** Office of Special Education and Rehabilitative Services, Department of Education.

**ACTION:** Notice of proposed priorities for RRTCs and RERCs.

**SUMMARY:** The Assistant Secretary for Special Education and Rehabilitative Services proposes certain funding priorities for the Disability and Rehabilitation Research Projects and Centers Program administered by NIDRR. Specifically, this notice proposes four priorities for RRTCs and three priorities for RERCs. The Assistant Secretary may use these priorities for competitions in fiscal year (FY) 2009 and later years. We take this action to focus research attention on areas of national need. We intend these priorities to improve rehabilitation services and outcomes for individuals with disabilities.

**DATES:** We must receive your comments on or before June 8, 2009.

ADDRESSES: Address all comments about this notice to Donna Nangle, U.S. Department of Education, 400 Maryland Avenue, SW., Room 6029, Potomac Center Plaza (PCP), Washington, DC 20202–2700.

If you prefer to send your comments by e-mail, use the following address: donna.nangle@ed.gov.

You must include the term "Proposed Priorities for RRTCs and RERCs" and the priority title in the subject line of your electronic message.

# FOR FURTHER INFORMATION CONTACT:

Donna Nangle. *Telephone*: (202) 245–7462 or by *e-mail*: donna.nangle@ed.gov.

If you use a telecommunications device for the deaf (TDD), call the

Federal Relay Service (FRS), toll free, at 1–800–877–8339.

SUPPLEMENTARY INFORMATION: This notice of proposed priorities is in concert with NIDRR's Final Long-Range Plan for FY 2005–2009 (Plan). The Plan, which was published in the Federal Register on February 15, 2006 (71 FR 8165), can be accessed on the Internet at the following site: http://www.ed.gov/about/offices/list/osers/nidrr/policy.html.

Through the implementation of the Plan, NIDRR seeks to: (1) Improve the quality and utility of disability and rehabilitation research; (2) foster an exchange of expertise, information, and training to facilitate the advancement of knowledge and understanding of the unique needs of traditionally underserved populations; (3) determine best strategies and programs to improve rehabilitation outcomes for underserved populations; (4) identify research gaps; (5) identify mechanisms of integrating research and practice; and (6) disseminate findings.

One of the specific goals established in the Plan is for NIDRR to publish all of its proposed priorities, and following public comment, final priorities, annually, in a consolidated notice. Under this approach, NIDRR's constituents can submit comments at one time rather than at different times throughout the year, and NIDRR can move toward a fixed schedule for competitions and more efficient grantmaking operations. This notice proposes priorities that NIDRR intends to use for RRTC and RERC competitions in FY 2009 and possibly later years. However, nothing precludes NIDRR from publishing additional priorities, if needed. Furthermore, NIDRR is under no obligation to make an award for each of these priorities. The decision to make an award will be based on the quality of applications received and available funding.

Invitation to Comment: We invite you to submit comments regarding this notice. To ensure that your comments have maximum effect in developing the notice of final priorities, we urge you to identify clearly the specific proposed priority that each comment addresses.

We invite you to assist us in complying with the specific requirements of Executive Order 12866 and its overall requirement of reducing regulatory burden that might result from these proposed priorities. Please let us know of any further ways we could reduce potential costs or increase potential benefits while preserving the effective and efficient administration of the program.

During and after the comment period, you may inspect all public comments about this notice in room 6029, 550 12th Street, SW., PCP, Washington, DC, between the hours of 8:30 a.m. and 4:00 p.m., Washington, DC time, Monday through Friday of each week except Federal holidays.

Assistance to Individuals with Disabilities in Reviewing the Rulemaking Record: On request we will provide an appropriate accommodation or auxiliary aid to an individual with a disability who needs assistance to review the comments or other documents in the public rulemaking record for this notice. If you want to schedule an appointment for this type of accommodation or auxiliary aid, please contact the person listed under FOR FURTHER INFORMATION CONTACT.

Purpose of Program: The purpose of the Disability and Rehabilitation Research Projects and Centers Program is to plan and conduct research, demonstration projects, training, and related activities, including international activities, to develop methods, procedures, and rehabilitation technology, that maximize the full inclusion and integration into society. employment, independent living, family support, and economic and social selfsufficiency of individuals with disabilities, especially individuals with the most severe disabilities, and to improve the effectiveness of services authorized under the Rehabilitation Act of 1973, as amended.

*Program Authority:* 29 U.S.C. 762(g), 764(a), 764(b)(2), and 764(b)(3).

Applicable Program Regulations: 34 CFR part 350.

# **Proposed Priorities**

In this notice, we are proposing four priorities for RRTCs and three priorities for RERCs.

For RRTCs, the proposed priorities

- Priority 1—Improved Employment Outcomes for Individuals with Psychiatric Disabilities.
- Priority 2—Transition-Age Youth and Young Adults with Serious Mental Health Conditions.
- Priority 3—Improving Measurement of Medical Rehabilitation Outcomes.
- Priority 4—Developing Strategies to Foster Community Integration and Participation for Individuals with Traumatic Brain Injury.

For RERCs, the proposed priorities are:

- Priority 5—Telerehabilitation.
- Priority 6—Telecommunication.
- Priority 7—Cognitive Rehabilitation.

Rehabilitation Research and Training Centers (RRTCs)

The purpose of the RRTCs is to improve the effectiveness of services authorized under the Rehabilitation Act of 1973, as amended, through advanced research, training, technical assistance, and dissemination activities in general problem areas, as specified by NIDRR. Such activities are designed to benefit rehabilitation service providers, individuals with disabilities, and the family members or other authorized representatives of individuals with disabilities. In addition, NIDRR intends to require all RRTC applicants to meet the requirements of the General Rehabilitation Research and Training Centers (RRTC) Requirements priority that it published in a notice of final priorities in the Federal Register on February 1, 2008 (72 FR 6132). Additional information on the RRTCs can be found at: http://www.ed.gov/ rschstat/research/pubs/resprogram.html#RRTC.

Statutory and Regulatory Requirements of RRTCs

#### RRTCs must-

- Carry out coordinated advanced programs of rehabilitation research;
- Provide training, including graduate, pre-service, and in-service training, to help rehabilitation personnel more effectively provide rehabilitation services to individuals with disabilities:
- Provide technical assistance to individuals with disabilities, their representatives, providers, and other interested parties;
- Disseminate informational materials to individuals with disabilities, their representatives, providers, and other interested parties; and
- Serve as centers of national excellence in rehabilitation research for individuals with disabilities, their representatives, providers, and other interested parties.

Applicants for RRTC grants must also demonstrate in their applications how they will address, in whole or in part, the needs of individuals with disabilities from minority backgrounds.

# **Proposed Priorities**

Proposed Priority 1—Improved Employment Outcomes for Individuals With Psychiatric Disabilities

# Background

Individuals with psychiatric disabilities have one of the lowest rates of employment of any disability group—only one in three of these individuals is employed (Kaye, 2002). They also

comprise the largest diagnostic category of working-age adults receiving Supplemental Security Income or Social Security Disability Insurance (Social Security Administration [SSA], August, 2008; SSA, September, 2008; McAlpine & Warner, 2001). For individuals with these disabilities who are employed, job retention is a major challenge (Murphy, Mullen & Spagnolo, 2005).

For individuals with psychiatric disabilities, there are numerous barriers to obtaining, retaining, and advancing in meaningful employment. These barriers include: The stigma associated with these disabilities; discrimination; disincentives associated with the loss of Social Security and Medicaid benefits; limits on available and effective vocational rehabilitation (VR) services for this population; and ineffective collaboration between VR, SSA, mental health agencies, and consumer groups (Dew & Alan, 2005; United States Government Accountability Office, 2005; New Freedom Commission on Mental Health, 2003). For some individuals with psychiatric disabilities, these barriers to employment are compounded by ineffective services for addressing the unique needs of individuals from racial, cultural, or linguistic minorities and individuals with both mental and physical health conditions (Substance Abuse and Mental Health Services Administration, 2005; United States Public Health Service Office of the Surgeon General, 2001). Research is needed to develop and advance innovative interventions that address these problems and barriers facing individuals with psychiatric disabilities.

Mental health research funded by NIDRR and others has led to advances in theory development, measurement tools, community-based supports, and treatment options for individuals with psychiatric disabilities. One example of an area of research that has led to advances in community-based supports and treatment options is research related to supported employment, a VR intervention that places consumers in integrated job settings and provides onthe-job training and supports, and salaries at or above minimum wage. Research in this area contributed to the conclusion that supported employment is an effective and evidence-based VR intervention for individuals with psychiatric disabilities (Dew & Alan, 2005; Mueser et al., 2004; New Freedom Commission on Mental Health, 2003).

Despite advances in theory development, measurement tools, community-based supports, and treatment options for individuals with psychiatric disabilities, literature in this area indicates that evidence-based and promising approaches for improving employment outcomes for individuals with psychiatric disabilities are not being incorporated into existing practice in an effective and consistent manner (Casper & Carloni, 2007, Dew & Alan, 2005). There is extensive documentation about the need to improve the incorporation of research findings in mental health service delivery to improve outcomes for individuals who receive mental health services (Institute of Medicine, 2001; New Freedom Commission on Mental Health, 2003; Substance Abuse and Mental Health Services Administration, 2005).

Further research is needed in order to address the low employment rate of individuals with psychiatric disabilities and to find solutions to the unique barriers these individuals face in obtaining, retaining and advancing in meaningful employment. This research should include a focus on improved models, programs, and interventions, and increased knowledge translation of research findings.

# References

Casper, E.S. & Carloni, C. (2007). Assessing the underutilization of supported employment services. *Psychiatric Rehabilitation Journal*, 30(3), 182–188.

Dew, D.W. & Alan, G.M. (Eds.). (2005). Innovative methods for providing VR services to individuals with psychiatric disabilities (Institute on Rehabilitation Issues Monograph No. 30). Washington, DC: The George Washington University, Center for Rehabilitation Counseling Research and Education.

Institute of Medicine. (2001). Crossing the quality chasm: A new health system for the 21st century. Washington, DC: National Academy Press.

Kaye, H.S. (2002). Employment and social participation among people with mental health disabilities. San Francisco, CA: National Disability Statistics & Policy Forum.

McAlpine, D.D. & Warner, L. (2001). Barriers to Employment Among Persons with Mental Illness: A Review of the Literature. New Brunswick, NJ: Institute for Health.

Mueser, K.T., Clark, R.E., Haines, M., Drake, R.E., McHugo, G.J., Bond, G., et al. (2004). The Hartford study of supported employment for persons with severe mental illness. *Journal of Consulting and Clinical Psychology*, 72(3), 479–490.

Murphy, A.A., Mullen, M.G., & Spagnolo, A.B. (2005). Enhancing individual placement and support: Promoting job tenure by integrating natural supports and supported education. American Journal of Psychiatric Rehabilitation, 8, 37–61.

New Freedom Commission on Mental Health, U.S. Department of Health and Human Services. (2003). Achieving the promise: Transforming mental health care in America. Final Report. (DHHS Publication No. SMA 03–3832). Rockville, MD: Author.

Office of the Surgeon General, U.S. Public Health Service, U.S. Department of Health and Human Services. (2001). Mental health: Culture, race, and ethnicity: A supplement to mental health: A report of the Surgeon General. Rockville, MD: Author.

Office of Research, Evaluation, and Statistics, Office of Retirement and Disability Policy, Social Security Administration (2008, September). Social Security Insurance annual statistical report, 2007. (SSA Publication No. 13–11827). Washington, DC: Author.

Office of Research, Evaluation, and Statistics,
Office of Retirement and Disability
Policy, Social Security Administration
(2008, August). Annual statistical report
on the Social Security Disability
Insurance program, 2007. (SSA
Publication No. 13–11826). Washington,
DC: Author.

Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. (2005). Transforming mental health care in America. Federal action agenda: First steps. (DHHS Publication No. SMA 05– 4060.) Rockville, MD: Author.

U.S. Government Accountability Office. (2005). Vocational rehabilitation: Better measures and monitoring could improve the performance of the VR program. (GAO Publication No. 05–865.) Washington, DC: Author.

# **Proposed Priority**

The Assistant Secretary for Special Education and Rehabilitative Services proposes a priority for a Rehabilitation Research and Training Center (RRTC) on Improved Employment Outcomes for Individuals with Psychiatric Disabilities. The RRTC must conduct rigorous research, training, technical assistance, and knowledge translation activities that contribute to improved employment outcomes for individuals with psychiatric disabilities. Under this priority, the RRTC must be designed to contribute to the following outcomes:

(a) Improved models, programs, and interventions to enable individuals with psychiatric disabilities to obtain, retain, and advance in competitive employment of their choice. The RRTC must contribute to this outcome by—

(1) Identifying or developing, and testing, innovative interventions and employment accommodations using scientifically based research (as this term is defined in section 9101(37) of the Elementary and Secondary Education Act of 1965, as amended). These interventions and employment accommodations must include an emphasis on consumer control, peer supports, and community living, and address the needs of individuals from traditionally underserved groups (e.g.,

individuals from diverse racial, ethnic, and linguistic backgrounds, and different geographic areas, and individuals with multiple disabilities).

(2) Conducting research to identify barriers to, and facilitators of, effective partnerships between State vocational rehabilitation (VR) agencies, the Social Security Administration, State and local mental health programs, and consumer-directed programs, and collaborating with these entities to develop new models for effective partnerships.

(3) Developing, testing, and validating adaptations of evidence-based interventions to enhance the effectiveness of those interventions for individuals from traditionally underserved groups (e.g., individuals from diverse racial, ethnic, and linguistic backgrounds, and geographic areas, and individuals with multiple disabilities). Current evidence-based approaches include but are not limited to supported employment.

(b) Increased incorporation of research findings related to employment and psychiatric disability into practice or policy. The RRTC must contribute to this outcome by coordinating with appropriate NIDRR-funded knowledge translation grantees to advance their work in the following areas:

(1) Developing, evaluating, or implementing strategies to increase utilization of research findings related to employment and psychiatric disability.

(2) Conducting training, technical assistance, and dissemination activities to increase utilization of research findings related to employment and psychiatric disability.

In addition to contributing to these outcomes, the RRTC must:

 Collaborate with state VR agencies and other stakeholder groups (e.g., consumers, families, advocates, clinicians, policymakers, training programs, employer groups, and researchers) in conducting the work of the RRTC. Research partners in this collaboration must include, but are not limited to, the NIDRR-funded RRTC for Vocational Rehabilitation Research, the Disability Rehabilitation Research Project on Innovative Knowledge Dissemination and Utilization for Disability and Professional Organizations and Stakeholders, and other relevant NIDRR grantees.

# Proposed Priority 2—Transition-Age Youth and Young Adults With Serious Mental Health Conditions

Background

The prevalence of serious mental health conditions in youth and young

adults transitioning from adolescence to adulthood is conservatively estimated to range from 1 to 3.2 million (Davis, 2003; Davis & Vander Stoep, 1997). This prevalence estimate is difficult to calculate largely because diagnostic categories applicable to individuals under the age of 18 differ from those applicable to adults. As defined by the Substance Abuse and Mental Health Services Administration (SAMHSA), the term "serious emotional disturbance" (SED) refers to diagnosable mental, behavioral, or emotional disorders resulting in functional impairment that substantially interferes with major life activities in individuals from birth to age 18 (SAMHSA, 1993). The term "serious mental illness" is used for comparable disorders in individuals aged 18 and older (SAMHSA, 1993).

For this priority, we define the target population as individuals between the ages of 14 and 30 who have been diagnosed with either SED or serious mental illness, as defined by SAMHSA. We refer to this target population as youth and young adults with serious mental health conditions (SMHC). The best estimate of the prevalence of SMHC is based on the prevalence rates of SED. Estimates of the prevalence of SED are 5 to 9 percent of the population (Davis & Vander Stoep, 1997).

Making the transition to adulthood is especially challenging for youth and young adults with SMHC. As youth and young adults with SMHC transition to adulthood, they are at increased risk for a variety of negative outcomes, including but not limited to arrest, substance abuse, unplanned pregnancy, dropping out of school, unemployment, difficulties in family and peer relationships, and difficulties with independent living (Armstrong et al., 2003; Jonikas et al., 2003). Individuals with disabilities transitioning from adolescence to adulthood, particularly youth and young adults with SMHC, who come from disadvantaged backgrounds (e.g., backgrounds involving foster care, poverty, histories of abuse, or histories of substance abuse), are at even greater risk for negative outcomes (Bobier & Warwick, 2005; Geenen et al., 2005; Lubman et al., 2007; National Council on Disability, 2008).

The New Freedom Commission on Mental Health (Commission) issued a series of recommendations regarding mental health care and its delivery in the U.S. (New Freedom Commission on Mental Health, 2003) that have applicability to programs serving youth and young adults with SMHC. Based on these recommendations, programs for youth and young adults with SMHC should be designed to achieve recoverybased outcomes, e.g., employment, education, and community integration. In addition, these programs should be family- and consumer-guided, i.e., consumers would choose the programs and providers to work with them, and partner with those providers to develop individualized plans of care and to make funding decisions (New Freedom Commission on Mental Health, 2003, pp. 28-29).

Previous research has also identified a number of interventions that show some promise of improving education and employment outcomes for youth and young adults with SMHC. There is some evidence, for example, that supported postsecondary education and supported employment can facilitate positive postsecondary and employment outcomes for this population (Cook *et al.*, 2005; Weiss *et al.*, 2004).

Nevertheless, currently available services for this population have a number of problems. First, because interventions are often designed for either children or adults, the services provided to youth and young adults with SMHC frequently are not coordinated and are not geared toward successfully transitioning children into the adult mental health systems (Davis & Sondheimer, 2005). Second, because service providers are frequently trained to work either with children or adults, they are not adequately trained to work with youth and young adults with SMHC who are transitioning between childhood and adulthood (Davis & Koyanagi, 2005). Under these conditions, programs and interventions are often not well suited to helping this target population to acquire necessary skills for independent living, employment, and community integration, and to maintain those skills in adulthood. In addition, many programs fail to provide a developmentally appropriate balance between the need to involve family members in decision-making and the need for youth and young adults with SMHC to become independent.

Previous NIDRR-funded work has documented the needs of this target population and has contributed to the current knowledge of best practices in transition programs for youth and young adults with SMHC (Deschenes & Clark, 2001; Jonikas et al., 2003). Other NIDRR-funded research has identified factors associated with better community adjustment for this target population, such as initial levels of

social adaptive behavior (Armstrong et al., 2003). However, despite previous work concerning youth and young adults with SMHC, there is little scientifically based research demonstrating which interventions are most likely to overcome the barriers described in the prior paragraph, and improve transition outcomes for youth and young adults with SMHC. There is even less scientifically based research on the efficacy of interventions for individuals from this target population who come from disadvantaged backgrounds (e.g., backgrounds involving foster care, poverty, histories of abuse, or histories of substance abuse).

# References

- Armstrong, K.J., Dedrick, R.F., & Greenbaum, P.E. (2003). Factors associated with community adjustment of young adults with serious emotional disturbance: A longitudinal analysis. *Journal of Emotional and Behavioral Disorders*, 11, 66–91.
- Bobier, C. & Warwick, M. (2005). Factors associated with readmission to adolescent psychiatric care. *Australian* and New Zealand Journal of Psychiatry, 39, 600–606.
- Cook, J.A., Lehman, A.F., Drake, R., McFarlane, W.R., Gold, P.B., Leff, H.S., et al. (2005). Integration of psychiatric and vocational services: A multisite randomized, controlled trial of supported employment. American Journal of Psychiatry, 162, 1948–1956.
- Davis, M. (2003). Addressing the needs of youth in transition to adulthood. *Administration and Policy in Mental Health*, 30, 495–509.
- Davis, M. & Koyanagi, C. (2005). Summary of Center for Mental Health Services (CMHS) youth transition policy meeting: National Experts Panel. Technical paper produced by University of Massachusetts Medical School and the Judge David L. Bazelon Center for Mental Health Law under contract #280–03–8082 with American Institutes of Research which was supported by a contract with CMHS of the Substance Abuse and Mental Health Services Administration.
- Davis, M. & Sondheimer, D.L. (2005). State child mental health efforts to support youth in transition to adulthood. *Journal* of Behavioral Health Services & Research, 32, 27–36.
- Davis, M., & Vander Stoep, A. (1997). The transition to adulthood for youth who have serious emotional disturbance:

  Developmental transition and young adult outcomes. The Journal of Mental Health Administration, 24, 400–427.
- Deschenes, N. & Clark, H.B. (2001). Best practices in transition programs for youth with emotional and behavioral difficulties. *Focal Point*, 15, 14–17.
- Geenen, S., Powers, L.E., & Lopez-Vasquez, A. (2005). Barriers against and strategies for promoting the involvement of culturally diverse parents in school-

<sup>&</sup>lt;sup>1</sup>Because this estimate is based on a narrower age range (16–25) than the one specified in this priority, we believe it is a conservative estimate.

- based transition planning. *Journal for Vocational Special Needs Education*, 27, 4–14.
- Jonikas, J.A., Laris, A., & Cook, J.A. (2003). The passage to adulthood: Psychiatric rehabilitation service and transitionrelated needs of young adult women with emotional and psychiatric disorders. Psychiatric Rehabilitation Journal, 27, 114–121.
- Lubman, D.I., Allen, N.B., Rogers, N., Cementon, E., & Bonomor, Y. (2007). The impact of co-occurring mood and anxiety disorders among substance-abusing youth. *Journal of Affective Disorders*, 103, 105–112.
- National Council on Disability (2008). Youth with Disabilities in the Foster Care System: Barriers to Success and Proposed Policy Solutions. http://www.ncd.gov/newsroom/publications/2008/FosterCareSystem\_Report.html).
- New Freedom Commission on Mental Health, U.S. Department of Health and Human Services. (2003). Achieving the promise: Transforming mental health care in America. Final Report. Page 29425. DHHS Pub. No. SMA-03-3832. Rockville, MD: Author.
- Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. (1993). Final notice. **Federal Register**, 58 (96), 29425.
- Weiss, J., Maddox, D., Vanderwaeerden, M., & Szilvagyi, S. (2004). The Tri-County Scholars Program: Bridging the clubhouse and community college. American Journal of Psychiatric Rehabilitation, 7, 281–300.

# **Proposed Priority**

The Assistant Secretary for Special **Education and Rehabilitative Services** proposes a priority for a Rehabilitation Research and Training Center (RRTC) on Transition-Age Youth and Young Adults with Serious Mental Health Conditions (SMHC). This RRTC must conduct research that contributes to improved transition outcomes for youth and young adults with SMHC, including youth and young adults with SMHC from high-risk, disadvantaged backgrounds. The research conducted by this RRTC must focus on family and consumer-guided care. For purposes of this priority, the term "youth and young adults with SMHC" refers to individuals between the ages of 14 and 30, inclusive, who have been diagnosed with either serious emotional disturbance (for individuals under the age of 18 years) or serious mental illness (for those 18 years of age or older). Under this priority, the RRTC must contribute to the following outcomes:

(a) Improved and developmentally appropriate interventions for youth and young adults with SMHC. The RRTC must contribute to this outcome by identifying or developing, and evaluating, innovative interventions that

- meet the needs of youth and young adults with SMHC using scientifically based research (as this term is defined in section 9101(37) of the Elementary and Secondary Education Act of 1965, as amended). In carrying out this research, the RRTC must utilize recovery-based outcome measures, including improved employment, education, and community integration, among youth and young adults with SMHC. The RRTC must involve youth and young adults with SMHC, and their families or family surrogates, in the processes of identifying or developing, and evaluating, interventions.
- (b) New knowledge about interventions for youth and young adults with SMHC who are from disadvantaged backgrounds (e.g., backgrounds involving foster care, poverty, abuse, or substance abuse). The RRTC must contribute to this outcome by conducting scientifically based research to identify or develop, and evaluate effective interventions, for these at-risk youth and young adults with SMHC.
- (c) Improved coordination between child and adult mental health services. The RRTC must contribute to this outcome by conducting research to identify and evaluate innovative approaches that address financial, policy, and other barriers to smooth system integration between the child and adult mental health service systems.
- (d) Improved capacity building for service providers. The RRTC must provide training and technical assistance with a particular emphasis on graduate, pre-service, and in-service training and curriculum development designed to prepare direct service providers for work with youth and young adults with SMHC.
- (e) Increased translation of findings into practice or policy. The RRTC must contribute to this outcome by coordinating with the RRTC on Vocational Rehabilitation and with appropriate NIDRR-funded knowledge translation grantees to—
- (1) Collaborate with State VR agencies and other stakeholder groups (e.g., State educational agencies, youth and young adults with SMHC, families, family surrogates, and clinicians) to develop, evaluate, or implement strategies to increase utilization of findings in programs targeted to youth and young adults with SMHC; and
- (2) Conduct dissemination activities to increase utilization of the RRTC's findings.

# Proposed Priority 3—Improving Measurement of Medical Rehabilitation Outcomes

Background

One of the central objectives of NIDRR-funded rehabilitation research is to "increase the number of validated new or improved methods for assessing function and health status" (NIDRR Long-Range Plan, 2005–2009, Executive Summary, 2007). To achieve this objective, state-of-the-art methods of measuring medical rehabilitation outcomes and the personal, clinical, and environmental factors that shape those outcomes are needed.

Data collection techniques, such as item-response theory and computerized dynamic assessment technologies, have demonstrated great potential for increasing the efficiency of data collection and the precision of measuring rehabilitation outcomes (Ware, 2003). Continued improvements in data collection and measurement methods will improve the capacity of practitioners to measure medical rehabilitation outcomes in a wide variety of settings and across disability groups.

In the past, NIDRR has funded several centers on rehabilitation outcomes measurement and sponsored numerous conferences and symposiums on this topic. A recent NIDRR-funded Post-Acute Rehabilitation Symposium (Symposium) identified a number of emerging outcomes measurement topics that require a special focus (Heinemann, 2007).

One topic the Symposium identified was the measurement of cognitive functioning. The ability to learn, as well as to attend to and participate in selfcare, are critical cognitive skills associated with other successful medical rehabilitation outcomes (Johnston et al., 2007). Cognition is both a rehabilitation outcome in itself (Sayer et al., 2008) and a factor that is related to broader functional and community outcomes for individuals with a wide variety of disabling conditions (Van Baalen, Odding, & Stam, 2008; Hershkovitz et al., 2007). Improved capacity to measure cognition is needed (Clohan et al., 2007). Specifically, improved measures of cognition that can be applied across rehabilitation populations and settings are needed to improve clinical practice and to assess the effectiveness of rehabilitation interventions and programs. Current measures of cognition do not adequately capture the range of cognitive functions among individuals in medical rehabilitation settings (Hall et al., 1999; Schepers et al., 2006), and do not

always reflect abilities that are relevant to performing activities in the community (Donovan *et al.*, 2007).

The Symposium also identified the measurement of environmental factors associated with outcomes as a topic in need of further investigation. Environmental factors, such as staffing and care practices, differ across settings, and can influence rehabilitation treatments and outcomes. Examples of such settings are post-acute care settings, including rehabilitation facilities, skilled nursing facilities, long-term care hospitals, home health agencies, and outpatient settings.

As with the measurement of cognitive functioning, there has been an increase in the amount of research being conducted on the influence of environmental factors on medical rehabilitation outcomes in recent years. For example, research indicates that the environment in which people live is a prominent predictor of community integration (Reistetter & Abreu, 2005), and that environmental factors such as the reduction of physical barriers are associated with community participation outcomes for children and youth with acquired brain injuries discharged from inpatient rehabilitation (Bedell, 2004). This increasing evidence that environmental factors are associated with rehabilitation outcomes has led to calls for developing healthrelated quality of life measures for individuals with disabilities that consider environmental factors (Schwartz et al., 2007).

There have been some international efforts pertaining to the measurement of the effects of the environment on rehabilitation outcomes. The Quebec Model for the Handicap Creation Process (Fougeyrollas, 1993) was the first disability-related taxonomy to offer a classification of environmental factors that influence rehabilitation outcomes. This taxonomy influenced the subsequent inclusion of environmental factors in the International Classification of Functioning, Disability and Health (ICF) (World Health Organization, 2001). The Craig Hospital Inventory of Environmental Factors (Craig Hospital Research Department, 2001) is a measurement tool designed to implement the ICF's environmental factors taxonomy, but is not specifically designed to assess differences across rehabilitation settings. Despite the current research and need in the field, state-of-the-art measures of cognition and of environmental factors for use across medical rehabilitation settings and subpopulations have not been developed.

#### References

- Bedell, G.M. (2004). Developing a follow-up survey focused on participation of children and youth with acquired brain injuries after discharge from inpatient rehabilitation. *NeuroRehabilitation*, 19, 191–205.
- Clohan, D.B., Durkin, E.M., Hammel, J., Murray, P., Whyte, J., Dijkers, M., et al. (2007). Postacute rehabilitation research and policy recommendations. *Archives* of Physical Medicine and Rehabilitation, 88, 1535–1541.
- Craig Hospital Research Department (2001).

  Craig Hospital Inventory of
  Environmental Factors (CHIEF) Manual,
  Version 3.0. Englewood, CO: Craig
  Hospital.
- Donovan, N.J., Kendall, D.L., Heaton, S.C., Kwon, S., Velozo, C., & Duncan, P.W. (2008). Conceptualizing functional cognition in stroke. *Neurorehabilitation* and *Neural Repair*, 22(2), 122–135.
- Fougeyrollas, P. (1993). Explanatory models of the consequences of disease and trauma: The handicap creation process. ICIDH International Network 6.
- Hall, K.M., Cohen, M.E., Wright, J., Call, M., & Werner, P. (1999). Characteristics of the Functional Independence Measure in traumatic spinal cord injury. Archives of Physical Medicine and Rehabilitation, 80(11), 1471–1476.
- Heinemann, A.W. (2007). State-of-the-science on postacute rehabilitation: Setting a research agenda and developing an evidence base for practice and public policy, an introduction. Archives of Physical Medicine and Rehabilitation, 88, 1478–1481.
- Hershkovitz, A., Kalandariov, Z., Hermush, V., Weiss, R., & Brill, S. (2007). Factors affecting short-term rehabilitation outcomes of disabled elderly patients with proximal hip fracture. Archives of Physical Medicine and Rehabilitation, 88(7), 916–921.
- Johnston, M.V., Graves, D, & Greene, M. (2007). The uniform postacute assessment tool: Systematically evaluating the quality of measurement evidence. Archives of Physical Medicine and Rehabilitation, 88, 1505–1512.
- National Institute on Disability and Rehabilitation Research. (2007). Long Range Plan for Fiscal Years 2005–2009: Executive Summary. http://www.ed.gov/ rschstat/research/pubs/nidrr-lrp-05–09exec-summ.pdf.
- Reistetter, T.A. & Ábreu, B.C. (2005).

  Appraising evidence on community integration following brain injury: A systematic review. Occupational Therapy International, 12, 196–217.
- Sayer, N.A., Chiros, C.E., Sigford, B., Scott, S., Clothier, B., Pickett, T., et al. (2008). Characteristics and rehabilitation outcomes among patients with blast and other injuries sustained during the Global War on Terror. Archives of Physical Medicine and Rehabilitation, 89(1), 163–170.
- Schepers, V.P., Ketelaar, M., Visser-Meily, J.M., Dekker, J., & Lindeman, E. (2006). Responsiveness of functional health status measures frequently used in stroke

- research. *Disability and Rehabilitation*, 28(17), 1035–1040.
- Schwartz, C.E., Andresen, E.M., Nosek, M.A., & Krahn, G.L. (2007). Response shift theory: Important implications for measuring quality of life in people with disability. Archives of Physical Medicine and Rehabilitation, 88, 529–536.
- Van Baalen, B., Odding, E., & Stam, H. (2008). Cognitive status at discharge from the hospital determines discharge destination in traumatic brain injury patients. *Brain Injury*, 22(1), 25–32.
- Ware, J. (2003). Conceptualization and measurement of health-related quality of life: Comments on an evolving field. Archives of Physical Medicine and Rehabilitation, 84 (4 Suppl 2): S43–S51.
- World Health Organization (2001). *ICF: International Classification of Functioning, Disability and Health.*Geneva, Switzerland: Author.

# **Proposed Priority**

The Assistant Secretary for Special Education and Rehabilitative Services proposes a priority for a Rehabilitation Research and Training Center (RRTC) on Measurement of Medical Rehabilitation Outcomes. This RRTC must create and implement state-of-the-art measures for medical rehabilitation outcomes and identify the cognitive and environmental factors that shape those outcomes. Under this priority, the RRTC must be designed to contribute to the following outcomes:

(a) New tools and measures that facilitate research to promote improved clinical practice in the field of medical rehabilitation. The RRTC must contribute to this outcome by developing valid and reliable measures of cognitive function for individuals who receive post-acute medical rehabilitation, as well as measures to assess environmental factors that affect outcomes among individuals with disabilities living in the community. The RRTC may also develop medical rehabilitation outcome measures in other areas where a demonstrated need has been identified in the literature. In order to promote efficient collection of outcomes data, this RRTC must develop and apply strategies including item response theory and computer-adaptivetesting techniques. Measures developed by the RRTC must be designed to improve the capacity of researchers and practitioners to measure medical rehabilitation outcomes in a wide variety of settings and across disability groups.

(b) Improved capacity to conduct rigorous medical rehabilitation outcomes research. The RRTC must contribute to this capacity by providing a coordinated and advanced program of training in medical rehabilitation research that is aimed at increasing the

number of qualified researchers working in the area of medical rehabilitation outcomes research. This program must focus on research methodology and outcomes measurement development, and provide for experience in conducting applied research.

(c) Collaboration with relevant projects, including NIDRR-sponsored projects, such as the Disability Rehabilitation Research Project on Classification and Measurement of Medical Rehabilitation Interventions, and other projects identified through consultation with the NIDRR project officer.

# Proposed Priority 4—Developing Strategies to Foster Community Integration and Participation for Individuals with Traumatic Brain Injury

Background

The Centers for Disease Control and Prevention (CDC) report that at least 1.4 million individuals sustain a traumatic brain injury (TBI) in the United States each year (Langlois, Rutland-Brown, & Thomas, 2006). A substantial number of these individuals subsequently have low levels of community integration and participation (CIP) (Gordon et al., 2006). CIP includes: assimilation (the ability to fit in with and be accepted by other individuals in the community); social support (being part of a network of family, friends, and acquaintances); occupation (having meaningful and productive activity during the main part of the day); and independent living (independence in daily tasks and in making everyday decisions and life choices) (Winkler, Unsworth, & Sloan,

Although the findings for CIP for individuals with TBI vary, research indicates that the unemployment rate among these individuals is 40 to 50 percent and the rate of social isolation for this group is 50 to 60 percent (Franulic, Carbonell, Pinto, & Sepulveda, 2004). Other long-term CIP consequences for individuals with TBI include financial dependence (Dikman, Machamer, & Temkin, 1993); divorce (Lezak, 1995); various forms of incarceration in places such as lockup care facilities, State hospitals, and prisons; and inability to perform instrumental activities of daily living such as driving a car, riding a bus, balancing a checkbook, and preparing meals.

Over the years, NIDRR has sponsored research to promote a methodological infrastructure that assists rehabilitation researchers in generating knowledge about the extent of CIP among

individuals with TBI and the effectiveness of interventions to promote CIP for these individuals. For example, NIDRR recently funded an initiative to generate a classification system of medical rehabilitation interventions that will promote effective CIP research through improving the field's ability to determine the active ingredients of rehabilitative care and carry out effective intervention studies.

A TBI-specific classification system that categorizes individuals according to the physical characteristics of their injury was promoted by a 2007 workshop sponsored by the National Institute of Neurological Disorders and Stroke. This classification system will link physical characteristics of injuries to the brain, with appropriate medical and rehabilitation interventions (Saatman et al., 2008). Still needed is a classification system based on symptoms experienced by individuals with TBI who are living in the community. This classification system can be used to link the postrehabilitation consequences of TBI with CIP-oriented interventions. Such a classification will allow practitioners and researchers to better match individuals with TBI with specific interventions, and to better characterize their study samples. This classification will also advance CIP research by increasing comparability of findings across studies, and promoting the replicability and generalizability of findings.

# References

Dikmen, S.S., Machamer, J.E., & Temkin, N.R. (1993). Psychosocial outcomes in patients with moderate to severe head injury: 2-year follow-up. *Brain Injury*, 7, 113–124.

Franulic, A., Carbonell, C.G., Pinto, P., & Sepulveda, I. (2004). Psychosocial adjustment and employment outcome 2, 5 and 10 years after TBI. *Brain Injury*, 18, 119–129.

Gordon, W.A., Zafonte, R., Cicerone, K., Cantor, J., Brown, M., Lombard, L., et al. (2006). Traumatic brain injury rehabilitation: State of the science. Archives of Physical Medicine and Rehabilitation, 84, 343–382.

Langlois, J.A., Rutland-Brown, W., & Thomas, K.E. (2006). Traumatic brain injury in the United States: Emergency department visits, hospitalizations, and deaths. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.

Lezak, M.D. (1995). Neuropsychological assessment. New York: Oxford University Press.

Saatman, K.E., Duhaime, A.C., Bullock, R., Maas, A.I.R., Valadka, A., Manley, G.T., Workshop Scientific Team, et al. (2008). Classification of traumatic brain injury for targeted therapies. *Journal of*  Neurotrauma, 25, 719–738.

Winkler, D., Unsworth, C., & Sloan, S. (2006).

Factors that lead to successful community integration following severe traumatic brain injury. Journal of Head Trauma Rehabilitation, 21, 8–21.

# **Proposed Priority**

The Assistant Secretary for Special **Education and Rehabilitative Services** proposes a priority for a Rehabilitation Research and Training Center (RRTC) for Developing Strategies to Foster Community Integration and Participation for Individuals with Traumatic Brain Injury (TBI). This RRTC must conduct rigorous research to examine barriers to and facilitators of community integration and participation (CIP) for individuals with TBI; provide training and technical assistance to promote and maximize the benefits of this research; develop and validate a symptom-based, clinically and scientifically useful system for classifying individuals with TBI after discharge from inpatient medical or rehabilitative care; and develop, implement, and evaluate interventions to improve long-term outcomesincluding return to work—for individuals with TBI. Under this priority, the RRTC must be designed to contribute to the following outcomes:

(a) New knowledge about the full range of symptoms of TBI that are experienced by individuals with TBI at any time after they exit inpatient care and re-enter the community. The RRTC must contribute to this outcome by developing and empirically validating a comprehensive list of the symptoms of TBI that can exist after inpatient care and that have the potential to affect CIP, and provide or develop effective and practical methods for their identification. These symptoms include, but are not limited to, the following categories: neurological (e.g., motor, sensory, autonomic functions, movement disorders, appearance, seizures, headaches, visual deficits, sleep disorders); medical (e.g., pulmonary, metabolic, nutritional, gastrointestinal, musculoskeletal, dermatologic, degenerative disorders such as Parkinson's disease and Alzheimer's disease); cognitive (e.g., memory, attention and concentration, language, perception, executive/front lobe functions, problem solving, abstract reasoning, poor insight, judgment, planning, information processing organizational skills); and behavioral (e.g., aggression, agitation, impaired initiation, learning difficulties, impulsivity, social disinhibition, shallow self awareness, altered sexual

functioning, mood disorders such as depression).

(b) An improved research infrastructure for developing interventions that facilitate CIP for individuals with TBI. The RRTC must contribute to this outcome by—

(1) Developing a classification system for use with individuals with TBI based on the symptoms identified in paragraph (a) of this priority;

- (2) Maximizing the likelihood that the classification system developed in (b)(1) of this priority will be adopted in TBI rehabilitation research and practice by: obtaining expert input in developing the classification system; conducting a comprehensive literature review to identify the barriers to CIP that are associated with the list of symptoms developed under paragraph (a) of this priority and the factors that tend to be effective in reducing these barriers; providing a practical validated "short" version of the classification system that can be used when there are time constraints; developing, field testing, and disseminating a comprehensive manual for using the classification system; and providing technical assistance to the public in the use of the manual.
- (c) New interventions to improve the level of CIP for individuals with TBI. The RRTC must contribute to this outcome by identifying or developing, and then evaluating, specific interventions tied to the classification system developed under paragraph (b)(1) of this priority and the barriers identified in the literature review conducted under paragraph (b)(2) of this priority, to improve the CIP of individuals with TBI using scientifically-based research methods. These interventions must target individuals in specific categories of TBI as established by the classification system developed under paragraph (b)(1) of this priority, as well as the barriers to CIP identified pursuant to the literature review conducted under paragraph (b)(2) of this priority; and

(d) Improved levels of CIP for individuals with TBI. The RRTC must contribute to this outcome by—

(1) Developing a systematic plan for widespread dissemination of informational materials related to the Center's TBI classification system and associated interventions to researchers, individuals with TBI and their family members, clinical practitioners, service providers, and members of the community. The RRTC must work with its NIDRR project officer to coordinate outreach and dissemination of research findings through appropriate venues such as NIDRR's Model Systems

Knowledge Translation Center, State agencies and programs that administer a range of disability services and resources, the U.S. Department of Veterans Affairs Veterans Health Administration, the U.S. Department of Defense, and related veterans' service organizations; and

(2) Establishing and maintaining mechanisms for providing technical assistance to critical stakeholders, such as researchers, consumers and their family members, clinical practitioners, service providers, and members of the community to facilitate the use of knowledge generated by the RRTC.

Rehabilitation Engineering Research Centers (RERCs)

General Requirements of RERCs

RERCs carry out research or demonstration activities in support of the Rehabilitation Act of 1973, as amended, by—

- Developing and disseminating innovative methods of applying advanced technology, scientific achievement, and psychological and social knowledge to: (a) Solve rehabilitation problems and remove environmental barriers; and (b) study and evaluate new or emerging technologies, products, or environments and their effectiveness and benefits; or
- Demonstrating and disseminating:
  (a) Innovative models for the delivery of cost-effective rehabilitation technology services to rural and urban areas; and (b) other scientific research to assist in meeting the employment and independent living needs of individuals with severe disabilities; and
- Facilitating service delivery systems change through: (a) The development, evaluation, and dissemination of innovative consumer-responsive and individual- and family-centered models for the delivery to both rural and urban areas of innovative, cost-effective rehabilitation technology services; and (b) other scientific research to assist in meeting the employment and independence needs of individuals with severe disabilities.

Each RERC must be operated by, or in collaboration with, one or more institutions of higher education or one or more nonprofit organizations.

Each RERC must provide training opportunities, in conjunction with institutions of higher education or nonprofit organizations, to assist individuals, including individuals with disabilities, to become rehabilitation technology researchers and practitioners.

Each RERC must emphasize the principles of universal design in its

product research and development. Universal design is "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (North Carolina State University, 1997. http://www.design.ncsu.edu/cud/about\_ud/udprinciplestext.htm).

Additional information on the RERCs can be found at: http://www.ed.gov/rschstat/research/pubs/index.html.

Proposed Priorities 5, 6, and 7— Rehabilitation Engineering Research Centers (RERCs) on Telerehabilitation (Priority 5), Telecommunication (Priority 6), and Cognitive Rehabilitation (Priority 7)

Proposed Priority 5—Telerehabilitation

Background

Telerehabilitation is the clinical application of consultative, preventative, diagnostic, and therapeutic interventions via two-way interactive audiovisual linkage performed in real time (Scheideman-Miller et al., 2002). Telerehabilitation was primarily developed to provide equitable access to rehabilitative therapy for individuals who are geographically remote, and physically or economically disadvantaged (Theodoros & Russell, 2008). Telerehabilitation has the potential to improve rehabilitation care in a cost efficient manner. Results from Dhurjaty (2004) demonstrate that telerehabilitation is cost effective and benefits many stakeholders, such as rehabilitation providers, patients, and payers. Rehabilitation providers benefit from telerehabilitation because it gives them the ability to see and evaluate patients remotely. Remote access to patients allows providers to serve more people, thereby increasing their clinical productivity and efficiency. Patients benefit from telerehabilitation because they do not have to travel to remote clinics or rehabilitation facilities.

The use of image-based telerehabilitation (e.g., videoconferencing); sensor-based telerehabilitation (e.g., wearable sensors for monitoring health and activity); and virtual environments and virtual reality telerehabilitation (e.g., immersive systems with haptic feedback), has resulted in advances in the fields of physical therapy, speech-language pathology, occupational therapy, and biomedical engineering (Russell, 2007; Theodoros & Russell, 2008). For 10 vears, NIDRR has contributed to these advances by funding research and development in telerehabilitation. Recent outcomes from this NIDRR-

funded research and development include but are not limited to the following: new technologies to enhance a virtual reality telerehabilitation system that enables clients to assess the wheelchair accessibility of building environments (Yue, Kim, Wang, & Hamza, 2007); allowing occupational or physical therapy practitioners to provide wheeled mobility and seating interventions to clients in a remote location via interactive secure videoconferencing (Schein & Schmeler 2007); an evaluation and comparison of seven instant messenger (IM) systems and remote communication techniques for telerehabilitation use (Kim & Fuhrman, 2007); and an information technology infrastructure (i.e., common applications and components that are generalizable across telerehabilitation applications such as web-conferencing, document sharing, and data sharing) to support telerehabilitation (Parmanto, Saptono, Sugiantara, Brienza & Nnaji,

Much of this work has been done on a small scale, and further work in this area is needed in order to realize the potential benefits of telerehabilitation on a larger scale. The viability of telerehabilitation services in real world environments with large patient cohorts and the broader issues of costs, benefits, and cost-effectiveness of telerehabilitation require investigation (Russell, 2007). In addition, there are issues relating to implementation costs, standards, ethics, and reimbursement that may affect the establishment and advancement of telerehabilitation within large health care systems and require further investigation (Feist-Price, 2002; Theodoros & Russell, 2008). Accordingly, NIDRR seeks to fund an RERC on Telerehabilitation to develop methods, systems, and technologies that support consultative, preventative, diagnostic, and therapeutic interventions in real time and to address barriers to successful telerehabilitation for individuals who have limited local access to comprehensive medical and rehabilitation outpatient services.

# References

Dhurjaty, S. (2004). The economics of telerehabilitation. *Telemedicine Journal* and e-Health, 10(2), 196–199.

Feist-Price, S. (2002, September 22). The use of telerehabilitation in assistive technology. The Free Library. See http://www.thefreelibrary.com/The use of telerehabilitation in assistive technology.-a094078142.

Kim, J. & Fuhrman, Y. (2007). Comparison of web-based videoconferencing systems for telerehabilitation applications. 30th Annual RESNA Conference Proceedings. Arlington, VA: Rehabilitation Engineering Society of North America Press.

Marshall, C.A., Sanderson, P.R., Johnson, S.R., Du Bois, B., & Kvedar, J.C. (2006). Considering Class, Culture, and Access in Rehabilitation Intervention Research. In K.J. Hagglund & A.E. Heinemann (Eds.), Handbook of Applied Disability and Rehabilitation Research (pp. 26–40). New York: Springer.

Parmanto, B., Saptono, A., Sugiantara, W., Brienza, D., & Nnaji, B. (2006). Information technology infrastructure for supporting telerehabilitation. 29th Annual RESNA Conference Proceedings. Arlington VA: Rehabilitation Engineering Society of North America Press.

Russell, T.G. (2007). Physical rehabilitation using telemedicine. *Journal of Telemedicine and Telecare*, 13 (5), 217– 20.

Scheideman-Miller, C., Clark, P.G., Moorad, A., Post, M.L., Hodge, B.G. & Smeltzer, S. (2003). Efficacy and sustainability of a telerehabilitation program.

Proceedings of the 36th Hawaii
International Conference on System
Sciences. New Brunswick, NJ: Institute for Electrical and Electronic Engineers (IEEE).

Schein, R.M. & Schmeler, M. (2007).

Telerehabilitation: A proposed innovative approach for rural wheelchair service delivery. 30th Annual RESNA Conference Proceedings. Arlington, VA: Rehabilitation Engineering Society of North America Press.

Theodoros, D. & Russell, T. (2008).

Telerehabilitation: Current perspectives.
In Current Principles and Practices of
Telemedicine and E-Health, 191–209.
Washington, DC: IOS press.

Yue, J., Kim, J., Wang, Y., & Hamza, H.
(2007). The virtual reality
telerehabilitation system for accessibility
of the built environment: feasibility test
of multimedia decision supporting
system, IP camera, and coded targets.
Proceeding of RESNA 30th International
Conference, June 2007.

# Proposed Priority 6— Telecommunication

Background

Telecommunication is the extension of communication over a distance through the electronic transmission of signals. Internet Protocol (IP) technologies and emerging telecommunications technologies offer several modes of conversation, allow for multiple features in one device, and have the potential to enable phones to meet the distinct needs of individuals with disabilities (National Council on Disability, 2006). However, new telecommunications technologies must be designed to be accessible and usable by individuals with disabilities in order for these individuals to fully benefit from their use.

Access to telecommunications technologies by individuals with

disabilities still remains a problem in 2009. To draw more world-wide attention to this issue, the International Telecommunication Union adopted the theme, "Connecting Persons with Disabilities: Information and Communication Technologies (ICT) Opportunities for All," for last year's World Telecommunication and Information Society Day, May 17, 2008. In addition, the World Summit on the Information Society urged member States to address the special requirements of persons with disabilities in their national e-strategies and encouraged the design and production of ICT equipment and services suited to their needs.

For over 10 years, NIDRR has contributed to advances in telecommunications access, telecommunications standards development, and emergency notification and communications for individuals with disabilities. However, individuals with disabilities continue to face several barriers to telecommunications access, including the lack of interoperable communications—electronics systems or items, teletypewriter (TTY) compatibility issues, inaccessible interfaces, and inaccessible equipment (National Council on Disability, 2006). Better product engineering, increased industry and community partnerships, access to technology and IP, and implementation of standards may help to alleviate some of the access barriers to telecommunications systems and products. The use of universal design, i.e., products, services, and facilities that are designed from their inception to be accessible to and usable by the greatest range of individuals, regardless of their ability, and without the need for specialized adaptation, may help to ensure that access features are incorporated into telecommunications technologies from the outset (National Council on Disability, 2004). Integrating accessibility features into standards and maintaining them as the standards evolve over time may further ensure telecommunications access for individuals with disabilities (Jaeger, 2006). Accordingly, NIDRR seeks to fund an RERC on Telecommunication to research and develop technological solutions to promote universal access to telecommunications systems and products including strategies for integrating current accessibility features into newer generations of telecommunications systems and products.

# References

International Telecommunication Union.

(2008). Theme 2008: Connecting Persons with Disabilities: Information and Communication Technologies (ICT) Opportunities for All. Geneva, Switzerland: Author. See http://www.itu.int/wtisd/2008/theme.html.

Jaeger, P.T. (2006). Telecommunications policy and individuals with disabilities: Issues of accessibility and social inclusion in the policy and research agenda. Telecommunications Policy, 30, 112–124.

National Council on Disability (2004). Design for Inclusion: Creating a New Marketplace—Industry White Paper. Publication date: October 28, 2004. Washington, DC: Author.

National Council on Disability (2006). The Need for Federal Legislation and Regulation Prohibiting Telecommunications and Information Services Discrimination. Publication date: December 19, 2006. Washington, DC: Author.

# Proposed Priority 7—Cognitive Rehabilitation

Background

Cognitive disabilities affect more than 20 million individuals in the United States today (Scherer, 2005). The term "cognitive disabilities" describes a range of symptoms and conditions that are associated with intellectual functions and abilities such as difficulties in learning, memorizing, information processing, problem solving, communication, and the ability to adapt to environmental demands due to orientation difficulties, problems with recognizing and responding to social cues, and more. The underlying causes of cognitive disabilities are numerous and include developmental disabilities, acquired brain injuries, stroke, Alzheimer's disease, and severe mental illness (Bodine, 2005).

Individuals with cognitive disabilities need assistance with performing a wide range of tasks and activities in daily life. While such assistance is provided largely by family members and care givers, clinicians, researchers, and rehabilitation engineers are developing technological products and interventions that assist individuals with cognitive disabilities with learning, memorizing, communicating, performing tasks and activities at home and work, and getting around in the community (cognitive assistive technology). Cognitive assistive technology has become more affordable and more widespread, and NIDRR has contributed to the research and development of cognitive assistive technology for five years. Examples of this type of technology include learning software, handheld data assistants, user interfaces designed especially for individuals with cognitive disabilities,

environmental control devices, and virtual reality technology (Lopresti et al., 2004; Mechling, 2007). Anecdotal evidence and data from small-scale studies show a positive effect of cognitive assistive technology on learning, communication, independent living skills acquisition, and the performance of simple work-related tasks (Agran et al., 2005; Man et al., 2006; Riffel et al., 2005). Larger, scaledup studies are needed in the area of cognitive assistive technology. In addition, further work is needed to ensure that features of cognitive assistive technology that support individuals with disabilities are fully integrated and maintained in technology design and can be applied in vocational rehabilitation settings, career development programs, postsecondary education facilities, and places of work. Accordingly, NIDRR seeks to fund an RERC on Cognitive Rehabilitation to research, develop, and evaluate innovative technologies and approaches that will improve the ability of individuals with cognitive disabilities to function independently within their homes, communities, and workplaces.

#### References

Agran, M., Sinclair, T., Alper, S., Cavin, M., Wehmeyer, M., & Hughes, C. (2005). Using self-monitoring to increase following-direction skills of students with moderate to severe disabilities in general education. Education and Training in Developmental Disabilities, 40, 3–13.

Bodine, C. (2005). Cognitive impairments, information technology systems and the workplace. Accessibility and Computing, 83, 25–29.

Lopresti, E.F., Mihailidis, A., & Kirsch, N. (2004). Assistive technology for cognitive rehabilitation: State of the art.

Neuropsychological Rehabilitation, 14(1/2), 5–39.

Man, D.W., Soong, W.Y., Tam, S.F., & Hui-Chan C.W. (2006). A randomized clinical trial study on the effectiveness of a teleanalogy-based problem-solving program for people with acquired brain injury (ABI). NeuroRehabilitation, 21(3), 205– 217.

Mechling, L.C. (2007). Assistive technology as a self-management tool for prompting students with intellectual disabilities to initiate and complete daily tasks: A literature review. Education & Training in Developmental Disabilities, 42(3), 252–269.

Riffel, L.A., Wehmeyer, M.L., Turnbull, A.P., Lattimore, J., Davies, D., Stock, S., et al. (2005). Promoting independent performance of transition-related tasks using a palmtop PC-based self-directed visual and auditory prompting system. Journal of Special Education Technology, 20(2), 5–14.

Scherer, M.J. (2005). Assessing the benefits of using assistive technologies and other

supports for thinking, remembering and learning. *Disability and Rehabilitation*, *27*(13), 731–739.

#### **Proposed Priorities**

The Assistant Secretary for Special Education and Rehabilitative Services proposes the following three priorities for the establishment of (a) an RERC on Telerehabilitation; (b) an RERC on Telecommunication; and (c) an RERC on Cognitive Rehabilitation. Within its designated priority research area, each RERC will focus on innovative technological solutions, new knowledge, and concepts that will improve the lives of individuals with disabilities.

(a) RERC on Telerehabilitation (Priority 5). Under this priority, the RERC must conduct research on and develop methods, systems, and technologies that support consultative, preventative, diagnostic and therapeutic interventions in real time and address the barriers to successful telerehabilitation for individuals who have limited local access to comprehensive medical and rehabilitation outpatient services. The RERC must contribute to the continuing development of a telerehabilitation infrastructure and architecture, conduct research and development projects on technologies that can be used to deliver telerehabilitation services, address the barriers to successful telerehabilitation to individuals who have limited access to rehabilitation services, participate in the development of telerehabilitation standards, and contribute, by means of research and development, to the use of telerehabilitation on a larger scale.

(b) RERC on Telecommunication (Priority 6). Under this priority, the RERC must research and develop technological solutions to promote universal access to telecommunications systems and products, including strategies for integrating current accessibility features into newer generations of telecommunications systems and products. The RERC must contribute to the continuing development of interoperable telecommunications systems, items, and assistive technologies; conduct research and development projects that enable access to emerging telecommunications technologies; address the barriers to successful telecommunication, including emergency communications access; and participate in the development of telecommunications standards.

(c) RERC on Cognitive Rehabilitation (Priority 7). Under this priority, the RERC must research and develop methods, systems, and technologies that will improve: existing assistive technology for cognition; the integration of assistive technology for cognition into assistive technology design; and the application of this technology in vocational rehabilitation settings, career development programs, postsecondary education facilities, and places of work. The RERC must contribute to the development and testing of assistive technology products that enhance cognitive functions needed to perform daily tasks and activities at home, school, work, and in the community; and to the development, testing, and implementation of cognitive assistive technology training programs and materials for professional use as well as for consumer use.

# RERC Requirements

Under each priority, the RERC must be designed to contribute to the following outcomes:

(1) Increased technical and scientific knowledge base relevant to its designated priority research area. The RERC must contribute to this outcome by conducting high-quality, rigorous research and development projects.

(2) Innovative technologies, products, environments, performance guidelines, and monitoring and assessment tools applicable to its designated priority research area. The RERC must contribute to this outcome through the development and testing of these innovations.

(3) Improved research capacity in its designated priority research area. The RERC must contribute to this outcome by collaborating with the relevant industry, professional associations, and institutions of higher education.

(4) Improved focus on cutting edge developments in technologies within its designated priority research area. The RERC must contribute to this outcome by identifying and communicating with NIDRR and the field regarding trends and evolving product concepts related to its designated priority research area.

(5) Increased impact of research in the designated priority research area. The RERC must contribute to this outcome by providing technical assistance to public and private organizations, individuals with disabilities, and employers on policies, guidelines, and standards related to its designated priority research area.

(6) Increased transfer of RERC-developed technologies to the marketplace. The RERC must contribute to this outcome by developing and implementing a plan for ensuring that all technologies developed by the RERC are made available to the public. The technology transfer plan must be

developed in the first year of the project period in consultation with the NIDRRfunded Disability Rehabilitation Research Project, Center on Knowledge Translation for Technology Transfer.

In addition, under each priority, the RERC must—

- Have the capability to design, build, and test prototype devices and assist in the transfer of successful solutions to relevant production and service delivery settings;
- Evaluate the efficacy and safety of its new products, instrumentation, or assistive devices:
- Provide as part of its proposal, and then implement, a plan that describes how it will include, as appropriate, individuals with disabilities or their representatives in all phases of its activities, including research, development, training, dissemination, and evaluation;
- Provide as part of its proposal, and then implement, in consultation with the NIDRR-funded National Center for the Dissemination of Disability Research (NCDDR), a plan to disseminate its research results to individuals with disabilities, their representatives, disability organizations, service providers, professional journals, manufacturers, and other interested parties;
- Conduct a state-of-the-science conference on its designated priority research area in the fourth year of the project period, and publish a comprehensive report on the final outcomes of the conference in the fifth year of the project period; and
- Coordinate research projects with other relevant projects, including NIDRR-funded projects, as identified through consultation with the NIDRR project officer.

*Types of Priorities:* 

When inviting applications for a competition using one or more priorities, we designate the type of each priority as absolute, competitive preference, or invitational through a notice in the **Federal Register**. The effect of each type of priority follows:

Absolute priority: Under an absolute priority, we consider only applications that meet the priority (34 CFR 75 105(c)(3))

Competitive preference priority:
Under a competitive preference priority, we give competitive preference to an application by (1) awarding additional points, depending on the extent to which the application meets the priority (34 CFR 75.105(c)(2)(i)); or (2) selecting an application that meets the priority over an application of comparable merit that does not meet the priority (34 CFR 75.105(c)(2)(ii)).

Invitational priority: Under an invitational priority, we are particularly interested in applications that meet the priority. However, we do not give an application that meets the priority a preference over other applications (34 CFR 75.105(c)(1)).

Final Priorities: We will announce the final priorities in one or more notices in the Federal Register. We will determine the final priorities after considering responses to this notice and other information available to the Department. This notice does not preclude us from proposing additional priorities, requirements, definitions, or selection criteria, subject to meeting applicable rulemaking requirements.

**Note:** This notice does *not* solicit applications. In any year in which we choose to use one of more of these priorities, we invite applications through a notice in the **Federal Register**.

Executive Order 12866: This notice has been reviewed in accordance with Executive Order 12866. Under the terms of the order, we have assessed the potential costs and benefits of this proposed regulatory action.

The potential costs associated with this proposed regulatory action are those resulting from statutory requirements and those we have determined as necessary for administering this program effectively and efficiently.

In assessing the potential costs and benefits—both quantitative and qualitative—of this proposed regulatory action, we have determined that the benefits of the proposed priorities justify the costs.

Discussion of costs and benefits:
The benefits of the Disability and
Rehabilitation Research Projects and
Centers Programs have been well
established over the years in that similar
projects have been completed
successfully. These proposed priorities
will generate new knowledge and
technologies through research,
development, dissemination, utilization,
and technical assistance projects.

Another benefit of these proposed priorities is that the establishment of new RRTCs and new RERCs will improve the lives of individuals with disabilities. The RRTCs and RERCs will generate, disseminate, and promote the use of new information that will improve the options for individuals with disabilities to perform regular activities in the community.

Intergovernmental Review: This program is not subject to Executive Order 12372 and the regulations in 34 CFR part 79.

Accessible Format: Individuals with disabilities can obtain this document in

an accessible format (e.g., braille, large print, audiotape, or computer diskette) by contacting the Grants and Contracts Services Team, U.S. Department of Education, 400 Maryland Avenue, SW., room 5075, PCP, Washington, DC 20202–2550. *Telephone:* (202) 245–7363. If you use a TDD, call the FRS, toll-free, at 1–800–877–8339.

Electronic Access to This Document: You may view this document, as well as all other Department of Education documents published in the **Federal Register**, in text or Adobe Portable Document Format (PDF) on the Internet at the following site: http://www.ed.gov/news/fedregister.

To use PDF you must have Adobe Acrobat Reader, which is available free at this site. If you have questions about using PDF, call the U.S. Government Printing Office (GPO), toll free, at 1–888–293–6498; or in the Washington, DC, area at (202) 512–1530.

Note: The official version of this document is the document published in the Federal Register. Free Internet access to the official edition of the Federal Register and the Code of Federal Regulations is available on GPO Access at: http://www.gpoaccess.gov/nara/index.html.

Delegation of Authority: The Secretary of Education has delegated authority to Andrew J. Pepin, Executive Administrator for the Office of Special Education and Rehabilitative Services to perform the functions of the Assistant Secretary for Special Education and Rehabilitative Services.

Dated: May 4, 2009.

#### Andrew J. Pepin,

Executive Administrator for Special Education and Rehabilitative Services. [FR Doc. E9–10653 Filed 5–6–09; 8:45 am] BILLING CODE 4000–01–P

# **DEPARTMENT OF ENERGY**

#### Federal Energy Regulatory Commission

[Docket No. IC09-725-001]

Commission Information Collection Activities (FERC-725); Comment Request; Submitted for OMB Review

April 30, 2009.

**AGENCY:** Federal Energy Regulatory

Commission. **ACTION:** Notice.

**SUMMARY:** In compliance with the requirements of section 3507 of the Paperwork Reduction Act of 1995, 44 U.S.C. 3507, the Federal Energy Regulatory Commission (Commission) has submitted the information

collection described below to the Office of Management and Budget (OMB) for review of the information collection requirements. Any interested person may file comments directly with OMB and should address a copy of those comments to the Commission as explained below. The Commission received no comments in response to the **Federal Register** notice (74FR 6861, 2/11/2009) and has made this notation in its submission to OMB.

**DATES:** Comments on the collection of information are due by June 5, 2009.

ADDRESSES: Address comments on the collection of information to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Federal Energy Regulatory Commission Desk Officer. Comments to OMB should be filed electronically, c/o oira\_submission@omb.eop.gov and include OMB Control Number 1902–0225 as a point of reference. The Desk Officer may be reached by telephone at 202–395–4638.

A copy of the comments should also be sent to the Federal Energy Regulatory Commission and should refer to Docket No. IC09-725-001. Comments may be filed either electronically or in paper format. Those persons filing electronically do not need to make a paper filing. Documents filed electronically via the Internet must be prepared in an acceptable filing format and in compliance with the Federal **Energy Regulatory Commission** submission guidelines. Complete filing instructions and acceptable filing formats are available at http:// www.ferc.gov/help/submission-guide/ electronic-media.asp. To file the document electronically, access the Commission's Web site and click on Documents & Filing, E-Filing (http:// www.ferc.gov/docs-filing/efiling.asp), and then follow the instructions for each screen. First time users will have to establish a user name and password. The Commission will send an automatic acknowledgement to the sender's e-mail address upon receipt of comments.

For paper filings, an original and 2 copies of the comments should be submitted to the Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE., Washington, DC 20426, and should refer to Docket No. IC09–725–001.

All comments may be viewed, printed or downloaded remotely via the Internet through FERC's homepage using the "eLibrary" link. For user assistance, contact *fercolinesupport@ferc.gov* or toll-free at (866) 208–3676 or for TTY, contact (202) 502–8659.

#### FOR FURTHER INFORMATION CONTACT:

Ellen Brown may be reached by telephone at (202) 502–8663, by fax at (202) 273–0873, and by e-mail at ellen.brown@ferc.gov.

SUPPLEMENTARY INFORMATION: The information collected under the requirements of FERC-725 ("Certification of Electric Reliability Organization; Procedures for Electric Reliability Standards" (OMB Control No. 1902–0225)) is used by the Commission to implement the statutory provisions of Title XII, subtitle A of the Energy Policy Act of 2005 (EPAct 2005).1

The Electricity Modernization Act of 2005 was enacted into law as part of the Energy Policy Act of 2005 on August 8, 2005. Subtitle A of the Electricity Modernization Act amended the Federal Power Act (FPA) by adding a new section 215, titled "Electric Reliability." Section 215 of the FPA buttresses the Commission's efforts to strengthen the reliability of the interstate grid through the granting of new authority to provide for a system of mandatory Reliability Standards developed by the Electric Reliability Organization (ERO) <sup>2</sup> and reviewed and approved by FERC.

On February 3, 2006, the Commission issued Order No. 672 3 certifying a single Electric Reliability Organization (ERO) to oversee the reliability of the United States' portion of the interconnected North American Bulk-Power System, subject to Commission oversight. The Reliability Standards apply to all users, owners and operators of the Bulk-Power System. The Commission has the authority to: (1) Approve all ERO actions, (2) order the ERO to carry out its responsibilities under these statutory provisions, and (3), as appropriate, independently enforce Reliability Standards.

Once certified, the ERO must submit each proposed Reliability Standard to the Commission for approval. Only a Reliability Standard approved by the Commission is enforceable under section 215 of the FPA.

The ERO may delegate its enforcement responsibilities to a

<sup>&</sup>lt;sup>1</sup>Energy Policy Act of 2005, Public Law 109–58, 119 Stat. 594 (2005) (codified at 42 U.S.C. 16451, et seq.)

<sup>&</sup>lt;sup>2</sup> "Electric Reliability Organization" or "ERO" means the organization (certified by the Commission) established for the purpose of developing and enforcing Reliability Standards for the Bulk-Power System, subject to Commission review.

<sup>&</sup>lt;sup>3</sup> Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards ¶ 31,204 71 FR 8662 (2006) Order on reh'g, 71 FR 19,814 (2006), FERC Statutes and Regulations ¶ 31,212 (2006).