

MossRehab Again Designated “Model System of Care”

*Prestigious \$1,825,000 Award Recognizes Excellence
and Builds on Past Research Accomplishments*

The second Model System of Care award allows investigators at MossRehab to continue research that promises to improve the lives of those with traumatic brain injuries.

For the second time, the U.S. Department of Education and the National Institute on Disability and Rehabilitation Research (NIDRR) has awarded MossRehab a grant to administer a regional Model System of Care for traumatic brain injury (TBI). The \$1,825,000 award, which recognizes excellence in brain injury treatment and research, is one of sixteen grants nationwide, and the only one conferred in the Philadelphia area.

Spanning the years 2002 to 2007, the award is the second Model System of Care grant earned by MossRehab. The institution’s initial designation, totaling \$1,725,000, was awarded in 1997.

“The goal of the Model System of Care is to find better ways to evaluate and treat the complex emotional, physical and behavioral problems caused by traumatic brain injury,” says Tessa Hart, PhD, Institute Scientist, who serves as Project Director with John Whyte, MD, PhD, Director, Moss Rehabilitation Research Institute. “Ultimately, we hope to enhance life-long services for people with brain injury and their families.”



MRRRI staff, pictured from left to right, are: Laurel Buxbaum, PsyD; Tessa Hart, PhD; John Whyte, MD, PhD; Ruth Fink, MA; Gerry Stefanatos, DPhil and Bob Meighan.

Research Addresses Broad Scope of TBI Problems

The second Model System of Care award allows investigators at MossRehab to continue research that promises to improve the lives of those with TBI. These studies address three areas that reflect the broad scope of cognitive and physical problems.

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Can New Technology Help Those With TBI to Meet Their Personal Goals?

People with TBI have difficulty in meeting personal goals and following through with their intentions – from keeping appointments to more complex goals such as finding and keeping employment – due to common problems with memory, initiation and behavioral control. “People with severe traumatic brain injury are continually reminded to do things they forget to do, or not to do things that are considered inappropriate by therapists and family members,” says Dr. Hart. “The need for these reminders makes the person with TBI dependent on others for meeting personal goals, controlling behaviors and completing everyday tasks. We want to see if some of the new computer technology in the mainstream marketplace can help the person with TBI to become more independent in ‘self-reminding’ for these basic tasks.”

New computer technology includes Personal Digital Assistants, known as PDAs, and Voice Organizers, which operate by voice commands. These devices are hand-held, calculator-sized computers equipped with alarms and memo functions to help users remember appointments, tasks and other important information.

Dr. Hart and her colleagues are continuing research to explore whether PDAs might prove to be useful as therapeutic aids for people with TBI. The institute’s nationwide survey of clinicians revealed that although there is considerable interest in using PDAs with this population, healthcare providers lack technological know-how. Current research focuses on determining the specific kinds of knowledge these clinicians need and using that information to develop training resources for TBI patients.

During the initial Model System of Care grant, MossRehab researchers showed that patients with TBI can use voice organizers to remember therapy goals. “Now, we’d like to know whether this improved recall actually translates into goal accomplishment,” says Dr. Hart. “Patients in our current study either use devices that beep to remember important information or their therapists remind them.”

MossRehab works to create rating system for attention dysfunction due to TBI

According to Dr. Whyte, attention disorders are universal in persons with brain injury. “Attention deficits make it difficult for

people with TBI to concentrate on important tasks and resist being distracted by insignificant movements and sounds in the environment,” he says. “One of the major problems in treating attention disorders is that many individuals with TBI cannot cooperate with traditional neuropsychological tests of attention. There is also a question about how well such tests are related to attentiveness in everyday life.”

Dr. Whyte and colleagues are validating an observational scale they have developed to determine if it can be used by a variety of healthcare professionals. “Our rating scale has shown a promising level of agreement between occupational therapists and physical therapists,” he says. “Now, we are conducting similar testing with speech therapists and nurses. Ultimately, we hope to use a scale like this to accurately measure patients’ responses to medications that are thought to improve attention.”

Can Botox[®] which treats TBI-related spasticity be administered more effectively?

The brain controls muscles by making them contract and relax. When the brain is damaged by stroke or TBI, it may lose the ability to relax the muscles. As a result, the affected joint in the arm or leg becomes permanently bent into a contracted position, which impedes movement, purposeful function and, in many cases, independence.

For years, botulinum toxin or Botox[®] has been used as a safe and effective treatment for a variety of disorders of abnormal muscle tone, including muscle overactivity or spasticity.

“We know that injections of Botox[®] can weaken these abnormal muscle contractions for about three to four months. Therefore, Botox[®] can alleviate muscle spasticity,” says Nathaniel Mayer, MD, Director of the Drucker Brain Injury Center at MossRehab. “However, patients with this problem tend to have many spastic muscles – all requiring individual treatment. As a result, we quickly reach the maximum level of medication that can be given according to established standards of practice. Our research is studying ways to deliver this medication more efficiently so less Botox[®] is required for each individual muscle. This will enable us to treat more muscles and, hopefully, achieve an even better result.”

For more information, contact: Moss Rehabilitation Research Institute at 215-456-5925.
Or visit us on the web: www.einstein.edu/mossrehab/research.

Gifts to Moss Rehabilitation Research Institute ensure continued and future research into treatments and therapies that improve the quality of care and life for people with physical disabilities. For information on gift-giving opportunities, please contact Major Gifts, Development Department, 215-456-7200, (fax) 215-456-7165, (e-mail) Sklare@einstein.edu, Albert Einstein Healthcare Network, Braemer Building, 5501 Old York Road, Philadelphia, PA 19141.