neurotransmitter

THE NEWSLETTER OF THE ACQUIRED BRAIN INJURY PROGRAM AT **SHEPHERD CENTER**

In this issue:

Disorders of Consciousness

Spring 2011

Shepherd Center

Darryl Kaelin, M.D.
Medical Director
Acquired Brain Injury Program

Building Relationships

If there is a common theme to the articles contained in this issue of *NeuroTransmitter*, it would be "building relationships." Shepherd Center has grown into a world-class rehabilitation and research center due, at least in part, to several meaningful and long-lasting relationships.

Common goals and interests have led to close bonds with our referring trauma centers. By delivering education and expedited transfers, Shepherd Center's regional admission liaisons make it easier for patients and families to make the transition from acute care to rehabilitation. Earlier his year, Shepherd Center released a new educational DVD series to inform newly injured patients and their families. The videos focus on understanding the new injury and present the terminology used during the treatment of brain and spinal cord injury. We believe the videos will help reduce anxiety and assist families as they make decisions about the next steps in their loved ones' recovery. You can view the brain injury video online at **braininjury101.org**.

We also have developed collaborative relationships with our payers and aim to provide them and their insured customers with cost-effective, evidence-based care. Doing this requires that we stay on top the rehabilitation research literature and translate findings to them to obtain coverage for the treatments our patients need. An article in this issue discusses the evidence for cognitive rehabilitation services, which are much needed by our patients with acquired brain injury, but are not universally covered by insurers. In a related article, director of brain injury research, Ron Seel, Ph.D., describes the recently published guidelines for the evaluation of disorders of consciousness. He chaired the expert task force that developed the guidelines.

Shepherd Center also shares a close professional relationship with the news media. Recently, our SHARE Initiative, which provides rehabilitation services for soldiers, was featured on NPR and the "CBS Evening News." These stories not only generated a great deal of attention, but also prompted more than $80,000 in donations that will help defray the costs that military insurance doesn't cover.

One of Shepherd Center's truly great success stories, former brain injury patient Hadley Korn, has been working in the news media industry and is highlighted in our patient profile. Hadley is a communications major at the University of Southern California and has completed internships with "Larry King Live" and the "Dr. Phil Show."

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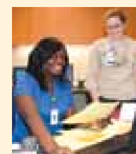

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Renovation Project Gives Shepherd Patients Added Privacy

Coverage for Cognitive Rehabilitation Continues to Lag Despite Evidence

By Amanda Crowe, MA, MPH

Treatment outcomes for traumatic brain injury (TBI) can be improved when the accompanying cognitive deficits — including memory loss, difficulties attending to tasks and shortfalls in functional communication — are addressed through rehabilitation.

"There has been substantial research to support cognitive rehabilitation for people with traumatic brain injury (TBI)," says Ron Seel, Ph.D., director of brain injury research at Shepherd Center. "We see many persons with TBI who benefit from these services at Shepherd."

> No matter what role people assume after brain injury — whether it's at home, school or work — they need to be able to think.
>
> — Susan Connors, Brain Injury Association of America

Although more health plans are now reimbursing for cognitive rehabilitation, some continue to deny these services.

"Many payers who are reluctant to pay for cognitive rehabilitation will argue that the 'evidence' isn't there; they claim it's unproven," says Susan Connors, president and CEO of the Brain Injury Association of America. "The issue is how you define the word evidence."

For example, TRICARE's stance on cognitive rehabilitation is partially dictated by federal regulations that only permit coverage of treatments, devices and medications for which there is "reliable evidence." As Connors explains, the only valid and "reliable evidence" for many health plans is a randomized, controlled trial.

But this type of study presents obvious challenges. Withholding rehabilitation services for research purposes would be cruel and might, in fact, violate the medical principle to do no harm. Thus, efforts are under way to convince the insurance industry that this therapy is both beneficial for patients and cost-effective.

"No matter what role people assume after brain injury — whether it's at home, school or work — they need to be able to think," says Connors, who works to dismantle barriers to cognitive rehabilitation. "Many of these therapies can help patients regain their thinking skills and improve overall quality of life."

Connors and others are hopeful that the National Academy of Sciences' Institute of Medicine, which is evaluating cognitive rehabilitation, will consider the full scope of "reliable evidence" as defined in law (or by the code of federal regulations) by including the findings, reports and expert opinions published on the topic. The evaluation results are expected by June 2012.

Unfortunately, getting a payer to agree that a specific cognitive rehabilitation therapy, service or device is an effective treatment is only the first hurdle in accessing care.

"Public and private payers of all types will cover a service if, and only if, all other conditions are met," Connors says.

Some of these conditions include:

- Not treating pre-existing conditions (for example, if the health plan was not in place at the time of injury).
- Annual or lifetime limits on the plan, either a dollar amount or number of units of therapy, or both. So perhaps they cover cognitive rehabilitation, but only 24 sessions per year. "If you are seriously injured and in a transitional rehabilitation program, you would likely need 24 units of cognitive rehabilitation within two weeks," Connors says.
- Imposing other limits. For example, cover cognitive rehabilitation if it is provided:
  - In certain settings, such as in-hospital rehabilitation or day treatment program or doctor's visits post-discharge;

  - By a qualified provider in the network;
  - As part of a comprehensive brain injury rehabilitation program. For example, as a standalone service, TRICARE considers cognitive rehabilitation to be unproven and does not cover the therapy when billed separately.
- Meeting pre-authorization requirements.

But the most difficult barrier to overcome is the question of medical necessity, Connors says. Often, the person deciding whether cognitive rehabilitation should be covered is an internist, not a neurologist or physiatrist with experience treating people with brain injuries. These specialists see the direct benefits these therapies can have on patient outcomes.

"I've heard of people who were pre-authorized, but didn't show sufficient progress within three or five days, so further treatment was not reauthorized," Connors notes. "Or it was authorized, but the billing folks fought it after the fact. Or, they cover the treatment, but will not authorize it for certain patients because their other impairments are so serious — they require a personal care attendant for feeding, bathing and dressing — that cognitive abilities won't matter."

The president of the American Congress of Rehabilitation Medicine is also speaking out on the need for cognitive rehabilitation coverage. "These therapies are an integral part of the rehabilitation process, and I think the evidence is clear that it works," says Gary Ulicny, Ph.D., who is also president and CEO of Shepherd Center. "It's inexcusable that these services somehow aren't being covered, not only for folks with brain injury, but also for our wounded and returning soldiers who have a long road to recovery and deserve better care."

People are Sharing with the SHARE Initiative

Contributions enable Shepherd Center to bridge a gap for military personnel recovering from brain or spinal cord injuries.

By Sara Baxter

When National Public Radio featured a story on Shepherd Center's SHARE Initiative in December 2010, the response from listeners was both immediate and generous.

Shepherd's phones began ringing minutes after the story aired as part of an NPR series on military personnel who have sustained brain injuries. Visitor traffic to Shepherd's Website also spiked. Within two weeks, Shepherd had received more than $80,000 in donations, including a single contribution of $20,000. Since then, another $10,000 has come in for the program.

"The response was amazing," says Dean Melcher, director of annual giving for the Shepherd Center Foundation. "We didn't even ask for donations. Listeners found us on their own."

The outpouring is an example of the widespread support Shepherd has received for the SHARE (Shaping Hope and Recovery Excellence) Initiative, a program originally funded by Atlanta philanthropist Bernie Marcus after he learned about the gap in care for military personnel with brain and spinal cord injuries. Initiated in 2008, SHARE treats and assists those who served in Iraq and Afghanistan with the goal of either rejoining the military or successfully transitioning to civilian life. To date, 167 service members have received help through the program.

The outpouring of support is both local and national. Atlanta area supporters donated more than 100 guitars when they heard that SHARE patients needed them for music therapy.

A 2009 effort garnered national support when former Shepherd patient Matthew Sanchez organized a 4,500-mile bike ride across the country to raise awareness and money for SHARE. His ride brought in nearly $10,000 to the program. In 2010, former ABI patient Wes Varda ran Fort Benning's Soldier Marathon — his first since recovering from his injury — also as a fundraiser for SHARE and raised more than $9,000.

"It truly is remarkable that we continue to see the generosity in support of wounded service members so these heroes can receive the much-needed care they deserve," says Susan Johnson, MA, CCC, CCM, program director of brain injury service.

Shepherd developed a specialized program within SHARE to treat mild TBI/PTSD — the signature wound of the wars. "This comprehensive program serves 10 to 12 military service members for about 10 to 12 weeks," Johnson says. "They have suffered from numerous blast injuries with subsequent PTSD and other chronic issues, which have evolved from lack of treatment for their complex medical needs."

The program needs $1.3 million in donations annually to cover the costs of care. Military insurance covers only some of the costs of care and medication — about 37.5 cents on the dollar — so the Initiative helps fill the gap. SHARE funds help absorb the cost of housing, special outings, job training, psychological counseling and other needs.

Shepherd Center physical therapist Candace Johnson works on balance issues with SHARE Initiative patient Michelle Cousar of McDonough, Ga.

Photo by Leita Cowart

TBI Communication and Cognition Expert Speaks at Shepherd Center

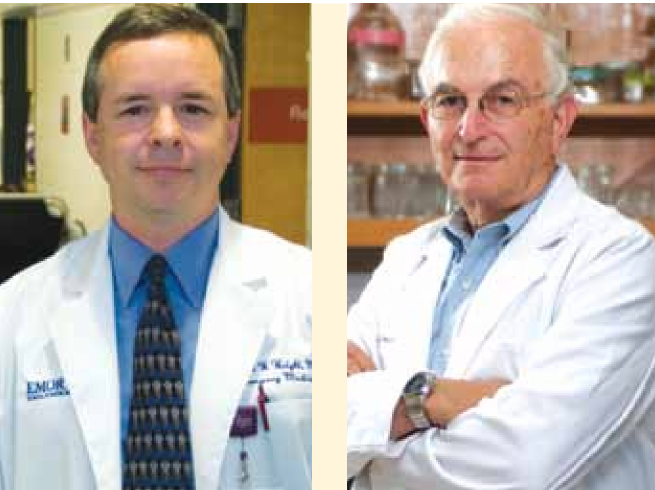
Lyn Turkstra, Ph.D., CCC-SLP

Lyn Turkstra, Ph.D, CCC-SLP, provided the lecture for Shepherd Center's TBI Grand Rounds Series held in March.

Dr. Turkstra is an associate professor in the Department of Communicative Disorders at the University of Wisconsin-Madison. She has studied and published extensively on cognitive and communication function after TBI with a special focus on social communication in adolescents and young adults. Dr. Turkstra has worked clinically with TBI survivors for more than 20 years.

Board-certified by the *Academy of Neurological Communication Disorders and Sciences* (ANCDS), she has served for eight years on the ANCDS writing committee on Practice Guidelines for Cognitive-Communication Disorders after Traumatic Brain Injury. Dr. Turkstra is a member of the Wisconsin Governor's Council on Brain Injury and the ASHA Joint Committee on Interprofessional Relationships with Neuropsychology.

Her Grand Rounds talk focused on evidence-based practices for cognition followed by an advanced, full-day workshop titled "Cognition: What's New, How to Assess It and What to Do With It."



> Progesterone could be a significant medical breakthrough. If this treatment is proven effective, it is likely to quickly become the international standard of care for treatment of acute brain injury.
>
> **Darryl Kaelin, M.D., medical director of the Shepherd Center Acquired Brain Injury Program**

Left: David Wright, M.D., associate professor of emergency medicine at Emory University School of Medicine

Right: Donald G. Stein, M.D., director of the Brain Research Laboratory at Emory University's Department of Emergency Medicine

Advances in the Acute Treatment of Brain Injury

Progesterone might save lives.

By Richard Sine

Progesterone may become the first drug shown to improve survival and reduce disability for persons with traumatic brain injury (TBI). If the treatment is approved, it will be due to decades of hard work by Atlanta-area physicians and researchers determined to overcome the unique hurdles impeding the development of "neuroprotectant" medications.

In 2010, researchers at Emory University in Atlanta launched ProTECT III, a Phase III clinical trial that is enrolling 1,140 patients at 17 medical centers in 15 states to study the effects of intravenous progesterone on traumatic brain injury (TBI) recovery. The randomized, double-blinded study is headquartered at Grady Memorial Hospital in Atlanta and is funded by the National Institutes of Health.

"Progesterone could be a significant medical breakthrough," says Darryl Kaelin, M.D., medical director of the Shepherd Center Acquired Brain Injury Program. "If this treatment is proven effective, it is likely to quickly become the international standard of care for treatment of acute brain injury."

David Wright, M.D., associate professor of emergency medicine at Emory University School of Medicine, is the principal investigator on the multicenter clinical trial. He co-led a 100-patient, single-center pilot study in 2006 that found a 50 percent reduction in mortality in patients treated with progesterone, as well as signs that progesterone could improve functional outcomes and reduce disability in patients with moderate brain injury. "We were shocked by the results," Dr. Wright says, "and we're very excited about moving on to the next step."

The treatment is the brainchild of Donald G. Stein, M.D., director of the Brain Research Laboratory at Emory University's Department of Emergency Medicine. He credits his students and colleagues with devoting time and effort to something that was initially considered far-fetched. "Today, there are still people who say, 'It's just a female hormone. How can it have these beneficial effects?'" Dr. Stein says. To date, more than 160 publications from upwards of 25 laboratories have documented the beneficial effects of progesterone.

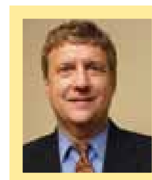
But that's no guarantee the progesterone clinical trial will succeed. Over the past two decades, almost all Phase II and III clinical trials for moderate and severe TBI have failed. "One of the major reasons suggested for these failures is that the complex and varied mechanisms observed in TBI cannot be addressed by single-drug therapies targeted to a specific mechanism or receptor site," Dr. Stein writes in the January 2010 issue of *Future Neurology*.

But progesterone may be uniquely suited to address the complexity of the apoptotic cascade. Researchers continue to explore the mechanisms behind progesterone's effects on the central nervous systems, but it appears to work on multiple genomic, proteomic and receptor systems, Dr. Stein says. Animal studies suggest that it modulates excitotoxicity, reconstitutes the blood-brain barrier, reduces cerebral edema, down-regulates the inflammatory cytokine cascade and decreases apoptosis, Dr. Wright notes. A key mechanism may be progesterone's beneficial effects on mitochondria. For example, progesterone helps mitochondria recover from calcium toxicity and severe vacuolation while upregulating the expression of antiapoptotic mitochondrial proteins such as Bcl-2, Dr. Stein explains.

The variability of pathologies associated with TBI is just one of the major challenges that Dr. Wright faces as lead investigator of the ProTECT III study. There's also the highly variable management of TBI patients across the nation — and even from surgeon to surgeon at a given site.

"This creates a tremendous amount of signal noise, which can wash out the potential for a drug to show a difference," Dr. Wright says. To try to quiet that noise, Dr. Wright has established management guidelines for ProTECT III that mandate standard interventions if the subject's condition falls outside physiological parameters in areas such as oxygenation and intracranial pressure.

Evidence-Based Practice Parameters Established for Assessing People with Disorders of Consciousness



By Ron Seel, Ph.D.
Director of Brain Injury Research, Shepherd Center

Disordered consciousness is one of the cardinal features of the time period immediately following severe brain injury. Recovery of consciousness may occur in minutes, days or months. Some people who sustain a brain injury never regain consciousness.

Consciousness cannot be directly observed. Therefore, clinical assessment of persons with disorders of consciousness (DOC) relies on documenting behavior and drawing inferences about the underlying state of consciousness. For years, there was a lack of consensus on differential diagnostic criteria for substantiating different levels of recovery of consciousness. In 2002, the Aspen Workgroup published a case definition based on expert opinion for diagnostic criteria for DOCs, which were separated into three levels — coma, vegetative state and minimally conscious state.

Standardized scales using operationally defined administration and scoring procedures are likely more reliable and valid than unstructured observational approaches for detecting consciousness. Numerous scales have been developed to diagnose, monitor and make prognoses about people with these disorders, as well as to measure clinical intervention outcomes. However, there had been no systematic review of the evidence to evaluate the content, reliability and validity of DOC scales.

The American Congress of Rehabilitation Medicine (ACRM) Brain Injury Interdisciplinary Special Interest Group (BI-ISIG) recognized this need, and the Disorders of Consciousness Task Force was formed to evaluate these clinical scales. The project received small grant awards from the ACRM Clinical Practice Committee and the National Institute on Disability and Rehabilitation Research (NIDRR) Model Systems Knowledge Translation Center.

After four years of vigorous task force efforts, the evidence-based review titled "Assessment Measures for Disorders of Consciousness: Evidence-Based Recommendations for Clinical Use and Future Research" was published in the *Archives of Physical Medicine and Rehabilitation* in December 2010. The report and recommendations have been endorsed by the ACRM as a Practice Parameter and by the American Academy of Neurology (AAN) as an educational report.

The evidence from this systematic review indicated that the Coma Recovery Scale-Revised may be used as an assessment option with minor reservations. Five other scales — Sensory Modality Assessment Technique, Western Neuro Sensory Stimulation Profile, Sensory Stimulation Assessment Measure, Wessex Head Injury Matrix and Disorders of Consciousness Scale — were recommended as assessment options with moderate reservations. All recommended scales have acceptable standardized administration and scoring procedures, acceptable-to-excellent item content and varying levels of evidence for reliability. However, further evidence is required on all scales to substantiate diagnostic and prognostic validity.

Systematic reviews, such as the DOC Task Force review, are important to provide an evidence basis for assessment and treatment. Currently, the ACRM, AAN and NIDRR TBI Model Systems are co-sponsoring a multi-organizational panel of experts who will conduct a systematic review of intervention, diagnostic and prognostic studies for DOC with the goal of formulating more comprehensive evidence-based practice guidelines. The work is expected to take two years.

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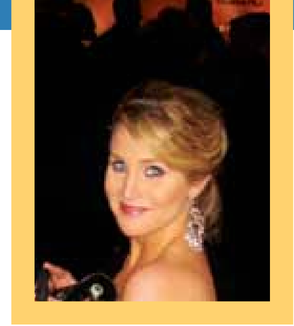

One Journey Ends, A New One Begins

After a near-fatal car accident left her clinging to life, former Shepherd Center patient Hadley Korn will soon graduate from college.

By Sara Baxter

Nearly seven years ago, Steve Korn got the phone call that every parent dreads. His 16-year-old daughter, Hadley, had been in a car accident.

He was told it was serious. When he arrived at Floyd Medical Center near Rome, Ga., he was whisked into a stark room where medical staff had gathered.

"I thought to myself, 'They're about to tell me that my child is dead,'" he recalls.

Fortunately, Hadley had survived what had been a horrific accident — a truck had plowed into the car in which she and a friend were riding. Her condition, however, was critical.

Steve arranged for his daughter to be airlifted to Children's Healthcare of Atlanta at Egleston. She had broken her neck, pelvis and several ribs. She also had sustained a traumatic brain injury.

"After a few days, we knew she would live, but we didn't know what condition she would be in when she woke up," Steve says.

It would be a while before they learned. Hadley remained hospitalized in a minimally conscious state for a month until she was admitted to Shepherd Center's Pre-Rehabilitation Education Program (PREP). Another month in a minimally conscious state passed. So the Korns made arrangements to bring Hadley home — standard procedure when a patient doesn't emerge from a minimally conscious state.

On the day before they were scheduled to leave Shepherd, something extraordinary happened. Hadley emerged to the point where she could participate in rehabilitation.

That moment proved to be the first step in a remarkable journey. For the next three months, Hadley spent her days at Shepherd relearning everything — how to walk, talk, eat, count and read.

Even though Hadley was improving, medical professionals cautioned her family that she was at significant risk for long-term cognitive impairments.

But Hadley's determination, resilience and family support along with Shepherd's aggressive therapy, resulted in a remarkable comeback. Soon after she was able to speak, she asked, "Can I still go to boarding school?"

After a year of outpatient therapy at Shepherd Pathways, Hadley left for boarding school at St. George's School in Rhode Island — the very place she was supposed to have gone five days before her accident.

"I was so ready to get on with my life," Hadley recalls. "All my friends were living normal lives with school and activities, and I couldn't do any of that."

The transition to school was harder than she imagined, including the fact that most of the students participated in some sort of team sports after school and Hadley could not because of the lingering effects of her injury. But Hadley adapted and graduated two years later with honors. Every college that received her application accepted her for admission. "We refused to believe that she would make anything other than a full recovery," says Steve, who spent almost every day of Hadley's 16-month recovery with her. He admits that their attitude was probably "more optimism than realism."

This December, Hadley, now 22, will mark another milestone. She will graduate from the University of Southern California with a degree in communications.

She has already completed internships with the "Dr. Phil Show" and "Larry King Live." She wants to get a job in television production after graduation. Hadley still has a few physical reminders of her 2004 accident — she walks with a limp, has weakness in her left arm and hand and speaks with a slow, raspy voice. She has minimal cognition and memory issues, and has learned to compensate for those challenges.

Steve credits his daughter's willful personality for her recovery. "She's a very headstrong, stubborn young lady," he says. And he is deeply grateful for the care she received at Shepherd Center.

"There is no question Shepherd was the place she needed to be," Steve says. "I think the world of everyone there. It is an invaluable place to have here in Atlanta."

There is no question Shepherd was the place she needed to be. I think the world of everyone there. It is an invaluable place to have here in Atlanta."

— Steve Korn, father of former patient Hadley Korn

Former brain injury patient Hadley Korn (back row, center) recently spoke to caregivers attending a workshop sponsored by the Brain Injury Peer Visitors Association. The association was founded by former brain injury patient Ann Boriskie (back row, left).

Photo Courtesy of Ann Boriskie

Renovation Project Gives Shepherd Patients Added Privacy

By Sara Baxter

Improving the quality of patient care sometimes involves power tools. That's the case with the second floor of the Shepherd Building. A 22,500-square-foot renovation is giving patients more privacy, minimizing transfers and enabling care providers to improve prevention of nosocomial infections.

Completed at the end of 2010, the renovation project puts Shepherd Center's Neurospecialty Unit (NSU) — which houses acquired brain injury (ABI), spinal cord injury, stroke, disorders of consciousness and dual-diagnosis patients — in closer proximity with the Acquired Brain Injury (ABI) Unit located on the second floor of the adjacent Marcus-Woodruff Building. Though the NSU can accommodate patients with a variety of diagnoses, most of the units' patients have brain injuries, making the proximity with the ABI Unit an important factor.

While the enhanced proximity is a plus, the addition of more private patient rooms is the greatest benefit from the project because it helps the staff better accommodate patients' medical needs.

"When Shepherd first opened, it was OK to have four-person rooms because patients needed the socialization and peer support," says Susan Johnson, MA, CCC, CCM, program director of brain injury services. "But that was when they had been in a hospital for 30 days and came to Shepherd in a stable state. Now, Shepherd patients are admitted earlier, and they are much more acute. There is more of a need for privacy for both the patients and their families."

The renovated floor also features:

- a designated suite for practicing activities of daily living, allowing patients to remain on the floor for therapy;
- a quiet treatment room that eliminates distractions for patients who might be confused;
- an activity room for patients and families to spend time together in the evening;
- and additional conference rooms for private consultations.

"It's a major advantage to have designated space for the neurospecialty patients," Johnson says. "On the third floor, we shared space with the Medical-Surgical Unit, which had different needs. This floor is strictly for rehabilitation patients."

Funded through the generous contributions of Shepherd supporters, the $5 million renovation project gives Shepherd Center a total bed capacity of 132, including 107 private rooms. The second floor of the Shepherd Building previously housed the Spinal Cord Injury Unit, which moved to the fifth floor of the Marcus-Woodruff Building in 2009 in a separate renovation project.

Renovations are complete on the second floor of the Shepherd Building, which houses the hospital's Neurospecialty Unit.

Photo by Steven Dinberg

Shepherd Center Launches New Video Series

By Sara Baxter

Having a loved one with a life-altering brain or spinal cord injury is not only a terrifying experience, it can also be a bewildering one.

To help those closest to patients find their way forward, Shepherd Center has produced a series of educational videos that are being distributed to trauma centers around the nation. The videos, available on DVD and online, explain brain and spinal cord injuries, present options for care following the trauma center, and establish expectations for the weeks and months ahead.

The DVD package includes printed companion guides. The videos are available for viewing online at **www.spinalinjury101.org** or **www.braininjury101.org**.

"The videos speak directly to recently injured people and their family members," says Larry Bowie, Shepherd's director of marketing and public relations. "The goal is to answer many of the questions they have about their injury and offer a clearer picture of what the rehabilitation process might entail."

Narrated by Judy Fortin, former CNN anchor and medical correspondent, the videos feature some of the nation's top neuroscientists, physicians, and brain and spinal cord injury experts to help people understand their new injury, the path to recovery and functional expectation.

The video series was produced in collaboration with the American Trauma Society, the National Spinal Cord Injury Association, the Brain Injury Association of America and the Christopher & Dana Reeve Foundation.

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NeuroTransmitter covers news and information about research, medical treatments and healthy living for people who have experienced an acquired brain injury. It is published twice a year. For more information, call **404-352-2020**.
Available online at **www.shepherd.org/publications.**

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If you would like to make a gift to support the work you have read about, contact the Shepherd Center Foundation at 404-350-7305 or visit shepherd.org

ACRM Annual Meeting to Headline in Atlanta

Shepherd Center opens its doors.

This fall, hundreds of researchers and clinicians on the cutting edge of evidence-based practice in rehabilitation medicine will gather in Atlanta, Ga., for the American Congress of Rehabilitation Medicine (ACRM)/ American Society of Neurorehabilitation (ASNR) annual meeting.

The theme of this year's educational conference — "Progress in Rehabilitation" — will showcase advances in rehabilitation science and research, as well as methods and tools for more effectively translating new findings into clinical practice.

"I am thrilled the meeting will be in Atlanta," says Gary Ulicny, Ph.D., president and CEO of Shepherd Center, and the new president of ACRM. "We are expecting more than 500 people from all over the world, and Shepherd will host an open house and one of the pre-conference symposia."

Much of the research presented at the conference will focus on ameliorating cognitive or mobility impairment and supporting community reintegration after injury, according to program planners. Secondary conditions such as pain, spasticity, pressure ulcers and other medical complications also will be addressed, along with new tools for assessment and diagnosis.

As ACRM is the leading interdisciplinary rehabilitation research organization in the country, it is only fitting that conference organizers are focused on paying tribute to collaborative research efforts that are helping to move the field forward, Dr. Ulicny says.

For more information about the ACRM/ASNR conference set to take place Oct. 11-15 at the Hyatt Regency Atlanta, visit **www.acrm.org**. Shepherd is also one of the sponsors of the gala and awards presentation to be held at the Georgia Aquarium.

Continued From Cover
Building Relationships

As with every relationship, there is a need for growth. Our patients, their families and our payors have asked us to grow — literally. In response to an increasing demand for our services, Shepherd Center recently completed renovation of the second floor of the Shepherd Building, expanding our brain injury and dual diagnosis (ABI/SCI) capacity to 58 beds — making us one of the largest units in the country.

Finally, we hope that *NeuroTransmitter* is establishing a relationship between each of us at Shepherd Center and you, the reader. We appreciate your interest in what we do. We welcome you to visit our facility so we can share more about what we do in our programs and research.