UT Southwestern

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NEWSLETTER DEPARTMENT OF PHYSICAL MEDICINE AND

QUARTERLY

REHABILITATION

PM&R CONNECTion



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PMR Scientific Day



Message from the Chair

Kathleen Bell, MD

Greetings at the new year from the UT Southwestern Medical Center Department of Physical Medicine and Reha-

bilitation! It is a thrill to be able to offer these sentiments as the new Chair of the Department. I am honored to follow in the path of the previous Chairs, Drs. Karen Kowalske and Phala Helm. I am willing to bet the mortgage that UT Southwestern PM&R is the ONLY department in the country with a line-up of three consecutive women chairs. Indeed, the Association of American Medical Colleges reports that only 15% of department chairs are women as of 2013-2014. UT Southwestern continues to be dedicated to advancing in the area of gender equality as well as so many other areas of excellence.

We have an exciting year ahead of us. With regard to education, the UT Southwestern residency program is currently ranked 24 of 78

programs by US News and World Report. Our move toward consolidating categorical positioning (R1 funding) is expected to keep us rising in the ranks.

Clinically speaking, the new and state-of-theart William P. Clements Jr. University Hospital opened in December, increasing our UT Southwestern beds by 100 and the new Parkland Hospital, topping out at almost 900 beds, will open in August 2015. Zale Lipshy University Hospital has become the only hospital in Texas focused exclusively on neurosciences. Our pediatric rehabilitation program continues to grow in conjunction with Children's' Health. In research, we conduct one of three Burn Model Systems in the United States and are one of the two collaborating centers for the North Texas Traumatic Brain Injury Model Systems. We are also proud to be part of the Texas Institute on Brain Injury and Repair (TIBIR).

Dallas has been one of the fastest growing areas of the United States and UT Southwestern is growing along with it. PM&R has a renewed commitment to excellence in 2015!

UTSouthwestern Medical Center

PM&R Faculty Receives Brain Injury Medicine Certification

In the fall of 2014, four UT Southwestern PM&R physicians received certification in Brain Injury Medicine (BIM) from the American Board of Medical Specialties (ABMS). This is the first year the BIM examination and certification has been offered. BIM certified physicians are the leaders in the field.

The subspecialty of BIM focuses on the evaluation, treatment, and rehabilitation of individuals with acquired brain injury. BIM physicians provide a high level of care for patients with brain injury and their families in both the hospital and the post-acute setting, and over the continuum of care to facilitate the process of recovery and improve medical and functional outcomes.

As UT Southwestern expands its Neurosciences program, we congratulate Drs. Kathleen Bell, Christine Johnson, Karen Kowalske, and Benjamin Nguyen.



Dr. Bell joined UT Southwestern in September 2014 as Chair of the PM&R Department. Prior to this, she was a Professor at the University of Washington in Seattle, where she had been on the faculty since 1984. She has extensive clinical and research experience in the area of traumatic brain injury, and is an Investigator in the North Texas TBI Model System and the Texas institute of Brain Injury and Repair.

Dr. Johnson has been on the faculty at UT Southwestern as Associate Professor since 2013. She has also been the Medical Director at the Centre for Neuro Skills (CNS) in Dallas since 2005. Her areas of interest at UT Southwestern include brain injury and wound care.





Dr. Kowalske was the UT Southwestern PM&R Department Chair for 15 years and has been on the faculty since 1990. She is the Medical Director at Zale Lipshy University Hospital Inpatient Rehabilitation Unit. Dr. Kowalske has been the Project Director for the North Texas Burn Rehabilitation Model System for over 20 years. Her areas of interest are brain injury and burn rehabilitation.

Dr. Nguyen has been on the faculty at UT Southwestern since 2008. His areas of interest include neuromodulation, stroke recovery, spasticity, and traumatic brain injury (TBI). He serves as the TBI Fellowship Director and Medical Student Advisor, and is the PM&R Student Curriculum Director.



If you would like to refer a patient or make an appointment with one of our physicians, please contact the UT Southwestern Patient Physician Referral Service at 214-645-8300

RESEARCH REPORT—ConTACT: Concussion Treatment After Combat Trauma

Traumatic brain injury has been called the signature injury of the Iraq and Afghanistan conflicts and it is estimated that almost 300,000 soldiers sustained mild TBIs since 2001. Dr. Kathleen Bell and colleagues at the University of Washington are investigating the efficacy of a telephone-based problem-solving treatment for active duty service members with a diagnosed mild TBI in a study funded by the Department of Defense through the INTRuST Consortium (<u>http://intrust.sdsc.edu/</u>). Along with post-traumatic stress disorder (more common in those with mild TBI), persisting symptoms may result in functional disability and poor quality of life. Three hundred fifty-six subjects were recruited from Joint Base Lewis McChord in Washington, and Fort Bragg, NC. After random assignment, the Telephone-PST group received 12 telephone calls from counselors and were guided and rehearsed in the use of PST to address problems associated with distress and post-concussion. An education group provides a control condition. Blinded assessments were performed at baseline, 6 and 12 months after the start of the study.

Subjects were mostly male with a mean age of 29 years. They averaged 2.4 combat tours prior to enrollment in the study. Most of the injuries were associated with blasts (85%). The issues self-selected by subjects for Telephone-PST included mood, insomnia, anxiety and stress, relationships, work, and thinking/concentration. Currently, the primary outcome measures (Behavioral Symptoms Inventory-18 and Rivermead Post-Concussion Symptoms Questionnaire) at 6 months are under analysis.



North Texas TBI Model System

The North Texas TBI Model System is one of 16 research centers for the study of traumatic brain injury funded by the National Institute on Disability and Rehabilitation Research since 1987. Our model system is a unique collaboration between the three largest Level I Trauma centers in North Texas: UT Southwestern/Parkland Health and Hospital System, Baylor Health Care System, and JPS Health Network. Patients with TBI admitted to the rehabilitation units at Parkland, Zale Lipshy University, or Baylor Hospitals are eligible for enrollment. More than 13,000 subjects have been enrolled throughout the country since the start of the program.

The North Texas Traumatic Brain Injury Model System (NT-TBIMS) pools the efforts and talents of individuals from the Departments of Physical Medicine and Rehabilitation, Neurosurgery, Neurology and Neurotherapeutics, Psychiatry, and Neuroradiology from the three leading medical institutions in the North Texas region. Currently, UT Southwestern is directing two research projects for the NTTBIMS: 1). To identify TBI patients who may benefit from early methylphenidate therapy utilizing Single Photon Emission Computed Tomography (SPECT) imaging of dopamine transporter (PI: Womack, Neurology) and 2). To examine the effect of phototherapy on circadian rhythm disturbance after TBI (PI: Bell, PMR) along with 3) Comparative effectiveness study of variations in clinical practices and patient outcomes across TBIMS rehab centers and to develop evidence-based practice guidelines for TBI rehab (PI: Shafi, Baylor).

FACTS ABOUT TBI IN TEXAS

- 146,000 Texans sustain a TBI every year
- 80% are mild, and
 20% are moderate to severe
- Every 4 minutes a Texan sustains a TBI

afghanistan by The U.S. Army /

CC by 2.0

 Every 30 minutes a Texan is hospitalized with a TBI

Statistics from Texas Traumatic Brain Injury Advisory Council

Coming Full Circle

On October 6, 2001, 4 days after turning 19 years old, Jose Saenz was heading home from a haircut when he was T-boned by a speeding motorist. He has no memory of the impact or the next 4



weeks of his life. Fortunately, Jose was rushed to **Parkland Memorial Hospital**, the largest Level One trauma center in North Texas, where he was treated for life-threatening injuries including a traumatic brain injury, collapsed lung and crushed right hip. Jose required neurosurgery to evacuate blood clots and implant a shunt in his brain. He remained comatose and in critical condition. After 2 weeks of nonresponsiveness, Jose's family realized he was turning his head to follow sounds in his hospital room and in the hall. His family knew he would survive when he opened his eyes and uttered his first word, "Gatorade". The strong, healthy, athletic young man who had been headed to the Marine Corps, with aspirations to one day be a police officer, could not use his right side. His speech was slow and unintelligible with a severe stutter, and his memory was affected. He could not walk, feed himself or even perform simple tasks of daily living. Jose states that it was "like being reborn, like being a baby again" who had to relearn to care for himself.

Jose spent several weeks on the Parkland inpatient rehabilitation unit participating in comprehensive brain injury rehabilitation. He was discharged still using a wheelchair for mobility and with significant cognitive deficits. He participated in outpatient rehabilitation therapy at Parkland for several months. He describes 2002 as the" most miserable time" of his life. While other 19 year olds were out exploring the world, he was living at home with

"Get up and start moving - Life ain't over yet" -lose Saenz his parents, depressed and angry over his lot in life. The UT Southwestern PM&R physicians who treated Jose at Parkland told his parents "not to hold him back", but rather to push him to keep trying. When Jose wasn't attending outpatient therapy, he was exercising at home. He played Nerf basketball with his affected right side, learning to throw a ball all over again. Gradually, his motor skills and strength began to improve. His therapies concentrated on improving his speech and his cognitive skills.

Towards the end of 2002, a friend of Jose's encouraged him to think about going back to school. Jose states he "wanted to do better" for himself. He had always loved helping people and was grateful for all the help he had received in his recovery process. With vocational rehabilitation, Jose began training as a medical assistant in November 2003. He had to borrow his classmates' notes to study because his handwriting was illegible. It took enormous effort and perseverance to learn and remember medical terminology, but in March of 2004, Jose graduated as a certified medical assistant. His first job was for a pulmonologist, but in the summer of 2004 his journey took him full circle when he was hired as a medical assistant on the OB/GYN service at Parkland Hospital. Jose loved his job, and the patients and staff loved him. Therapists and nurses who had treated him as a patient began to ask Jose to come and speak with patients and their families, encouraging and motivating them in their recovery process. Jose describes himself as "a big miracle, a walking testimony" of what hard work and faith can do. He tells patients, "Get up and start moving. Life ain't over yet." In 2007, Jose's dream came true when he transferred to the Parkland inpatient rehabilitation unit as a therapy tech. Jose says, "I saw myself in every patient. It was like a flashback. I could identify with them. It was an awesome feeing to make patients comfortable and to give them hope". As a therapy tech, he didn't just physically touch their bodies, he also "touched their souls". Jose's advice to new techs on the unit was, "when you go into the patient's room, you place your mother or loved one in that bed and you treat them the way you would want your loved one treated." Jose states this is not the life he had planned for himself at the age of 19, but he wouldn't change anything that happened. He believes God has given him a purpose in life to impact others' lives by serving them.

In 2014, Jose left Parkland to advance his medical knowledge and professional skills and is currently employed as an EEG tech at Medical Center of Plano. He lives in Carrollton, TX, with his lovely wife, 9 year old daughter and 5 year old son. He credits the staff at **Parkland Hospi**tal and God for his remarkable recovery.

Parkland Health and Hospital System—serving North Texas and Dallas County since 1894 and partner with UT Southwestern since 1943



YOUR OPPORTUNITY TO SUPPORT PM&R AT UT SOUTHWESTERN

The PM&R department would like to extend our gratitude for the financial support of our donors over the years. Our physicians and researchers are integrating advances in comprehensive patient care, and the development of innovative education and prevention programs to improve health care in North Texas and around the world. As a nonprofit organization, UT Southwestern relies heavily on the generosity of its supporters to remain at the forefront of medical care and scientific discovery.

Your contributions and gifts designated to PM&R are used:

- To improve health care in our community, Texas, our nation, and the world through innovation and education;
- To educate the next generation of leaders in patient care, biomedical science and disease prevention;
- To conduct high-impact, internationally recognized research;
- To deliver patient care that brings UT Southwestern's scientific advances to the bedside — focusing on quality, safety, and exemplary patient service.

To make a gift designated to PM&R you may go online directly to <u>UT Southwestern</u> or the <u>Southwestern Medical Foundation</u> or contact:

UT Southwestern Office of Development Phone: 214-648-2344 giving@utsouthwestern.edu



With your continued support designated to PM&R we will be able to progress the science of rehabilitation medicine through research and education.

Tales That Wag: Animal-Assisted Therapy



Soft brown eyes, ears at attention and a quirky little under bite describe therapy pet, Sadie Mae. Sadie is loved and handled by physical therapist/owner, Charlotte Morrison. Sadie has been a working dog for the past 4 years. Sadie is a welcome

therapy modality in our PM&R gym. Sadie works for Therapet, an Animal Assisted Therapy volunteer organization which uses animals in visitation programs and therapeutic settings to promote health, hope and healing. Passing the K9 Good Citizen's Test is a prerequisite to begin Therapet training. Visitation programs use animals, accompanied by their owners, to visit with patients, families and staff in healthcare settings.



There are numerous benefits to Animal Assisted Therapy (ATT) including:

Improved motivation and sense of well being
Reduced anxiety, loneliness and stress
Improved endurance, range of motion and strength
Faster recovery from serious physical or emotional trauma
Improved morale for patients, families and staff
Better participation in therapeutic treatment
Increased attention and vocabulary skills
Improved long and short term memory
Improved communication and social skills
Improved fine motor skill, mobility and balance

Sadie is one of our most effective treatment modalities. She provides distraction allowing the therapist to perform range of motion exercises with increased success. The therapist reports that a patient who is normally uncooperative will voluntarily reach for Sadie, not realizing that he is exercising his affected arm. Loss of balance is often a serious deficit for brain injured patients. Encouraging the patient to pet Sadie while working on balance can increase the length of time the patient will tolerate therapy. Sadie and other therapets are helping to improve patient outcomes. (For more information on the Therapet Program visit <u>www.therapet.org</u>.)



Spotlight on Faculty and Fellows

Dr. John Thottakara has been a faculty member at UT Southwestern as Assistant Professor since 2009. He is the Medical Director of Inpatient Rehabilitation and Outpatient PM&R Brain Injury Clinic at Parkland Health and Hospital System. Working together with a team of experts including trauma surgery, orthopaedic surgery, and neuro-surgery, he also serves as the Director of Trauma Rehabilitation Services at Parkland, the first verified level I trauma center in Texas.

After completing his residency in PM&R at Wayne State University he came to UT Southwestern Medical Center to complete a fellowship in Brain Injury Medicine. Dr. Thottakara is a co-investigator on the National Institute on Disability and Rehabilitation Research (NIDRR) funded Traumatic Brain Injury Model System (TBIMS) which is responsible for gathering core data for the national database as well as conducting research studies on traumatic brain injury.

His clinical interests are Neuro-Rehabilitation treatment for brain injury and concussion, Botox Injections for nervous system disorders, degenerative disorders and medical management of nervous system disorders.



Dr. Jeffrey Watkins, was selected for the Brain Injury Medicine (BIM) fellowship at UT Southwestern in 2014. He received his medical training at UT Southwestern and completed a one-year Internal Medicine residency at Howard University in Washington, DC, before coming to the PM&R residency program at UT Southwestern. Dr. Watkins decided to apply for the BIM fellowship after developing an interest in spasticity management during his residency. He has plans to pursue his interest in Neuro-Rehabilitation following completion of his fellowship this summer.



The Brain Injury Medicine (BIM) fellowship at UT Southwestern offers a well-rounded experience including brain injury rehabilitation and medical management. Fellows are exposed to the continuum of care using the Brain Injury rehabilitation model, which consists of: acute trauma consult service, acute inpatient rehabilitation, and community re-integration programs.

The BIM fellow is an active participant in the management of patients in clinics for spasticity management and wheelchair seating. The fellow also gains experience through exposure to ongoing clinical trials and translational research.

UT Southwestern Faculty

Publications and Presentations-Year in Review

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Friedly JL, Comstock BA, Turner JA, Heagerty PJ, Deyo RA, Sullivan SD, Bauer Z, Bresnahan BW, Avins AL, Nedeljkovic SS, Nerenz DR, Standaert C, Kessler L, Akuthota V, **Annaswamy T**, et al. (2014). A Randomized Trial of Epidural Glucocorticoid Injections for Spinal Stenosis. N Engl J Med, 371(1):11-21.

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Lequerica A, Chiaravalloti N, Cantor J, Dijkers M, Wright J, Kolakowsky-Hayner SA, Bushnick T, Hammond F, **Bell K**. (2014). The factor structure of the Pittsburgh Sleep Quality Index in persons with traumatic brain injury. NeuroRehabilitation. 35 (3):486-92.

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Kasper JM, Wadhwa V, **Scott KM**, Chhabra A. Clunealgia: CT Guided Therapeutic Posterior Femoral Cutaneous Nerve Block Clinical Imaging. 2014;38(4):540-42.

American Academy of Physical Medicine and Rehabilitation, San Diego, November 2014

Do KB. Exercise Is a Cancer 'Drug' - Why and How You Should Use It in Your Practice

Bell KR, DiTommaso C, Zumsteg J. The Brain and Exercise: Healing and Prevention

Bierner SM, de Leon J. Wound Care Options for Physiatrists and Other Rehabilitation Professionals

Yang W. Acupuncture for Physical Medicine and Rehabilitation

Washington State TBI Annual Conference Bell KR. TBI 101

American Congress of Rehabilitation Medicine Bell KR. Phototherapy and Sleep after TBI in Acute Rehabilitation.

2014 Galveston Brain Injury Conference Bell, KR, Flanagan S. Medical Surveillance for Chronic TBI.



William P. Clements Jr. University Hospital opened in 2014. With 460 beds, this state-of-the-art facility contributes to enhanced patient care with every detail.

Poster and Paper Presentations – 2014 Year in Review

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Bell K, Sawyer KA, Temkin N, Dikmen S, Dillworth T, Ehde D, Williams R, Hoffman JM. (2014). Headache trajectory and the development of post traumatic stress disorder after mild traumatic brain injury. PM&R, 6(95):S332.

Davis K, Scott K. (2014). Sacral plexus prostate metastases manifesting as sacroiliac and gluteal musculoskeletal pathology: A case report. PM&R, 69S):S246-247.

Fisher LW, Scott KM. (2014). The treatment of chronic coccydynia using pelvic physical therapy. PM&R, 6(9S):S351.

Gracies JM, Brashear A, Mc Allister P, Walker HW, Marciniak CM, **Gul F**, et al. (2014). Randomized, double-blind placebo-controlled Phase III study of Dysport, abobotulinumtoxinA, in the treatment of adults with upper limb spasticity. PM&R, 6 (9S):S327.

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Association of Academic Physiatrists Araim R, Pate, N, Gul F, Krohn P. (2014). Baclofen pump catheter granuloma: Baclofen Catheter granuloma is an explana-tion for altered neurological function or significant increase in drug requirement. Am J Phys Med Rehabil. 2014;93(2 Supp.):a89.

American Burn Association

Schneider JC, Nadler D, Mathews K, Carrougher GJ, Wiechman SA, Gibran NS, Meyer III WJ, Herndon DN, Kowalske KJ, Ryan CM. Pruritus in Pediatric Burn Survivors: Prevalence and Risk Factors. J Burn Care Res.2014;35(Supp 1):S183.

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American Medical Society for Sports Medicine

Loveless M, Bell KR, Lombard L. Complications of Return to Play: Altered Mental Status 10 Days after Concussion in a Collegiate Rower.

Tenth World Congress on Brain Injury Loveless M, Bell K, Hoffman J, Temkin N, Dikmen S, Barber J. Good old days...or were they? Evaluation of pre-injury symp-tom reporting at time of injury and six months following concussion.



Working Together for Patient Benefit

"Using the newly created pathway, Children's Health Dallas will be able to serve our population in a consistent comprehensive manner, regardless of the initial point of contact, age or mechanism of injury."

Wendy Goodwin, M.D.

Mild TBI—Developing a Clinical Pathway

There are many factors in the world of medicine that are compelling hospitals to identify "best practices" and standardize patient care. The use of pathways is one means of standardizing improvement and impacting hospital-wide care. On the other hand, issues may be identified as "opportunities for improvement" after audits or sentinel events. In the case of Mild Traumatic Brain Injury ("mTBI") at Children's Health Dallas, an interdisciplinary team took on this challenge. This team included physicians and staff from the Emergency Department, Trauma Surgery, PM&R, Neurology, Neurosurgery, Neuropsychology and the Clinical Effectiveness Department. Dr. Wendy Goodwin, TBI specialist and pediatric physiatrist, was a guiding influence.

Because of the lack of consensus guidelines on pediatric mTBI (except for adolescent sportsrelated concussion), there were limited resources to serve as a guide. Members reviewed literature on all aspects of evaluation and treatment strategies. The first priority was to agree upon the use of standard definitions including "mild TBI", "concussion" and the preferred use of these terms. Some aspects of published pediatric concussion tools were utilized such as the Acute Concussion Evalution (ACE), ACE Care Plan and the Sport Concussion Assessment Tool 3 (SCAT 3). However, these had to be modified based on clinical experience for different age groups as low as 2 years old. The developmental expertise of the physical, occupational and speech therapists was essential in establishing these recommendations for physical exam screening.

Another unique challenge was to identify a practical bedside cognitive screening tool including multiple domains of cognition validated at the youngest possible age. The tool chosen was the Pediatric Test of Brain Injury, which is validated in English only, and to a minimal age of 6 years old. Identifying and addressing vestibular issues, even in very young patients, was emphasized but remains a special challenge, confounded by difficulty examining very young patients for these problems and relative scarcity of pediatric vestibular trained therapists. Follow-up after hospital presentation will be further detailed in future amendments to this pathway. Due to the large population involved, training of community pediatricians will be a cornerstone for follow-up of uncomplicated concussions. Physical Medicine, led by Dr. Goodwin, has opened a mTBI Clinic to handle follow-up care of more complicated cases.

While general guidelines now exist (see below), it's likely that every hospital and community will need to adapt existing guidelines to their own needs. Physiatrists interested in developing pathways for concussion and mTBI should contact their hospital's Quality Department. Examples of existing pathways may be found on the websites of major hospitals nationwide, and each state's

Healthcare Quality Office usually offers great resources as well. Another resource is The Ontario Neurotrauma Foundation who has been a pioneer in developing guidelines for TBI treatment.



2015 PM&R Scientific Day Update on Traumatic Brain Injury: From Playing Fields to Battle Fields May 9, 2015

This program is designed to highlight scientific advances in the field of Mild Traumatic Brain Injury/ Post-Concussive Syndrome (mTBI/PCS) in the field of Physical Medicine and Rehabilitation. This program will also showcase the research performed by residents and fellows in the Department of Physical Medicine & Rehabilitation at UT Southwestern.

Invited Speakers

Ross Zafonte, DO - "TBI Clinical Trials- What Have We Learned "

"Sports Related Concussion Pathophysiology and Long Term Consequences What is Known and What is Not"

Dr. Zafonte is the Earle P. and Ida S. Charlton Professor and Chairman of the Department of Physical Medicine and Rehabilitation at Harvard Medical School. He is the chief of Physical Medicine and Rehabilitation at Massachusetts General Hospital, Brigham and Women's Hospital, as well as Senior Vice President of Medical Affairs Research and Education at Spaulding Rehabilitation Network. Dr. Zafonte's text book, Brain Injury Medicine, is considered the standard in the field of brain injury care. Dr. Zafonte also serves on the

Board of Governors for the American Congress of Rehabilitation Medicine and received the 2014 Moody Prize for Brain Injury Research and Care.



Hunt Batjer, MD - "Neurosurgical Issues following Sport Related

Concussions in Athletes"

Dr. Batjer is the Chair of the Neurological Surgery at UT Southwestern and holds the Lois C.A. and Darwin E. Smith Distinguished Chair in Neurological Surgery. He is an internationally recognized cerebrovascular surgeon specializing in ischemic and hemorrhagic stroke, as well as an authority on brain injury. In addition, he is Co-Chair of the National Football League Head, Neck and Spine Committee and Co-Director of the Texas Institute for Brain Injury and Repair at UT Southwestern.

Faculty Speaker:

Kathleen Bell, MD - "CONTACT: CONcussionTreatment After Combat Trauma – The Military Experience of MTBI "

Dr. Bell is the Chair of the Department of Physical Medicine and Rehabilitation at UT Southwestern and holds the Kimberly-Clark Distinguished Chair in Mobility Research. She is a nationally recognized leader in rehabilitation medicine and a specialist in neuro-rehabilitation. Dr. Bell is an Investigator with the Texas Institute for Brain Injury and Repair at UT Southwestern (TIBIR). Dr. Bell was recently at University of Washington, where she was the Medical Director of the Brain Injury Rehabilitation Program, Chief of Clinical Services in Rehabilitation Medicine and Project Director for the UW TIB Model System.



UPCOMING EVENTS:

Saturday May 9, 2015 UT Southwestern T. Boone Pickens Biomedical Building Dallas, TX

> CMEs 6.5 Register Now

For more information: <u>cmeregistra-</u> <u>tions@utsouthwestern.edu</u> or call 214-648-3138



Medical Center

May 9th, 2015 6.5 CME

Save the date - UT Southwestern PM&R Scientific Day Update on Traumatic Brain Injury: From Playing Fields to Battle Fields

Location: T Boone Pickens REGISTER NOW

Guest Speakers:

Ross Zafonte, DO (Spaulding Rehabilitation Network) "TBI Clinical Trials– What Have We Learned" "Sports Related Concussion Pathophysiology and Long Term Consequences: What is Known and What is Not"

Hunt Batjer, MD (UT Southwestern Neurosurgery) "Neurosurgical Issues following Sport Related Concussions in Athletes"

Faculty Speaker:

Kathleen Bell, MD (UT Southwestern PM&R) "CONTACT: CONcussionTreatment After Combat Trauma – The Military Experience of MTBI"

UT Southwestern Department of Physical Medicine & Rehabilitation 5323 Harry Hines Blvd. MC 9055 Dallas, TX 75390