

SCI SIG NEWSLETTER

APTA Neurology Section
Fall 2009

MESSAGE FROM THE CHAIR

Welcome to Fall!

For me fall is a very busy time. I have students back from full-time internships to debrief and document. I have a new class of students in my Adult Neurologic Rehabilitation course, which means 36 new names and faces, as well as getting the course up and running for the semester. This year to add to the fun it is my turn to be the class advisor to the incoming students. My son was a late admit to a fine arts college, so we finished moving him 3 days before classes started. Amidst this chaos the back to school

routine for the younger brother required autopilot.

This year we also had a mayoral race in my home city, and as I wanted a change, I was sure to vote in the primary. Well the incumbent was knocked out, and I was patting myself on the back for voting when I received in the mail a letter from the elections office. Apparently my signature no longer matches with the signature on my voter's registration (done right after my marriage and a new name—small wonder for those of us into motor learning). So my vote did NOT count. And unless I

took steps it would not count in the general election. Therefore, even with the crazy life recounted above I made a trip to the County Elections Building to rectify my signature.

The moral of the story—now IS the time to be counted. Take the extra time and effort to be heard. Voice your opinion about healthcare reform.



Jennifer Hastings, PT, PhD,
NCS

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Not sure who your representatives and senators are? Check out this non-partisan resource!

www.votesmart.org



CSM 2010 SCI SIG Programming

Be sure not to miss the great programming for the SCI SIG this year at CSM in San Diego (February 17th to 20th). We again have two exciting speakers who will share their expertise with you. The first speaker, Kendra Betz, MSPT, ATP from the VA Central Office will present “PT Implementation of SCI Clinical Practice Guidelines: A Comprehensive Review with a Focus on Upper Limb Preservation” during the educational session following our business meeting. She will teach you how to implement the PVA Clinical Practice Guidelines into your practice and will focus on the guidelines for the upper extremity, specifically on the key areas of wheelchair selection and configuration, postural support, functional skills training, pain management and exercise recommendations. Don’t miss this opportunity to learn new ways to help your patients.

The roundtable for the SCI SIG, entitled “Rehabilitation of Patients with SCI: An International Perspective,” will be led by Joy Bruce, MSPT, ABD, NCS, from the Shepherd Center. Come to this session to learn and discuss the social, political, and cultural issues that influence the care of patients with SCI around the world. Bring your ideas to share, even if you haven’t had much experience with this topic. It is time to think globally as we have a lot to learn from each other.



Other Upcoming SCI Conferences in the US

October 7-11, 2009, Denver, CO

The annual American Congress of Rehabilitation Medicine (ACRM) conference has great sessions related to SCI, many of which are presented by PTs.

December 3-5, 2009, Orlando, FL

The Pediatric Spinal Cord Injury and Dysfunction conference (also known as the Howard H. Steel conference) is held every 3 years and is a comprehensive meeting for those of us who work with children with SCI.

May 26-28, 2010, Nashville, TN

The American Spinal Injury Association’s annual meeting provides great programming for

Pediatric Spinal Cord Injury Computer Adapted Tested: A Tool for Measuring Outcomes

Christina L Calhoun, PT, MS

The Shriners Hospital for Children (SHC) SCI Centers of Excellence (Philadelphia, Chicago, and Northern California) specialize in providing orthopedic and rehabilitative care to many of the children and adolescents living with SCI in this country. While there are some outcomes tools designed to evaluate impairment (muscle strength, range of motion, etc) and functional abilities (such as self care) in this population, there are currently no outcomes tools appropriate for evaluating how children and adolescents participate in typical childhood roles nor is there an evaluation tool that adequately evaluates quality of life of children with SCI. In order to compensate for the inadequate or lack of evaluation tools, health care providers often administer multiple assessments at one time that place burden on children and families and do not necessarily provide the information that is desired.

The Shriners Hospitals for Children – Philadelphia was awarded a four-year research grant (Mulcahey, PI) to develop and evaluate large item banks designed to evaluate activity performance and participation in children and youth with spinal cord injury. The study is a multi-center effort with the Shriners Hospitals for Children - Chicago and Northern California as data collection sites and with Dr. Steve Haley at Boston University. The goal of the study is to develop computer adapted test (CAT) platforms of activity performance and participation. CAT is a 21st century measurement tool that is causing a shift in the outcomes measurement process. An example of a CAT testing platform is the SAT exam taken by high school students. There are thousands of SAT test items in the computer and, based on the response of the first item, computer logic determines the appropriate second item and, based on the response of the second item, computer logic determines the choice of the third item and so on. As a consequence of computer adaptive testing, students are able to complete an

exam based on their abilities and the number of items and the time required to complete the test is greatly reduced. The SCI CAT will function similarly by selecting items tailored specifically to the child, which will shorten the overall time required for the assessment but still provide precise and important information. The SCI CAT will allow clinicians to evaluate treatment interventions such as upper extremity tendon transfers and evaluate the impact of SCI on children's participation at home, school and the community longitudinally. The ultimate goal of the SCI CAT research is to provide the Shriners Hospitals for Children and other pediatric institutions with a dynamic computer-based measurement tool that is capable of evaluating activity performance and participation not only in children with SCI but in any child receiving care at the hospitals.

Year one of the study involved building two comprehensive item pools used to evaluate activity performance and participation¹. This was a multi step process which started with the development of conceptual definitions of the two constructs: activity performance and participation. The next step involved a review of existing assessment tools for important concepts and patient chart reviews to identify patient-identified goals that were scored as important among children and parents. Iteratively, items were written, refined, underwent cognitive testing^{2,3} and modified. Multidisciplinary focus groups were used to reduce the total number of items selected for the item banks.

The item banks subsequently underwent a large scale calibration study that involved administration of all of the items to 375 children with SCI and 320 parents of children with SCI. The calibration study was designed to test the uni-dimensionality of the item banks, to evaluate the validity of the test items and to apply contemporary

item response theory (IRT) to the items to solidify a final CAT platform. We are currently completing the analysis of the calibration study and anticipate fully developed CAT platforms by year's end.

The final phase of the SCI CAT study, which will occur in 2010, includes psychometric studies of the SCI CAT. During this phase, the SCI CAT will be administered to 100 children with SCI and 100 parents of children with SCI.

Once developed, this tool will span the pediatric age continuum (4-21 years), provide relevant scores across categories of neurological injury, and will be designed to be implemented across a variety of clinical and research settings. The SCI CAT, which will address a serious deficiency in the ability to conduct pediatric SCI outcome monitoring and clinical research, will establish the first CAT containing items designed specifically for children with SCI.

1. Calhoun CL, Haley SM, Riley A, Vogel LC, McDonald CM, Mulcahey MJ. Development of items designed to evaluate activity performance and participation in children and adolescents with spinal cord injury. *International Journal of Pediatrics*, In Press.

2. Mulcahey MJ, DiGiovanni N, Calhoun CL, Homko E, Riley A, Haley S. Children's and Parents' Perspectives about Activity Performance and Participation following Spinal Cord Injury: Themes from a Cognitive Interview Study. *AJOT*, In Press.

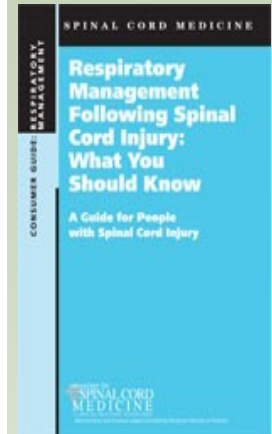
3. Mulcahey MJ, Calhoun CL, Riley A, Haley SM. Children's reports of activity and participation after sustaining a spinal cord injury: A cognitive interviewing study. *Developmental Neurorehabilitation*, In Press.

New Consumer Guide Released

People with spinal cord injuries and their caregivers have a new resource to help with improving the quality of their lives: [Respiratory Management Following Spinal Cord Injury: What You Should Know](#), new from the Consortium for Spinal Cord Medicine.

This consumer guide is a companion to the clinical practice guideline, [Respiratory Management Following SCI](#), published by Paralyzed Veterans of America (PVA) on behalf of the Consortium for Spinal Cord Medicine.

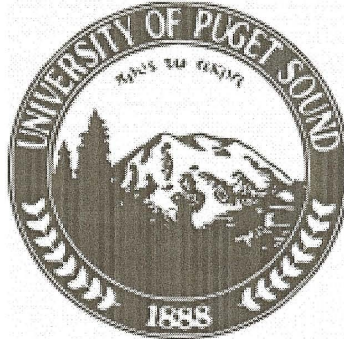
[Click here](#) to download the Respiratory Management consumer guide for FREE today!



Remember

October is National Physical Therapy Month

*Move Forward.*TM
Physical Therapy Brings Motion to Life
American Physical Therapy Association



The University of Puget Sound

Length of Inpatient Rehabilitation Stay Following a C6 or C7 SCI and the Effects on Wellness, Function, and Community Participation Volunteers wanted for a research study

WHO: We are recruiting individuals who have sustained a C6 or C7 spinal cord injury who are over the age of 18, neurologically stable, and at least 1-year post injury. Participants cannot have co-morbidities such as cancer or brain injury and must be able to read and understand English.

WHY: This research is being done to determine the relationship between the length of in-patient physical therapy rehabilitation and overall functional outcome for patients with a C6 or C7 SCI. Determining an optimal length of stay will be beneficial in the recovery process following a traumatic spinal cord injury for developing an appropriate rehabilitation protocol.

BENEFITS AND RISKS: There is unlikely to be any risks or direct benefits from being in this study. The primary benefit is to help health care providers determine how long people with spinal cord injuries should remain in rehabilitation in order to have the best outcomes.

WHEN AND WHAT: This study is a series of surveys that can be filled at home and returned via mail, fax, or email.

HOW: If you would like to participate in this research study, please contact us via email at kmerschel@ups.edu or by phone at 253-879-2445.

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ACRM-ASNR Joint Educational Conference

Plan now to attend the 2009 ACRM-ASNR Joint Educational Conference in Denver, Colorado, at the Marriott Denver Tech Center Hotel, October 7-11, 2009. The theme for 2009 is *Building the Evidence Base for Rehabilitation Interventions: From Research to Clinical Care*.



The American Spinal Injury Association (ASIA) and the American Paraplegia Society (APS); the American Association of SCI Nurses (AASCIN); the American Association of SCI Psychologists and Social Workers (AASCIPSW); and the Therapy Leadership Council (TLC) will join forces this year to present the “Congress on Spinal Cord Medicine and Rehabilitation.” The congress will be held from Sept. 23-26, 2009 in Dallas, TX.



American Physical Therapy Association | Combined Sections Meeting



International Spinal Cord Society

ISCOS
2009

21-24 October

Florence

48th Annual Scientific Meeting



Allegoria della Primavera,
by Sandro Botticelli, tempera on panel,
Museo degli Uffizi, Florence
(concession of the Ministry
for Cultural Assets and Activities)

ISCOS