



RRTC Newsletter

Rehabilitation Research and Training Center on Secondary Conditions in Individuals with SCI



FALL 2011

A newsletter of research activities and implications for RRTC study participants and people with SCI

Summer Students Present Projects!

On Wednesday, August 3, our two undergraduate students for the RRTC and DRRP grants presented their final research projects to the MUSC Office of Graduate Studies.

Allysan Scatterday, a rising senior at the College of Charleston, presented her research titled, "In-home exercise program produces functional outcomes for individual with incomplete spinal cord injury." In her presentation, she discussed a definition and description of SCI, including common secondary conditions related to SCI. She also discussed benefits of exercise to individuals with SCI and the personal and environmental barriers experienced that deter exercise. Allysan wanted to describe how to eliminate these barriers to exercise to allow individuals with SCI to participate with higher rates in this beneficial activity. She described a case study to explore the effectiveness of an in home physical activity program to reduce environmental barriers to exercise.

The nine month home exercise program in the study was found to decrease barriers to exercise while improving the functional outcomes of range of motion, cardiorespiratory

fitness, locomotion, and manual muscle testing. Future research can be completed on effectiveness of home exercise programs to increase activity levels in this population and decrease the prevalence of secondary conditions.

Leah Snipe, a rising sophomore at Wofford College, presented on, "The prevalence of cardiopathy, hypertension, diabetes, and obesity in persons with acute TSCI." Leah began her presentation with an introduction to traumatic spinal cord injury (TSCI), cardiopathy, hypertension, and diabetes. She described that previous research has illustrated that individuals with TSCI have higher prevalence of cardiopathy, hypertension, and diabetes several years post injury.

The goal of her research was to determine if those individuals hospitalized from TSCI already have a higher incidence of cardiopathy, hypertension, and diabetes or are at greater risk of developing these conditions.

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Allysan Scatterday, Dr. James Krause and Leah Snipe after research project presentations.

“The goal of my research was to determine if those individuals hospitalized from TSCI already have a higher incidence of cardiopathy, hypertension, and diabetes or are at greater risk of developing these conditions.”

Leah Snipe, undergraduate student, Wofford College

Recent RRTC Publications & Presentations

Kohout, R., Saunders, L.L., & Krause, J.S. (2011). The relationship between prescription medication use and ability to ambulate distances after spinal cord injury. *Archives of Physical Medicine and Rehabilitation*, 92, 1246-1249.

Krause, J.S., & Saunders, L.L. Do risk factors for mortality after SCI parallel those from the general USA population? Invited oral presentation to the Awards Session of the American Spinal Injury Association/International Spinal Cord Society annual conference, Washington, DC: June 2011.

Saunders, L.L., Krause, J.S., & Focht, K.L. A longitudinal study of depression after spinal cord injury. Oral presentation at the American Spinal Injury Association/International Spinal Cord Society annual conference, Washington, DC: June 2011.



July RRTC Grand Rounds!

On Tuesday, July 12, 2011 we hosted our quarterly Grand Rounds presentation for the RRTC grant. Dr. Jim Krause, principal investigator of the grant, presented:

"Preventing secondary health conditions and promoting longevity after spinal cord injury (SCI)." The objectives of the presentation included: identify a minimum of 3 health behaviors that affect the development of secondary conditions or early mortality, identify a minimum of 2 psychological factors that lead to an elevated risk of secondary health conditions or early mortality, and identify optimal predictors of mortality which should be assessed to identify high-risk cases and implement prevention strategies for elevated risk of secondary health conditions or early mortality after SCI.

In the presentation, Dr. Krause gave an overview of SCI and secondary health conditions related to SCI. He discussed previous team research completed on secondary health conditions utilizing the risk model classifying the types of factors related to maintaining health and longevity after SCI. This risk model has found that biographic and injury factors, as well as behavioral factors and socioeconomic factors are important in determining secondary conditions and mortality after SCI, even after controlling for health status. In addition, it was concluded that life expectancy

needs to become a greater priority in SCI care, every clinician has the opportunity to become an educator, and diminished life expectancy is a consequence of SCI that should be discussed with the individual and his/her family. Acute and scheduled follow-ups in individuals with SCI should include screening for risk factors for mortality, including signs of clinical depression. Lastly, prevention strategies are needed prior to the development of secondary conditions that threaten long term survival with SCI.

One hundred and eighteen attendees came to the presentation which included physical therapists, occupational therapists, students of physical therapy and occupational therapy, and researchers. Attendees were from MUSC and neighboring Roper Rehabilitation Hospital, and the VA Hospital. All attendees were eligible for one hour of CME or CEU credit. The next Grand Rounds will be in October at MUSC.

Here is the link to the full video of our Grand Rounds presentation:

http://chpondemand.musc.edu/rehab_int/Grand_Rounds_07_12_11.mp4

“ It was concluded that life expectancy needs to become a greater priority in SCI care, every clinician has the opportunity to become an educator, and diminished life expectancy is a consequence of SCI that should be discussed with the individual and his/her family. ”

~ Dr James Krause,

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Summer Students Present Projects!

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Leah used data from the South Carolina TSCI Registry and database and controlled for injury severity. She found that risk for cardiopathy, hypertension, and diabetes does increase with TSCI, as soon as injury occurs. Obesity is also a risk factor in developing these conditions.

Leah recommended addressing obesity in persons with acute TSCI to help prevent these secondary conditions. Her research

also looked at race and SES and found that minorities as well as persons with low SES are generally less healthy, at higher risk for early mortality, and less likely to receive adequate care. The clinical implications of this research are largely preventive, in that screening needs to be increased in individuals with TSCI who are obese and have already existing cardiopathy, hypertension, and diabetes. Early screening can help prevent the conditions from worsening.