



Polytrauma/Blast-Related Injuries

Polytrauma/Blast-Related Injuries-QUERI Update

December 2008

As of October 9, 2008, approximately 37,000 service members have been wounded in action or killed in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF), and thousands of those who were wounded suffered blast-related injuries. Improvised explosive devices, blast (high-pressure waves), landmines, and explosive fragments now account for the majority of combat injuries. Most of these blast/explosion-related injuries are polytraumatic, meaning that they result in impairments in more than one body system or organ. New systems of care have been developed to address the rehabilitation needs of service members with these complex injuries, particularly returning OEF and OIF veterans.

Priority: Post-Deployment Healthcare Challenges

The Polytrauma and Blast-Related Injuries Quality Enhancement Research Initiative (PT/BRI-QUERI) was established in October 2005 to identify and implement best evidence-based practices for the post-deployment healthcare challenges presented by modern warfare. PT/BRI-QUERI is dedicated to promoting the successful rehabilitation, psychological adjustment, and community re-integration of men and women who have experienced polytrauma and blast-related injuries. This QUERI center also focuses on the needs and care of the families of these service members, as well as the coordination of care across the continuum of military healthcare systems – from the Department of Defense (DoD) through both facility-based and community-based VHA care.

The VA has created a tri-level Polytrauma System of Care (PSC) comprised of four Polytrauma Rehabilitation Centers (PRCs) that provide specialized acute rehabilitation treatment and expand the clinical expertise in care of polytraumatic injuries. These acute rehabilitation centers are located in Minneapolis, MN, Palo Alto, CA, Richmond, VA, and Tampa, FL. Service members with polytraumatic injuries receive specialized care in the 21 VISN-based Polytrauma Network Sites (PNS) located in the four PRCs, as well as the other 17 VISNs.

The third component of the PSC are the Polytrauma Support Clinic Teams

(PSCT) located in local facilities, in addition to Polytrauma Points of Contact (PPOC) located at all other VHA facilities that have the responsibility to assist polytrauma patients in their local area with accessing the necessary and appropriate services.

New and Ongoing PT/BRI Funded Studies

Projects approved for funding in 2008 include three that examine Traumatic Brain Injury and Post-Traumatic Stress Disorder (TBI/PTSD) comorbidity and two that focus on TBI assessment and screening.

1.) *Epidemiological Study of Mild Traumatic Brain Injury Sequelae Caused by Blast Exposure during Operations Iraqi Freedom and Enduring Freedom.* This study examines the prevalence of post-concussive syndrome (PCS) after blast-related mild TBI in OEF/OIF veterans. Findings will inform secondary prevention and treatment strategies, as well as selection of methods to detect mild TBI. This study is funded through the Department of Defense (DoD); for more information contact David Cifu, MD at david.cifu@va.gov.

2.) *Mild TBI/PTSD Comorbidity and Post-Deployment Outcomes in National Guard Soldiers.* This study uses longitudinal data from National Guard soldiers returning from Iraq in order to identify

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the rate of TBI/PTSD comorbidity in returning veterans, provide information on VA's TBI screening practices, and define health care utilization outcomes for veterans with TBI/PTSD comorbidity. This is a QUERI funded study; for more information, contact Melissa Polusny, PhD at melissa.polusny@va.gov.

3.) *TBI/PTSD Comorbidity Quality Improvement (QI) Project.* PT/BRI-QUERI has partnered with the National Center for PTSD and Physical Medicine and Rehabilitation to examine current practices, challenges, and gaps in services for OEF/OIF veterans who have TBI and PTSD. This is funded by QUERI; for more information, please contact Nina Sayer, PhD at nina.sayer@va.gov.

4.) *Cognitive Assessment of Veterans after Traumatic Brain Injury.* Dr. Kerry Donnelly's study is examining cognitive and psychological profiles of OEF/OIF veterans in VISN 2. Her findings will shed light on the consequences of blast exposure, as well as the relationship between TBI and psychiatric disturbance. This is an HSR&D funded study; for more information, contact Kerry Donnelly, PhD at kerry.donnelly@va.gov.

5.) *Use of VA Administrative Data to Examine TBI Screening and Evaluation.* TBI screening and evaluation are a high priority for VA and the PT/BRI-QUERI. This project is using VA administrative data to describe TBI screening and follow-up evaluation practices, and to identify clinic- and patient-level factors that affect screening, screening results, and follow-up evaluation. This study is funded by QUERI LIP; for more information, contact Nina Sayer, PhD at nina.sayer@va.gov.

Polytrauma/Blast-Related Injuries-QUERI has formed a family care collaborative with the four VA Polytrauma Rehabilitation Centers (PRCs) to promote family-centered care, standardize family care across and within all the PRCs, and optimize outcomes for family members of severely injured soldiers. The PT/BRI Family Care Map collaborative developed a web-based

tool to help family members understand the rehabilitation process and their role as part of the care team. The website includes reference materials, such as the Polytrauma Family Education Manual, as well as links to external references. The tool is being piloted at the four PRCs for six months. For more information about this project, contact Carmen Hall, RN, PhD at carmen.hall@va.gov.

How Do I Learn More?

For more information about PT/BRI-QUERI, contact:

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Web Resources

For more information about the QUERI program in general, and to link to all of the individual QUERI Centers, please go to www.queri.research.va.gov

The PT/BRI-QUERI Executive Committee

Each QUERI Executive Committee is co-chaired by research and clinician experts. The research coordinator for the PT/BRI-QUERI is **Nina Sayer, PhD**, and the clinical co-coordinators are **Barbara Sigford, MD, PhD**, and **Steven Scott, DO**. This executive committee brings together a diverse group of researchers, clinicians, and leaders from VA, DoD, and consumer organizations committed to improving care for individuals with polytrauma and blast-related injuries. The PT/BRI-QUERI Executive Committee members include: Lucille Beck, PhD; David Cifu, MD; Adam Darkins, MD; **Carmen Hall, PhD, RN** (Implementation Research Coordinator); Michael Jaffee, MD, MC, USAF, FS; Robert Kerns, PhD; Laurent Lehmann, MD; Henry Lew, MD, PhD; Audrey Nelson, PhD, RN; Paul Pasquina, MD; and Patricia Rossbach, RN.