Report of (VA) Consensus Conference: Practice Recommendations for Treatment of Veterans with Comorbid TBI, Pain, and PTSD

Executive Summary:

The Special Committee on PTSD in FY2008 recognized the dilemma of increasing numbers of Veterans presenting with PTSD and co-morbid Mild Traumatic Brain Injury (mTBI) faced by VA clinicians and recommended a consensus conference be planned and convened. The Undersecretary for Health concurred and in the VA response to the Committee's 2008 Report, charged the National Center for PTSD to develop a multidisciplinary workgroup to proceed with plans. The group was asked to propose treatment recommendations within the context of current programs and processes that could be rapidly disseminated to VA clinicians.

A conference planning committee was organized in October 2008, with membership from VA's Office of Mental Health Services, and Physical medicine and rehabilitation. It was quickly recognized that pain was such a common co-occurring disorder with PTSD and m TBI in order to fulfill the goal of comprehensive care for Veterans, Pain Management should also be considered as a secondary target problem in addition to the primary concerns of co-occurring PTSD and TBI. Consequently, Planning Group membership was expanded to include input from VA Neurology, Pain Management, Primary Care, and Pharmacy as well as from the Defense Center of Excellence in TBI and Psychological Health.

Thirty-one invited participants from the Department of Veterans Affairs (VA), the Department of Defense Centers of Excellence (DCoE), and one national expert in brain injury from outside the VA and DoD met as a consensus panel in Washington, D.C. on June 1 and 2, 2009 to make specific practice recommendations to improve the VA health care services, educational, and systems coordination for Veterans with posttraumatic stress disorder (PTSD), pain and a history of mild traumatic brain injury (mTBI). Participants were purposefully selected to represent experts in mental health, rehabilitation, pain, neurology, primary care, pharmacy and research.

The conference consisted of (1) a day of round-table discussion to review challenges and the current knowledge base in three primary strategic aspects of care delivery to the above patients: clinical assessment, treatment planning and treatment; and (2) a half day of development of clinical practice recommendations and education and systems priorities. Primary sponsors of the conference were the Office of Mental Health Services (OMHS) and the Office of Rehabilitation Services, Department of Veterans Affairs.

The key questions the group addressed were:

1. **Assessment -** What are the best approaches to assess PTSD/history of mTBI and pain in Veterans presenting for treatment?

2. **Treatment Planning -** What are the challenges of treatment planning with a Veteran with comorbid PTSD, pain and a history of mTBI?

3. **Treatment -** What do the practice guidelines tell us about the most effective PTSD, pain, and a history of mTBI treatment strategies?

In addressing the three key questions, issues emerged in four thematic areas that helped categorize topics: 1) educational; 2) access or process of care; 3) assessment/treatment; and 4) systems. Specifics related to these four themes are discussed in greater detail below. The consensus committee reached the following conclusions:

With respect to assessment, the consensus panel agreed that utilization of the existing VA tools to assess Veterans for PTSD/mTBI/pain needs to be coordinated with screening results clearly distinguished from diagnostic assessment. Practitioners need to understand the difference between historical exposure (e.g. mTBI) and current symptoms. Comprehensive assessment of PTSD, mTBI, pain and other comorbidities (such as depression and alcohol/drug misuse) is essential.

On the issue of treatment planning, a major challenge identified by the consensus panel was developing an interdisciplinary treatment plan that coordinates and incorporates input from all necessary specialty services. Panelists emphatically pointed out that it takes significant time for practitioners to meet with experts from other disciplines to plan appropriately coordinated care. Furthermore, since consulting practitioners often do not receive clinical workload "credit" for such activities, they are not motivated to consult and promote collaborative care.

In terms of treatment recommendations, the consensus panel recommended at this time to use the current clinical practice guidelines for PTSD, mTBI and pain for patients who concurrently meet diagnostic criteria for at least two of these disorders. At present, there is no data suggesting that the current clinical practice guidelines should be modified for treatment of comorbid PTSD, mTBI and/or pain. Ongoing systematic treatment monitoring is essential to continuously obtaining evaluation on the effectiveness of recommended treatments for complex patients.

Background:

As the conflicts in Afghanistan and Iraq have continued, Veterans are presenting to VA clinicians with a diagnosis of PTSD, a history of mTBI, and pain symptoms in increasing numbers. There are, however, no evidenced-based treatment trials to guide clinical practice for the comorbid conditions. Clearly direction on clinical assessment and treatment recommendations for clinicians needs to be developed. Given the toll of PTSD and the additional impacts of a history of mild traumatic brain injury and pain, it is imperative that clinical guidance for the complex comorbidities be developed. Clinical practice guidelines currently exist for the three separate conditions: posttraumatic stress disorder, mild traumatic brain injury/concussion and pain management. The task of the consensus conference was to determine if the existing separate clinical practice guidelines offer useful recommendations to clinicians when they are treating a Veteran with all three conditions. Preliminary research evidence is scant for both the psychological and medication interventions for PTSD, a history of mTBI and/or pain.

The PTSD/ m TBI conference planning committee was organized in October 2008 by Drs. Matthew Friedman, Robin Hurley, and Nancy Bernardy. (For a list of planning committee members, consensus participants and their discipline, see Appendix A.) Prior to the formation of

the planning committee and as a separate project , the Polytrauma and Blast-Related Injuries QUERI had developed a needs assessment study of provider perceived challenges in efforts to meet the needs of new Veterans with a history of mTBI and PTSD and to identify opportunities for quality improvement and priorities for research. Semi-structured interviews were conducted with 40 providers within either PTSD programs or Polytrauma Network Sites from each VISN. Interview questions focused on assessment and treatment of patients with mTBI/PTSD. Because planning committee members (e.g. Dr Nina Sayer) participated in the survey project, the Consensus Conference was able to access the survey data shortly before the actual publication of the paper describing the survey results. The paper (Sayer et al., 2009) was published after the conference so it is not included in the references. Findings pointed to the need for guidance on best practices for assessment and treatment of mTBI/PTSD, improved systems to coordinate or integrate services, a structured approach toward patient and provider education, and research to build the evidence-base for practice. The results of the needs assessment helped shape the key questions discussed during the consensus conference.

As a starting principle, the group defined its terms. As there has been much recent discussion about the language used when describing traumatic brain injury, the planning committee decided prior to the meeting not to focus on terminology during the conference but instead to recognize that we were talking about a " history of mTBI" when using the term of comorbid PTSD and mTBI. When we referred to TBI during the conference, it was primarily with respect to mTBI/concussion. Most of the discussion of this conference was on mTBI because of its prevalence among OEF/OIF Veterans (Hoge, et al, 2008). We use the term "post concussive symptoms" in this report to refer to the symptoms that some individuals develop following an mTBI but are not a part of the diagnosis of mTBI. We also use the term "comorbidity" to refer to PTSD, a history of mTBI, and/or pain symptoms.

In preparation for the meeting**,** the Minneapolis VA Evidence Synthesis Program, Center for Chronic Disease Outcomes Research conducted a literature search through MEDLINE for articles from 1980 to April 2009 that focused on prevalence, assessment and treatment of co-occurring TBI and PTSD. Thirty articles met inclusion criteria and an additional five studies were included under secondary results (See Appendix C for review of key findings). In addition, the Polytrauma and Blast-Related Injuries (PT/BRI) QUERI collaborated with the National Center for PTSD (NCPTSD) and the VA's Office of Rehabilitation Services to conduct a needs assessment study involving clinicians who work in specialized PTSD and brain injury programs.

Material was provided to participants prior to the consensus conference including 24 scientific articles (For references, see Appendix D), the VA/DoD Clinical Practice Guidelines for post-traumatic stress disorder, concussion/mild traumatic brain injury and pain management as well as the Consensus Statement of the 31 July and 1 August 2008 Defense and Veterans Brain Injury Center (DVBIC) Consensus Conference on the Acute Management of Concussion/Mild Traumatic Brain Injury (mTBI) in the Deployed Setting. During the meeting, preliminary data on the effectiveness of cognitive behavioral therapy (CBT) in individuals with comorbid PTSD/history of mTBI from two VA PTSD treatment clinics were made available.

The group worked from a predefined agenda (See Appendix B) of questions in a roundtable format: What are the best approaches to assess PTSD/history of mTBI and pain in Veterans presenting for treatment? What are the challenges of treatment planning with a Veteran with

comorbid PTSD, pain and a history of mTBI? What do the clinical practice guidelines tell us about the most effective PTSD, pain, and a history of mTBI treatment strategies? The first day, moderated by Dr. David Oslin, was spent delineating what was known and importantly what was not known about clinical assessment, interdisciplinary treatment planning, and treatment of the comorbidities. At the end of the day, the planning committee met to synthesize all of the input from the consensus participants.

There were surprisingly few conflicting recommendations among this diverse group of clinicians from different specialties. Regarding assessment, the consensus panel agreed that the existing VA tools to assess Veterans for PTSD/mTBI/pain need to be coordinated to allow for a comprehensive determination of comorbidities and a differentiation of current symptoms versus the historical diagnosis. Research should be conducted that identifies additional questions/tools that clinicians should add to their assessment for symptoms or functional problems.

In the area of treatment planning, the primary challenges identified by the consensus panel were in the difficulties of doing an interdisciplinary treatment plan that coordinates with all necessary specialty services. Practitioners spoke of the time it takes to meet with other departments to plan coordinated care. They also emphasized that because they often do not receive clinical workload "credit" for such time spent as consultants, they are not motivated to consult and promote collaborative care.

The consensus panel recommended that at this time, the most effective treatment strategies are likely to be the current clinical practice guidelines for the three comorbidities. One challenge practitioners face is understanding the guidance in all three guidelines. A useful instrument would be the development of a brief clinical support tool that brings together the three guidelines in a way that clinicians can actually use. Clinical research will need to identify what modifications, if any, need to be made to the current evidence-based treatment recommendations. Clinical approaches that complement the currently recommended cognitive-behavioral therapies for PTSD include adding pain management resources, concentration and attention measures, and obtaining more subjective ratings of improvement in post concussive and pain symptoms before and after PTSD treatment. Obtaining behavioral assessments of functioning in the client's natural environment will also provide valuable information. Through research, treatment strategies such as assistive devices and repetition will be refined and disseminated. Systematic treatment monitoring will then provide valuable information about the effectiveness of recommended treatments.

As previously noted, in discussing the three key questions in the conference, issues emerged in four important thematic areas: 1) educational issues; 2) access or process of care; 3) assessment/treatment issues; and 4) systems issues. Thus, the recommendations of the consensus panel with regard to clinical assessment, treatment planning, and treatment of the comorbidities of PTSD, mTBI and pain are presented in more detail through the four themes:

1. Educational Issues

Most of the educational issues raised were concerned with the assessment and diagnosis of mTBI. The consensus panel felt there is a clear need for education aimed at providers in addition to the development of educational recommendations/materials for patients/family members. One issue exists around the need to educate practitioners about the difference between a history of

brain injury or "exposure" versus current symptoms and severity. It was evident from the discussion that some providers in the field still think that a diagnosis of mTBI depends on a patient reporting current symptoms such as headache or confusion. This may particularly be true in primary care settings where initial screening often occurs. A history of mild traumatic brain injury does not predict or indicate current symptoms a patient may have but rather is a descriptor of what happened at the time of injury, and indicates a need for further assessment. Providers should be informed about the VA screening process and understand that a positive screen for TBI and/or PTSD and referral to a specialty clinic for more thorough assessment does not mean the Veteran has a diagnosis. Providers should be trained to present the screen's results in a fashion that promotes recovery and wellness, regardless of whether the screen triggers further assessment.

The consensus panel agreed that there is a need for systematic and ongoing patient/family education from screening through diagnosis through treatment that includes information on the comorbidities of PTSD, a history of mTBI, and/or pain. The consensus panel felt there should be an emphasis on demystifying the illness and on a recovery approach. Patients and families should understand from the beginning that full recovery is a reasonable expectation.

Finally, the consensus panel stressed that there needs to be an increased familiarity within the VA of available resources. Often clinicians are unaware of existing resources in their own facilities or at sister facilities: e.g. pain programs, post-deployment clinics, polytrauma network sites, polytrauma resource centers, and OEF/OIF programs. There needs to be provider education on the facility's system of care, on how to advise a patient and family what they can expect to receive for treatment and what is available at a facility. Coordinated materials that cover this information for both patient/family and provider education should also be readily available. The VA has committed considerable resources to make these programs available for both clinicians and patients. Disseminating the availability and content of these programs is a must. Clinicians should also utilize the experts and invaluable resources from VA's National Center for PTSD, regional Polytrauma Rehabilitation Centers and VISN-level polytrauma network sites, the Mental Illness Research, Education, and Clinical Centers (MIRECCs) and Centers of Excellence including the Chronic Pain Rehabilitation Program at Tampa and the VA Connecticut PRIME center. There needs to be increased dissemination of useful resource web links for both practitioners and Veterans and family members and knowledge of where to access helpful information.

2. Access/Process of Care

As a first step, the consensus panel agreed that it was important to develop knowledge about entry to care pathways for Veterans with the comorbidities of PTSD, mTBI, and/or pain. It should be emphasized that there is no "wrong door" to access treatment. If a Veteran comes to primary care or to a specialty clinic, screening and assessment need to occur with coordination of services and correct communication from the beginning that a positive screen is not a positive diagnosis. Further assessment is needed before any diagnosis can be made. It is also important to strike a proper balance between specialty and primary care treatment. The consensus panel emphasized that although most Veterans may be screened in primary care and may find it a more comfortable location to seek treatment for symptoms such as pain and insomnia, further assessment and diagnosis should be coordinated with specialty care.

There is a need to develop a VA "menu" of different models of care that are appropriate in facilities of different sizes and levels of complexity. "Potential best practice models" should be identified and shared with the field. Core essential elements for clinical success should be identified and maintained. It should be noted that that potential best practice models are not just seen in the large polytrauma settings; different practice models may be best in different clinical settings. Smaller VA Medical Centers, Community Based Outpatient Clinics, and Vet Centers should be encouraged to share their models of care as "Potential Best Practices" with VHA administration and other small facilities. This currently has not been done and is an immediate, easily accomplished priority.

An additional key component to full interdisciplinary care is supported employment and educational/vocational training. The importance of a "recovery expectation" should be stressed and shared with practitioners, Veterans and family members.

3. Clinical Assessment/Treatment

The consensus panel stressed the importance of a careful, comprehensive clinical assessment and interdisciplinary treatment plan that includes determination of all comorbidities and a differentiation of current symptoms versus historical diagnoses. The panel noted that OEF/OIF Veterans are generally referred to specialty clinics for assessment and/or treatment after screening positive for PTSD or a history of mTBI in primary care where the meaning of a positive screen is not always well understood. Recognition and treatment of all comorbidities, particularly mental health diagnoses, may get overlooked, depending on how sub-specialized the specialty clinic is. There is a need for concurrent, collaborative care that allows consultation between polytrauma, pain and mental health specialties that leads to coordinated care plans. Given the overlap of post-concussive symptoms with PTSD and depression, mental health practitioners, polytrauma and pain experts need to collaborate care. All clinicians should deliver the same consistent message that encourages a recovery prognosis, discharge planning with well-defined exit strategies, and step-down levels of care. The use of post-deployment health clinics would provide continuity of care for Veterans and their family members after discharge.

Finally, the consensus panel noted that active discussion between providers needs to happen with acknowledgment that chart notes in the electronic medical record is not the best way of communicating with colleagues around complex comorbid cases. The consensus panel added that it is important to provide Veteran-centered care that prioritizes and incorporates the patient's goals and preferences and that includes family members as much as possible in the assessment and treatment process. There was consensus that the use of a motivational interviewing style with this cohort could be helpful in determining treatment goals.

The current VA/DoD clinical practice guidelines for all three of these comorbid conditions offer general assessment and treatment guidance. There was complete consensus that the current VA/DoD clinical practice guidelines for PTSD, mTBI and pain should be followed at this time, until new research suggests other approaches or demonstrates that current clinical practice guidelines are ineffective or inappropriate for this complex population.

The current clinical practice guidelines for PTSD recommend, as first line treatments, cognitive-behavioral therapy including cognitive processing therapy, prolonged exposure, and eye movement desensitization and reprocessing. In a randomized controlled trial of cognitive

processing therapy and prolonged exposure conducted in civilian women, substantial and clinically significant treatment gains were achieved in both treatments and maintained at the end of a five-year follow-up (Resick, Nishith et al. 2002). Outcome data from two PTSD treatment programs (Ann Arbor and Cincinnati) provide preliminary support for the consensus recommendation to follow the current evidence-based treatments. These pilot data indicate that Veterans with PTSD and concurrent mTBI benefit as much from either prolonged exposure or cognitive processing therapy as Veterans with PTSD alone. In summary, there was agreement that Veterans who experience mTBI and/or pain, along with PTSD, should have the opportunity to receive the two best evidence-based treatments in the VA/DoD practice guidelines for PTSD, prolonged exposure therapy or cognitive processing therapy.

In the case of medication management, it is critical to provide adequate dosage. Although many practitioners know to "start low and go slow," oftentimes, practitioners fail to titrate up to fully beneficial doses of medication. There may need to be risk-benefit profiles established before selection/prescription of medications. For example, a Veteran could be told that medication "A" (such as a central stimulant) may help your mTBI symptoms of memory loss or decreased concentration but may not help with PTSD symptom "B" or might possibly make your PTSD worse. An antidepressant that is useful in PTSD might be contraindicated after a TBI due to anticholinergic or sedative side effects. Two selective serotonin reuptake inhibitors (SSRIs), sertraline and paroxetine have FDA approval as first-line recommended treatments in PTSD. There was consensus that they are both indicated for veterans with PTSD with or without comorbid mTBI and/or pain.

There may be several key domains that require attention for treatment adjustments. These domains could be developed into educational materials and include what to do with (a) partial responders or those who are not compliant with treatment; (b) how to address problems with memory, attention or executive functioning; hearing loss, pain, balance problems and insomnia; polypharmacy; and substance use or abuse.

The new clinical practice guideline for concussion/mTBI focuses on promoting a recovery expectation, noting that a vast majority of patients will improve without lasting effects and that mTBI is a common injury with a time-limited, predictable course. It states that education of patients and families is the best available intervention for veterans starting treatment. For ongoing or chronic post-concussive symptoms, the guidelines take the clinician through each symptom profile step-by-step for recommended assessments and treatments.

The pain management guidelines emphasize that a comprehensive pain assessment be conducted with attention to important comorbidities. Treatment most often involves optimized pharmacological management and evidence-based non-pharmacological interventions. The development of an integrative, multimodal and multidisciplinary pain plan of care to include family members is a critical component of the guidelines.

The consensus panel, however, was still left with the question of how useful are the current guidelines for treating the two or three of these disorders concurrently and how well can a Veteran with the comorbidities benefit from the evidence-based treatments. Given the lack of clinical trials, it was strongly recommended that systematic monitoring of ongoing treatment be carried out. The importance of measurement and monitoring outcomes was strongly endorsed. The effectiveness of treatments that are delivered and the sophistication of the provider need to

be continually assessed. Information from such evaluations will be useful to guide practice until randomized clinical trials can provide more rigorous data. This is especially pertinent when the patient is not progressing after an adequate trial of recommended treatment. Finally it should be reinforced that providers need to stop medications when they are not effective. Polypharmacy remains a significant concern for patients with multiple comorbidities.

4. Systems Issues

The majority of concerns from the consensus panel were related to systems issues. There is a systematic need to support clinicians who are providing interdisciplinary care. Currently, there is no consistent workload credit given to clinicians who take the time to manage or review cases with other providers. If workload credit was consistently appropriated for clinical care coordination activities, it would encourage and promote coordinated, collaborative care. Such a change would then help clinicians to spend the time to utilize consultation resources such as the regional polytrauma network sites (polytrauma resource centers), the MIRECCs, the National Center for PTSD, or other Centers of Excellence. It is also important to encourage and offer incentives to providers to follow the clinical practice guidelines regarding the use of non-formulary medications. For example, if a practitioner, while following a clinical practice guideline, needs to prescribe a non-formulary medication, s/he should be able to utilize a protocol that provides a seamless "by-pass" around the sometimes complex non-formulary approval process. This would allow for appropriate patient care in a less challenging way than is currently available at many facilities. The consensus panel was of the opinion that different VA Medical Centers have different levels of acceptance/denial for approving non-formulary medication use. A standardized protocol throughout VHA would be much better.

Finally, the group acknowledged that OEF/OIF veterans may have multiple case managers and providers in different teams. The consensus participants expressed the view that there needs to be a single provider and/or case manager identified who is responsible for the coordination of care for each Veteran who screens positive for the comorbidities. This is to ensure that interdisciplinary care is afforded in the least complex manner. The case manager could also serve as a resource for the patient and his/her family.

Conclusions: The group presented a draft summary to the meeting participants on the second day during which recommendations were developed, based on the best scientific evidence and expert clinical experience. The recommendations were to guide clinical practice for veterans suffering from co-occuring PTSD, history of mTBI, and pain. A presentation of the conference results was made at the VA OMHS mental health meeting in Baltimore the month after the conference and then a draft consensus statement was developed. This document is the workgroup's consensus statement, prepared for VA review before release of recommendations to the field.

This June 2009 conference was seen as an important first step in developing treatment recommendations for clinicians. Given the current evidence, it is recommended that the current VA/DoD clinical practice guidelines be utilized for Veterans with PTSD/a history of mTBI and pain. Clearly there is a need for further research in clinical trials of both medication and psychological interventions to confirm the effectiveness of treatment strategies and to develop guidance for treatment adjustments that might be essential when all three conditions exist simultaneously and when alteration or augmentation of current practice guidelines appears

necessary. A separate polytrauma conference is scheduled for the third quarter of FY2010 and will make specific research recommendations.

What then are the next steps?

A number of specific recommendations were made that can be implemented now while the necessary research is conducted to offer more specific guidance. They include:

1. Define what constitutes "potential best practice" models in VA for the effective treatment of veterans with co-morbid PTSD and mTBI with, and without the associated co-morbidity of pain. Models should be identified that are appropriate in facilities in different sizes and levels of complexity; then identify those "best practices" that address the three comorbidities across different clinical settings. Such information can readily be shared with the field to quickly improve practice.

   OMHS response: Concur with the need to identify existing best practice programs in the field, starting with specification of effective characteristics of the programs presented at the Consensus Conference and at the July 2009 Mental Health Conference.

2. Determine if it is possible to offer incentives to ensure that clinicians can take the time to manage, collaborate and use consultation services for clinical care coordination for these patients with multiple co-morbidities. These collaborations can include facilitation of communication and treatment planning across rehabilitation, pain, substance abuse, and mental health service providers. The key to this process is workload credit for the time required for collaboration as it is key to treatment delivery.

   OMHS response: Concur in principle that collaborative care coordination is essential for the optimal care of patients with multiple co-morbidities. Consider identifying approaches and administrative policies being developed in conjunction with the Primary Care Medical Home initiative for incentives towards enhanced collaborative care.

3. Information should be developed through consultation with the Rural Health Initiative to determine what special and unique issues arise for the PTSD/ mTBI/pain population of patients in the rural health setting. This could then be disseminated to the field.

   OMHS response: Concur, recommend this activity be associated with the identification of best practice models suggested in Recommendation #1.

4. Ongoing monitoring of treatment outcomes of patients with the comorbidities should be collected to examine variables such as outcomes from cognitive-behavioral treatment, prescribed medications, health care utilization, and no-show rates. This capability already exists and it is important to have a strong clear understanding of this patient cohort.

   OMHS response: Concur with the importance of these types of clinical and process outcome measures, especially as applied to best practice model programs to confirm their efficacy across treatment settings and to identify opportunities for improvement.

5. Importantly, feedback from OEF/OIF Veterans with mTBI has indicated the need to include family members not only in treatment planning and treatment but also to provide support to family members when possible. This single step can greatly increase the expectation of a recovery prognosis and should be coordinated as soon as possible. The inclusion of the family as well as the patient as partners in care is also a cornerstone of the recovery and rehabilitation orientation of VA mental health care.

   OMHS response: Concur: engagement of significant others in the management of poly trauma/ TBI as well as co-morbid PTSD, other mental health tissues and pain management is essential for good clinical outcomes.

6. Educational resources for providers, patients and families should be developed that explain the meaning of a positive screen for PTSD, mTBI and pain and offer information on treatment. These can then be catalogued for easy access and distribution. Resources may also include websites that can reach a broad audience as well as brochures that are easily accessed and/or distributed in the clinic setting that support recovery expectations. Several resources already exist to support clinicians working with patients with these comorbidities and include useful information for patients and families. They include websites such as:

   - the National Center for PTSD website (www.ptsd.va.gov)
   - the VA Mental Health's OEF/OIF website (www.mentalhealth.va.gov/OEFOIF)
   - the MyHealtheVet website (www.myhealth.va.gov)
   - the Defense and Veterans Brain Injury Center website (www.dvbic.org)
   - the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (www.dcoe.health.mil)

   OMHS response: Concur, noting that resources such as the PTSD, mTBI and Pain Management CPGs are already published on web site to which links can be established. Also slides based on the findings of the Consensus Conference have been presented at the July, 2009 Mental Health Conference and the Evolving Paradigms 2 Conference in September 2009, can also be posted on one or more websites for reference by the field.

7. A community of practice website for clinicians treating patients with PTSD/ mTBI /pain co-morbidities would allow participants an opportunity to access resource information and query one another for advice in handling specific problems. To complement these resources, it is essential that recommended outcome measures be developed to capture improvements in clinical outcomes. Finally, consultation models would greatly enhance patient care and decrease systems issues and should be shared and disseminated to the field.

   OMHS response: Concur in principle noting that this recommendation proposes a step wise approach with elements based in other recommendations, such as development of outcome measures. The Informatics implications of establishing a new web site would also have to be considered.

8. Finally, the consensus panel felt that there is a need to develop clear action plans for research priorities in treatment of patients with PTSD/ mTBI/ pain with timelines in advance of a research summit scheduled for FY2010.

   OMHS response: This recommendation will be referred to the Office of Research & Development which had observers at the Consensus Conference.

Summary

The work of the consensus conference panel is a first step in a process of providing practical clinical treatment guidance to clinicians working with Veterans with comorbid PTSD, history of mTBI and pain.

For now, the recommendation of the consensus panel is for clinicians to use the current specialized VA/DOD clinical practice guidelines for mTBI, PTSD and pain (all three are available at www.healthquality.va.gov). These recommendations should be reviewed as new evidence is developed.

These recommendations need to be disseminated to the field quickly, to assist with demystifying the treatment of Veterans with these complex presentations.

Additional research is needed to build the evidence base for practice.

Appendix A

Committee Members and Conference Attendees

Planning Committee Members (and specialty):

Dr. Matthew Friedman - MH

Dr. Robin Hurley - Rehab

Dr. Larry Lehmann - MH

Dr. David Chandler - Rehab

Dr. Nancy Bernardy - MH

Dr. Robert Kerns - Pain

Ms. Kathy Helmick - DCoE

Dr. Sonja Batten - DCoE

Dr. Nina Sayer - Rehab

Dr. Jennifer Mauldin - Pharm.

Dr. Josef Ruzek - MH

Dr. Terry Keane - MH

Dr. David Oslin, Moderator - MH

Conference Observers:

Dr. Wendy Tenhula - MH

Dr. Kathleen Carlson - QUERI

Dr. Alex Ommaya – OR&D

Dr. Terri Gleason – OR&D

Ms. Trish Rikli - EES

Dr. Doug Bidelspach - Rehab

Dr. Robert Ruff - Neurology

Additional Conference Attendees:

Dr. David Cifu - Rehab

Dr. Jennifer Vasterling - MH

Dr. Kate Chard - MH

Dr. Hal Wortzel - MH

Dr. Sheila Rauch - MH

Dr. Barbara Sigford - Rehab

Dr. Henry Lew - Rehab

Dr. Rodney Vanderploeg - Rehab

Dr. Jay Uomoto - Rehab

Dr. Lisa Brenner - Rehab

Dr. Joel Scholten - Rehab

Dr. Ronald Riechers - Neurology

Dr. Jim Kelly - DCoE

Dr. Michael Clark - Pain

Dr. Suzy Gulliver – MH (SUD)

Dr. Kate Andrews – Primary Care

Dr. Karen Seal – Primary Care

Dr. Lori Golterman - Pharm

Dr. Joe Francis – OR&D

Col. Mike Jaffee - DCoE

Dr. Miguel Roberts – DcoE

Dr. Tom McAllister – Dartmouth Medical School

Appendix B

Practice Recommendations for Treatment of Veterans with Comorbid PTSD, mTBI and Pain Consensus Conference - Agenda – June 1 and 2, 2009

Monday, June 1 – Overview/Agreement of Findings

8:00 – 8:10	Inside VACO Perspective – David Chandler
8:10 – 8:30	Welcome and Introductions of attendees – Larry Lehmann
8:30 – 9:00	Overview and Goals of Consensus – Implications of Conference/Interactions with DCoE - Matthew Friedman and Robin Hurley
9:00 – 9:30	Current Needs/Comorbidity Rates/Results from the Systematic Review – Kathleen Carlson

Round Table Discussions – 3 Primary Strategic Aspects: Patients, Systems, and Outcomes – Challenges and Knowledge

9:30 – 10:00 ASSESSMENT – Patients, Systems and Outcomes

Best approaches to assess PTSD/mTBI/Pain

ROUND TABLE QUESTIONS: What questions/tools should clinicians add to their assessment for symptoms/functional problems? What are the systems issues? What does the current knowledge tell us and what are the challenges and outcomes priorities?

10:00 – 10:15 Break

10:15 – 12:15 TREATMENT PLANNING – Patients, Systems and Outcomes

ROUND TABLE QUESTIONS: What are the challenges of treatment planning with a patient with comorbid PTSD/mTBI/Pain? What can we do to overcome them? What are the systems issues? What does the current knowledge tell us and what are the outcomes priorities? What questions/tools should clinicians add to treatment planning when addressing comorbid PTSD/mTBI/Pain? How should treatment planning be altered to address symptoms/functional problems? What might go wrong if you ignore the presence of the other condition?

12:15 – 1:30 p.m. Lunch

1:30 – 3:30	TREATMENT-Patients, Systems and Outcomes ROUND TABLE QUESTIONS: What do the practice guidelines tell us about the most effective PTSD, mTBI, and pain treatment strategies? What are the challenges of treatment with a patient with comorbid PTSD/mTBI/pain? What happens when you add substance use, depression and other comorbidities? Are there interventions that work for comorbid PTSD/mTBI and pain (e.g., skills training)? How should clinicians change the content and format of educational groups and evidence-based treatments such as CPT, PE? What modifications are recommended and are not recommended? Are there certain treatment strategies (e.g., repetition, assistive devises) or interventions (recreational therapy, cognitive rehabilitation) that may improve outcomes for comorbid symptoms? What are the systems issues? What does the current knowledge tell us and what are the challenges and outcomes priorities?
3:30 – 3:45	Break
3:45 – 5:00	TREATMENT (continued) – Medication Management- Patients, Systems and Outcomes ROUND TABLE QUESTIONS: What medications are useful in the treatment of a patient with these comorbidities? How do they alter rehabilitation? What do we use for treating the anger and aggression often seen in this group of patients? What medications are not recommended? What are the systems issues? What does the current knowledge tell us and what are the challenges and outcomes priorities?
5:00 – 5:30	Wrap-up/Plan for tomorrow

Tuesday, June 2 - Development of Practice Recommendations- Outcomes

8:15 – 8:45 a.m.	Moderator – Summarize Key Points of First Day Discussion, Overview of Plan for the Morning
8:45 – 9:45	Development of Clinical Recommendations, Priorities and Outcomes
10:00 – 11:00	Development of Clinical Recommendations, Priorities and Outcomes
11:00 – 12:00	Implementation Strategies/Next Steps/Outcomes – Challenges and Knowledge
12:00 – 12:30 p.m.	Conclusions

Appendix C

Evidence Synthesis Results

The Minneapolis VA Evidence Synthesis Program was asked to review the existing literature from 1980 to April 2009 to determine supporting research for three key questions related to TBI/PTSD patient care:

1).What is the prevalence of comorbid TBI and PTSD? Does the prevalence vary by population, injury etiology, TBI severity (mild vs. moderate/severe), or methods of case ascertainment?

2). What is the relative accuracy of diagnostic tests used for assessing mild TBI among individuals with PTSD, or assessing PTSD among individuals with a history of mTBI?

3). Are there psychosocial or pharmacological therapies used for treatment of mTBI and PTSD simultaneously? Are therapies for treatment of mTBI effective when mTBI is comorbid with PTSD? Are therapies for treatment of PTSD effective when PTSD is comorbid with mTBI? Is there evidence of harm when applying treatment recommendations for one to the other?

A key component of the report from the Evidence Synthesis Program was the need for future research recommendations.

Thirty unique observational studies met inclusion criteria and reported prevalence of comorbid TBI and PTSD. There was wide variability in study design, patient demographics, trauma types and mental health comorbidity across studies. Combat injuries accounted for most of the trauma in the 7 studies involving US military personnel and Veterans.

- There were no studies examining prevalence of comorbid TBI and PTSD in a large, representative population. Across the studies reviewed, reported prevalence of comorbid TBI and PTSD varied widely across study populations.

- There were no published studies addressing the relative accuracy of diagnostic tests used for assessing mTBI or PTSD when one condition co-occurs with the other condition.

- Additionally, there were no published studies that evaluated treatments to simultaneously address the symptoms of mTBI and PTSD together. One good-quality randomized controlled trial examined the comparative efficacy of cognitive-behavior therapy and supportive therapy in individuals with comorbid mTBI and Acute Stress Disorder (Bryant 2003).

- A number of ongoing research studies were listed that will address some of the above questions. The group concluded, however, that there is a clear need to develop an evidence base and to identify best practices for patients with comorbid mTBI/PTSD.

Appendix D

Materials Distributed to Consensus Panel for Meeting Review and References

Adler, A. B., Wright, K. M., Bliese, P. D., Eckford, R. D., & Hoge, C. W. (2008). A2 diagnostic criterion for combat-related posttraumatic stress disorder. [Journal Article]. *Journal of Traumatic Stress, 21*(3), 301-308.

Batten, S. V., & Pollack, S. (2008). Integrative outpatient treatment for returning service members. [Journal Article]. *Journal of Clinical Psychology, 64*(8), 928-939.

Bazarian, J., Boerman, H., Bolenbacher, R., Dalton, D., De Jong, M., Doncevic, S., et al. (2008, July 31 and August 1, 2008). Paper presented at the Defense and Veterans Brain Injury Center Consensus Conference on the Acute Management of Concussion/Mild Traumatic Brain Injury (mTBI) in the Deployed Setting, Washington, DC.

Belanger, H. G., Kretzmer, T., Yoash-Gantz, R., Pickett, T., & Tupler, L. A. (2009). Cognitive sequelae of blast-related versus other mechanisms of brain trauma. *J Int Neuropsychol Soc, 15*(1), 1-8.

Belanger, H. G., Uomoto, J. M., & Vanderploeg, R. D. (2009). The Veterans Health Administration system of care for mild traumatic brain injury: Costs, benefits, and controversies. [Journal Article]. *Journal of Head Trauma Rehabilitation, 24*(1), 4-13.

Bryant, R. A. (2001). Posttraumatic stress disorder and mild brain injury: controversies, causes and consequences. [Journal Article]. *Journal of Clinical and Experimental Neuropsychology, 23*(6), 718-728.

Bryant, R. A., Moulds, M. L., Guthrie, R. M., & Nixon, R. D. V. (2003). Treating acute stress disorder following mild traumatic brain injury. [Journal Article]. *American Journal of Psychiatry, 160*(3), 585-587.

Chalton, L. D., & McMillan, T. M. (2009). Can 'partial' PTSD explain differences in diagnosis of PTSD by questionnaire self-report and interview after head injury? [Journal Article]. *Brain Injury, 23*(2), 77-82.

Clark, M. E., Walker, R. L., Gironda, R. J., & Scholten, J. D. (2009). Comparison of pain and emotional symptoms in soldiers with polytrauma: unique aspects of blast exposure. *Pain Med, 10*(3), 447-455.

Corrigan, J. D., & Cole, T. B. (2008). Substance use disorders and clinical management of traumatic brain injury and posttraumatic stress disorder. [Journal Article]. *Journal of the American Medical Association, 300*(6), 720-721.

Darkins, A., Cruise, C., Armstrong, M., Peters, J., & Finn, M. (2008). Enhancing access of combat-wounded veterans to specialist rehabilitation services: the VA Polytrauma Telehealth Network. *Arch Phys Med Rehabil, 89*(1), 182-187.

Friedemann-Sanchez, G., Sayer, N. A., & Pickett, T. (2008). Provider perspectives on rehabilitation of patients with polytrauma. *Archives of Physical Medicine and Rehabilitation, 89*, 171-178.

Gironda, R. J., Clark, M. E., Ruff, R. L., Chait, S., Craine, M. H., Walker, R., et al. (2009). Traumatic brain injury, polytrauma, and pain: Challenges and treatment strategies for the polytrauma rehabilitation. [Journal Article]. *Rehabilitation Psychology, 54*(3), 247-258.

Kennedy, J. E., Jaffee, M. S., Leskin, G. A., Stokes, J. W., Leal, F. O., & Fitzpatrick, P. J. (2007). Posttraumatic stress disorder and posttraumatic stress disorder-like symptoms and

mild traumatic brain injury. [Journal Article]. *Journal of Rehabilitation Research and Development, 44*(7), 895-919.
Nampiaparampil, D. E. (2008). Prevalence of chronic pain after traumatic brain injury: a systematic review. [Journal Article]. *Journal of the American Medical Association, 300*(6), 711-719.
Resick, P.A., Nishith, P., et al (2002). A comparison of cognitive-processing therapy with prolonged exposure and a waiting condition for the treatment of chronic posttraumatic stress disorder in female rape victims. *J Consult Clin Psychol, 70(4):* 867-879.
Ruff, R. M., Iverson, G. L., Barth, J. T., Bush, S. S., & Broshek, D. K. (2009). Recommendations for diagnosing a mild traumatic brain injury: a National Academy of Neuropsychology education paper. *Arch Clin Neuropsychol, 24*(1), 3-10.
Sayer, N. A., Chiros, C. E., Sigford, B., Scott, S., Clothier, B., Pickett, T., et al. (2008). Characteristics and rehabilitation outcomes among patients with blast and other injuries sustained during the Global War on Terror. [Journal Article]. *Archives of Physical Medicine and Rehabilitation, 89*(1), 163-170.
Sigford, B. J. (2008). "To care for him who shall have borne the battle and for his widow and his orphan" (Abraham Lincoln): the Department of Veterans Affairs polytrauma system of care. *Arch Phys Med Rehabil, 89*(1), 160-162.
Soo, C., & Tate, R. (2007). Psychological treatment for anxiety in people with traumatic brain injury [Review] (Publication no. 10.1002/14651858.CD005239.pub2).
Stein, M. B., & McAllister, T. W. Exploring the convergence of posttraumatic stress disorder and mild traumatic brain injury. *American Journal of Psychiatry [online]*, 1-9.
Strasser, D. C., Uomoto, J. M., & Smits, S. J. (2008). The interdisciplinary team and polytrauma rehabilitation: prescription for partnership. *Arch Phys Med Rehabil, 89*(1), 179-181.
Taber, K. H., & Hurley, R. A. (2009). PTSD and combat-related injuries: Functional neuroanatomy. [Journal Article]. *Journal of Neuropsychiatry and Clinical Neurosciences 0895-0172, 21*(1), 1 p preceding 1, 1-4.
Terrio, H., Brenner, L. A., Ivins, B. J., Cho, J. M., Helmick, K., Schwab, K., et al. (2009). Traumatic brain injury screening: preliminary findings in a US Army Brigade Combat Team. *J Head Trauma Rehabil, 24*(1), 14-23.
Uomoto, J. M., & Fann, J. R. (2004). Explanatory style and perception of recovery in symptomatic mild traumatic brain injury. [Journal Article]. *Rehabilitation Psychology 49*(4), 334-337.