

Navy Medicine Keeps Focus on Neurological Assessments

Story Number: NNS100813-06

8/13/2010

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WASHINGTON (NNS) -- Concussions can happen in many ways, from sports injuries or in the case of war, during conflicts in which service members may be injured by explosions causing mild to significant head/brain trauma.

Neurocognitive assessments of concussions, also known as mild traumatic brain injury (mTBI), have been a significant focus of military leadership as brain injuries have been more prevalent with the increased sophistication of improvised explosive devices (IED).

Signs of a concussion can range from mild to severe and can include headache, change in alertness, loss of consciousness, dizziness, and in severe cases, coma.

"Early diagnosis is important because medical impairment of a service member in combat may affect mission completion, putting not only themselves but also other Sailors and Marines at risk," said Cmdr. Jack Tsao, a neurologist and Director of Traumatic Brain Injury Programs for the Bureau of Medicine and Surgery.

Growing concerns about concussions by the Department of Defense and medical professionals have led to the development of tests that will better diagnose concussions. The ANAM (Automated Neuropsychological Assessment Metrics) test is one of many tools used by military medical professionals to assess brain function post-concussion.

The ANAM is a computer-based test that is designed to detect reaction speed and accuracy of attention, memory, and thinking ability. It records a service member's performance through responses provided on a computer.

The ANAM test is conducted prior to deployment and can be used to identify and monitor changes in cognitive function. However, by itself, it is not an instrument that can be employed to diagnose any medical condition.

According to Tsao, the results are being used by theater healthcare staff to compare a service member's cognitive abilities after an injury to baseline performance. Should the results of a post-injury test appear abnormal, this will guide medical providers in providing more in-depth care.

On May 28, 2008, then Assistant Secretary of Defense for Health Affairs Dr. S. Ward Casscells signed a memorandum directing all military departments to implement baseline pre-deployment neurocognitive assessments for all service members, who are required to complete this mandatory assessment within 12 months prior to deployment.

"Having a baseline which you can compare against after a Sailor or Marine sustains a concussion gives us more medical information and will enable medical providers to make

better informed decisions about when a service member is able to return to full duty," Tsao said.

From July 17, 2008 to June 11, 2010, 101,013 Sailors and Marines have taken the ANAM.

"In the future, we hope to have a handheld neurocognitive testing device which will enable corpsmen to make a concussion diagnosis rapidly on the front line," said Tsao.

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