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Officials Step Up Efforts to Detect, Prevent Brain Injury

By Elaine Wilson

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WASHINGTON, March 24, 2010 – The Defense Department is “extremely invested” in the early detection of traumatic brain injury, and is pushing new guidelines and numerous research initiatives to the front burner to aid in that effort, a brain injury expert said today.

Kathy Helmick, senior executive director of traumatic brain injury for the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, joined several defense and service officials for a teleconference to explain the upcoming change to brain injury guidelines in the combat theater and other initiatives taking place throughout the department.

Traumatic brain injury, commonly known as TBI, is defined as a disruption of brain function resulting from a blow or jolt to the head or a penetrating brain injury. The wars in Iraq and Afghanistan have yielded a “significant” number of TBI cases, noted Col. H. Morita, chief of medical operations for the Air Force Medical Support Agency.

Between January 2000 and September 2009, more than 161,000 servicemembers were identified as having suffered a traumatic brain injury, the majority of which were classified as a concussion, also referred to as mild TBI, according to the Defense Department report, “Traumatic Brain Injury Care in the Department of Defense.”

“While [the number of cases is] unfortunate, it has resulted in the ability to further characterize and understand concussions and to improve the future care of our servicemembers,” Morita said.

Early detection and treatment is the cornerstone for a successful recovery, Helmick noted. “Rapid detection, both on the battlefield and home base, when mild TBI occurs, is something that we’re deeply committed to,” she said.

To that end, a new policy, expected to launch in the coming months, will require servicemembers who suffer possible concussions to seek medical care, she said.

“Servicemembers, under certain circumstances -- certain operational exposures to potential concussive events -- are going to be required to go see a medical person and at least have an initial intake evaluation of some sort,” explained Navy Cmdr. Fred Kass, director of clinical programs and acting director for psychological health for Marine Corps Health Services.

Currently, servicemembers self-identify a need to be evaluated, Kass said, but these self-reporting guidelines only go so far with a motivated servicemember who wants to stay on patrol. While he may be concerned about some symptoms he’s experiencing, “he may not raise his hand and say, ‘I need some help.’ He doesn’t want to let his buddies down,” he added.

Under the new guidelines, all servicemembers exposed to a potential head injury will be assessed before they’re able to return to duty.

Kass said he has high hopes for the policy. “At the end of the day, I think it will be one of our key initiatives in helping better define this population, understanding them better, providing better care,” he said.

Helmick said she hopes the new in-theater guidelines will send a message that treatment works. “We want to find everybody and we want to get everybody back in the fight. So let us find you, and let us treat you, and we’ll get you back,” she said.

Along with the new policy, significant research is ongoing to refine methods for early detection, said Morita, highlighting projects such as serum biomarkers to obtain more independent and objective markers of injury, sensor imaging studies and instruments to diagnose concussion.

Morita also pointed out an ongoing Air Force study that looks at the effectiveness and safety of hyperbaric oxygen therapy to treat chronic symptoms of mild and moderate TBI. The Defense Department also is funding a larger, multicenter study to examine hyperbaric oxygen’s effects, he added.

On the preventive front, Morita noted that studies have suggested the need for improved protective gear for servicemembers, including a next-generation combat helmet. A state-of-the-art enhanced combat helmet and a head-borne system designed to mitigate the impact of blasts and blunt impacts are in development, he said.

Air Force Col. Michael Jaffee, director of the Veterans and Brain Injury Center, praised the collaboration that’s resulting in innovations in protective gear. The Defense Department’s materiel and medical communities work alongside the civilian academic and sports communities. In the sports field, experts are looking at the developments made in helmet design in the National Football League, he said.

Experts are working to combine this knowledge into a combat helmet “that can maintain its safety for ballistic, for bullet protection, as well as enhancing its safety for other types of concussive forces as well,” Jaffee said.

When combined, “These joint efforts ensure the best care for our servicemembers who put themselves in harm’s way,” Morita said.