

DEPARTMENT OF DEFENSE BLOGGERS ROUNDTABLE WITH KATHY HELMICK, INTERIM SENIOR EXECUTIVE DIRECTOR, TRAUMATIC BRAIN INJURY; DIRECTOR, TRAUMATIC BRAIN INJURY CLINICAL STANDARDS OF CARE, DEFENSE CENTERS OF EXCELLENCE FOR PSYCHOLOGICAL HEALTH AND TRAUMATIC BRAIN INJURY SUBJECT: THE NEW CLINICAL PRACTICE GUIDELINES FOR TREATMENT OF MILD TBI (CONCUSSION) AMONG SERVICEMEMBERS IN-THEATER TIME: 11:30 EDT DATE: MONDAY, MARCH 15, 2010

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LIEUTENANT JENNIFER CRAGG (Office of the Secretary of Defense for Public Affairs): With that, I'd like to welcome you to the Department of Defense's Bloggers Roundtable for Monday, March 15, 2010. My name is Lieutenant Jennifer Cragg with the Office of the Secretary of Defense for Public Affairs, and I'll be moderating the call today.

A note to the bloggers on the line, please simply state the name -- your name and organization you're with prior to asking your questions. And, if possible, please place your phone on mute during the conversation so we can hear everything. Today, our guest is Kathy Helmick. She's the interim senior executive director, Traumatic Brain Injury, and director of TBI Clinical Standards of Care, Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury.

Ms. Helmick will discuss the new clinical practice guidelines for the treatment of mild TBI among servicemembers in theater. So without further ado, I'm going to turn it over to Ms. Helmick so she can start with an opening statement. And we'll go to questions.

But, ma'am, before I do, I just want to welcome someone who just dialed in.

Is that you, Taylor?

Q It is. It's Taylor Kiland with TheExaminer.com and Navy Log Blog.

LT. CRAGG: Great, Taylor. I have you right behind Carla. And I just introduced Ms. Helmick. So we'll go ahead, and she's going to provide her opening statement, and we'll go right into questions.

Ms. Helmick, you're -- the floor is yours.

MS. HELMICK: Great. Thank you. And good morning, everybody. It's my honor to have a chance to talk to you about some of the exciting things that are happening in the Department of Defense as it relates to care, treatment and research to -- for those that sustain traumatic brain injury on the battlefield and all the way back to home station.

Some of the things I want to discuss today are the new incident-based-driven theater protocols. It sounds like a lot here, but what we're doing is we're morphing from a symptom-based approach in theater to an incident-based approach. And how that really becomes actualized is, instead of a servicemember coming up and raising their hand and saying, "I have a headache; I think somebody should check me out," we are morphing into an incident-based protocol by which an event happens in theater, and all that are involved in that event go get checked out by medical.

The tenet behind this is that we strongly believe that early detection and early treatment decrease the complaints of post-traumatic brain injury after sustaining the injury, and it also provides us with the great opportunity to intervene from an educational perspective. So we're very excited about the new protocols that will be going into effect relatively soon in theater that will mandate a mandatory evaluation after you've been involved in certain incidences.

In addition, those new protocols are looking at clinical guidance related to recurring concussion, which we also know is -- an area that we now have to face after being at war for quite a long time is those folks that have sustained not one or two but three or more concussions over a certain amount of time. I hope we also get a chance to talk about some of the new research advancements. We are fast-tracking our research portfolios so that we can translate the findings from research being done into clinical practice, and improve care on the battlefield as soon as possible. And a lot of the research has to do with learning more and more about our biggest thorn, if you will, which is the blast and explosion and dynamics, the physics that are involved in blast explosion events and the ensuing sequeli both from a medical standpoint, as well a cognitive behavioral standpoint and how that affects servicemembers that have these exposures. So with that, I will -- that's kind of the end of my opening comments.

LT. CRAGG: Thank you so much, ma'am. Let's go straight with -- into, Chuck, sorry about that.

Chuck, please go ahead.

Q Yes, ma'am. Chuck Simmins from America's North Shore Journal. And thank you for speaking with us today. This is an area I'm very interested in. And I appreciate the opportunity to talk with you.

I wanted to ask about two things that occurred to me when I first received the invite for this call.

I have interviewed several servicemembers, male and female, who have survived IED blasts, and they all sustained injuries involving

their hearing. I'm aware that there are earplugs that can modulate loud noises, and yet allow normal speaking to occur.

So my first question, is the hearing damage -- one young man I talked to last week has the ringing in the ears, the tinnitus. If that were prevented, would that cut down on TBI? Or is that just an associated injury to the TBI?

MS. HELMICK: Actually, that's a very big question, sir. Interestingly, we have not found a correlation between blast, brain injury and ruptured tympanic membrane. We thought we would. We thought that once you look into somebody's ear after they had a blast-related event that you would -- and found that their membrane had been ruptured, that this would be an indirect marker of a brain injury since it's also very close proximately. But what -- we're not finding that. We're finding that patients that are involved in a blast explosion can have a symptom of ringing in the ears after the blast explosion that may or may not be related to the actual traumatic brain injury. Many times the hearing loss that's described after a blast will quickly rebound, and people get -- restore their hearing quite rapidly.

When it persists, that's when audiology is part of the multidisciplinary team, and they have a chance to evaluate the patient after -- with suspected concussion and looking further at the hearing complications. So I guess what I'm saying in a nutshell is that it's not a one-to-one corollary in that patients that have a ruptured membrane are able to say that they've had actually a traumatic brain injury. It's not a precursor. It's not a marker.

Q Okay. And just a quick second question. I wanted -- this week I was just listening to XM radio, and they have all-doctor radio channel, and they were talking about sports injuries in young people. And one doctor stated definitively that he felt that mouth guards were the very first preventive measure to prevent concussion in football players. And I'm just wondering if you're familiar with any information regarding that topic and TBI in blast injuries.

MS. HELMICK: You know, I really am not well-versed in the -- I mean, we do have a portfolio growing in the personal protective equipment that includes helmets and, of course, other equipment that our servicemembers wear -- (audio break). But in terms of mouth gear, I could not give you any military-relevant information related to the use of mouth gear and decreasing incidents or rates of traumatic brain injury. I do -- I am aware that they're used quite extensively in the sports world, in the NFL. And we actually have a lot of initiatives partnering with the NFL and collaborating with hockey folks in the NCAA. So this is actually a good area that we can leverage and find out what they're learning.

Q Great.

Thank you.

LT. CRAGG: Thank you, Chuck. And thank you, ma'am.

Carla, you were next? Please go ahead.

Q Hi, this is Cara from SOME SOLDIER'S MOM. Could you address at all about what you're learning from the NFL data that's being shared compared to the more complex IDD dynamics?

MS. HELMICK: Sure, ma'am. That's a great question. And this is where it gets -- it's a little confusing because the NFL injuries, we know, are impact-type injuries. A wide receiver or a running back gets hit, and there's an impact that occurs, and there's a transmitted force between two people that hit each other or between the member -- the player and the hard surface in those type of impact injuries. And NFL's done a great job on capturing the dynamics, the angle, the force involved in those type of -- those type of injuries. But we know that's the context by which concussions are sustained on the playing field.

In addition, when a wide receiver or a running back is hit, there's not the threat of loss of life. So some of the stress responses, the fight or flight, the -- what happens when you do think your life is endangered, some of the chemicals in your body, the cortisol et cetera -- we don't know at this point how that differs when you're that involved in a blast explosion with the threat of loss of life, as opposed to being hit and those chemical cascades are not present on the football field.

So we've got this nerve chemical difference in addition to the fact that we've got with blasts many dynamics that can take place. One is just from the blast itself, which is an overpressurized wave. So in and of itself how that blast wave can get transmitted to the brain tissue, we're learning more and more about, you know, by the month. There was a recent paper that recently -- that came out through the American Academy of Neurology that showed on diffusion tensor imaging, DTI imaging, which is a sequence of an MRI, that there were differences when somebody was involved in blasts, as opposed to an impact injury like a car accident or a sports injury. And the difference is in the white matter there was inflammation changes that were occurring with blasts that were not occurring in the impact.

Now, to further complicate matters, many of the blast-related brain injuries occurring in theater have this blast-plus phenomenon where it's the blast overpressure wave in addition to being in a vehicle and getting the impact dynamic. So you hit your head on the top of a vehicle while a blast goes off underneath you. So you really do have two components, impact plus blast, and those mechanisms that ensue which further complicate. Like I said, it's kind of clean when it's just impact, and it's clean when it's just blast wave. But when you add both, then you get, obviously, two mechanisms of injury that cause a blast injury.

So we know there are differences between servicemembers being injured by explosion or blast, as opposed to the athlete in the NFL playing on the gridiron. And we're trying to understand those differences more from both a mechanistic standpoint that I alluded to, impact versus blast, as well as a neurochemical standpoint and stress

responses and what kind of interplay the threat of loss of life may have on that.

Q Thank you.

LT. CRAGG: Thank you, ma'am. And thank you, Carla.

Taylor, you're next. Please go ahead.

Q Yeah. Hi, Ms. Helmick. This is Taylor Kiland. I write for Examiner.com and also the Navy Memorial's Navy Log Blog.

Can you go into more detail as to what the -- exactly the collaboration with the NFL is?

And is it informal or formal? How extensive is this collaboration in terms of research and studies?

MS. HELMICK: Well, the NFL has committees on mild traumatic brain injury and we are ad hoc members of the Department of Defense on that committee. So we are looking at, I would characterize our relationship with the NFL right now as we're looking for areas of engagement. We are getting -- (inaudible) -- on what the NFL is doing and what their concerns are as we're sharing what we're doing and what our concerns are. And as you can quite imagine, the Department of Defense's portfolio on traumatic brain injury care is quite large and vast.

So we're talking about some of the research that's being done in a lot of the centers, in areas of leveraging our devices that allow for early detection and prompt detection on a battlefield or on a playing field of traumatic brain injury. That's one area.

So this committee is involved with looking at and learning what each other's portfolio is and then discussing where we can have some efforts going on that are in sync with the injuries sustained on the battlefield and the injuries sustained by our elite force athletes.

And some of the other areas look at how to rapidly access on the sidelines for concussion, as well as some of the neuro-cognitive testing that's done and that's one area that we've really been in sync and in leverage with the sports world is the pre-deployment neuro-cognitive testing equivalent to the pre-season cognitive testing, meaning that when you get baseline scores of cognition and then when somebody is injured either on the football field or injured in theater, you retest them and you can see how variant they are from their baseline scores.

So that's just one area. But most of our collaborations at the stage that we're at right now is full visibility on what's going on from both the research paradigm, as well as treatment and early detection, early detection is a huge part.

There is a lot of write up about how proteins that the longitudinally the NFL Players Association found that build up proteins,

which can be toxic and cause dementia-like symptoms and there was a write up through the Players Association that this has been found in long-term NFL players, and actually that became in sync with a Vietnam vet that we have really found deposits of cal protein. So we're leveraging findings, both from the research piece, as well as clinical and the clinical piece of specific -- (inaudible) -- early detection.

Q Fascinating.

MODERATOR: Thank you, ma'am and thank you, Taylor.

We still have time on the horn at least one more time. So, Chuck, your were first. Please go ahead.

Q Yes, ma'am. Are you finding any significance to the directionality of the blast from above, from below, from up high, from front, back? Are there any differences?

MS. HELMICK: We do, and I'm just consulting with Judith here on the op sec (sp) issues related to that.

Q Oh, yeah.

MS. HELMICK: I'm sorry. I'm going to put you on mute for half a second.

Q Yeah.

MS. HELMICK: Sir, I can tell you that we are looking at that issue. We're looking at blast dynamics related to the directionality, which you brought up which would be to the right, to the left, underneath. We're also looking at relationships between enclosed and open spaces in magnitude of blast. And I'll have to leave it there.

Q Okay.

Well, let me ask this. Have you hypothesized or actually tested any equipment that we could see going forward that would be introduced in the field that would reduce the TBI danger?

MS. HELMICK: Sir, those field testing initiatives are happening all the time, continuous. We have feedback loops now in which we can marry up the engineering and the equipment pieces with the clinical data, and actually it's being done at levels that haven't been previously in terms of new engagement between the medical community and the materiel community to do exactly what you're saying and still look at the records of people that have sustained concussions with the type of equipment they were using and then offer to the materiel community improvements for such equipment.

So we are learning quite a bit and things by the month are being field tested to see if we can help, to see if we can help decrease the incidents of brain injury. This also includes helmet sensors and other initiatives that are ongoing as we examine the attack nature and the

explosion magnitude and some of the other variables that I mentioned previously.

Q Thank you.

MS. HELMICK: I did want to mention. I didn't say before about the NFL, but I went to kind of hard science and talked about research and clinical. But one of the other pieces that we're working on actively with the NFL is the whole access to care and de-stigmatizing coming in and getting checked out for injuries. One of the commonalities we have in both of these populations is the elite athletes, folks that are physically in the prime of their lives and take a lot of attention to detail to their bodies and their muscles and to being these elite specimens.

And so realizing that attitudinal changes are necessary so that people don't will away their symptoms, don't discount them, but rather get early treatment, which will lead to early recovery and get back into the fight, get back into the game. And that's the message we've really stressed with the line command is that this is not about taking people out of the fight or taking them out of the game or for the NFL, having them lose their multi-million dollar contracts. This is all about keeping them safe, keeping them in a safe zone while they're vulnerable for a secondary injury, making sure they get checked out and then getting them back to what they love doing, which is being part of the mission and playing back on the field. Q What you're saying is that you're viewing this situation, these are fully recoverable injuries in your mind?

MS. HELMICK: Absolutely. And that the cornerstone is early detection and early treatment and that these are recoverable injuries.

Q Thank you.

MODERATOR: Thank you, ma'am, and thank you, Chuck. Carla, do you want to go ahead?

Q Yeah. We know that there are a number of symptoms of mild traumatic brain injury and PTSD that overlap. Is there ongoing research in that area in terms of refining how to diagnose one as opposed to the other?

MS. HELMICK: Absolutely. The fullest of money that Congress generously gave us to explore psychological health and traumatic brain injury conditions. There were substantial funds that went into actually delineate your point exactly.

There are studies looking at the different neuro-imaging findings that can be found from somebody that has a brain injury, a psychological health issue, mainly PTSD. There is, as well, neuropsychological studies being done as markers for this.

There's proteomic and genetics bio-markers testing being done as well. So there's a multi-prong approach to feather out the distinguishing factors between the two.

Currently, our clinicians in the Department of Defense take a system-based approach, so, you know, they come in seeking help from a primary care provider and maybe sent to specialty clinics if needed for further evaluation. But it's really a symptom-based approach and also recognizing the need for access to care.

So we don't want people not to show up or not to come in for care. So we keep it in that primary care model and we treat the symptoms, but we have active engagement at the research level to try to decipher these various clinical entities.

Q Thank you.

MS. HELMICK: We also a providing guidance in the field so that one medicine that may work for one, but bad for the other and I'm not saying that exists. But we are trying to really help bring the disciplines together so that we can provide more clarity to the timing of treatment for specific psychological health conditions and how that marries up with traumatic brain injury. For example, if you're going to do exposure therapy for Post-Traumatic Stress Disorder, which is a common evidence-based therapy for that and you have a traumatic brain injury that is causing significant memory issues, you know, you're going to have to get clinicians talking to each other to get that in sync so that the exposure therapy can be maximized in lieu of, you know, in some memory issues.

So there's a lot of interdisciplinary talking that's necessary and communication to get this moving forward.

Q And can I just also follow up and can you tell me what the most recent evidence base is for the TBI syndrome that apparently is evident in up to about 10 percent of those with mild TBI?

MS. HELMICK: Well, right. The strongest literature related to mild traumatic brain injury symptom treatment is in the education initiative. So being able to sit down with a service member, eyeball-to-eyeball and tell them what they have and tell them about the symptoms and tell them what to expect for the natural recovery history here and give them some strategies to help deal with some of the symptoms that they're dealing with has been showed repeatedly in adult populations to help decrease symptom reporting and enhanced recovery. And that's the strongest evidence-based treatment we have. Now, that's not to say we don't have other evidence-based treatments, we've got consensus-based treatments and the VA and DOD put out a consensus document, evidence-based treatment guideline, I'm sorry, in April of last year that addressed the full gamut of treatments, different levels of evidence as I said. The strongest that I just gave you was the education intervention. But there are medications, as well as therapies.

We're looking closely at the cognitive rehabilitation in mild traumatic brain injury as an efficacious therapy to be used. A lot of the work has been done in the more severe brain injuries.

And so this is why our portfolio needs to, research portfolio needs to grow rapidly because we have studies in the moderate, severe and penetrating brain injury population and whether those studies translate to concussion patients and post-concussion syndrome is yet to be known.

So that's what we're in the process of looking at the same treatments to see if they work for less severe injuries.

Q Thank you.

MODERATOR: Hey. We have time to go over to Taylor. I don't know if Taylor dropped off the call. Are you still with us, Taylor?

Q I'm still here, but I don't have another question.

MODERATOR: Okay. With that, we're cutting close to the roundtable, end of the roundtable. I just want to make sure, Carla, Chuck, any last-minute questions for either one of you?

Q No, thank you.

Q I'm good. Thank you.

MODERATOR: Great. And just so you know, Chuck, Carla, Taylor, when we get the transcript, I'll make sure to send it your way just like we always do.

Q Terrific.

Q Thank you.

MODERATOR: And I want to turn this back over to Ms. Helmick if you would like to end with any closing thoughts for today. The floor is yours.

MS. HELMICK: Sure. That would be great.

So our real message to send out to everybody is that protect your greatest weapon. We want to make sure people are aware that, you know, the brain is, obviously, a very important organ, most would say it's the most important organ except the heart surgeons may not say that. But anyway, so we want everybody to be protect their brain. Our tag line for our campaign to get the incident-based protocols going and to really make sure that people are up to date on what we're doing is educate, train, track and treat. And so we want to make sure at all levels people have those awareness symptoms, train providers on the evidence-based treatments that we've discussed, treat effectively early, early detection, early treatment. And then track all this so that we had good metrics for how we need to adjust our road map, what do we need to do different clinically. What are the continued clinical challenges that

are out in the field? And how does this cohort of people nine years into a war with TBI, is it evolving and changing? And we need to be on the front end of that so that we can provide state-of-the-art care.

So that's all I think I want to say.

MODERATOR: Thank you, ma'am, very much. And just to remind everyone, you've been listening to Kathy Helmick. She is the interim senior executive director for traumatic brain injury, director of TBI clinical standards of care at DECO for Psychological Health and Traumatic Brain Injury, that is Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury.

And with that, you can find a transcript in the audio files if you visit www.dodlive.mil, click on the blogger roundtable. You'll find more information about this event.

Thank you so much, ma'am, for calling in today and thank you for the bloggers.

This ends today's roundtable. Thank you very much.

END.