Gano: Hi. Welcome to Clinical Updates in Brain Injury Science Today, or “CUBIST,” a podcast for health care providers about current research on traumatic brain injury, also known as TBI. This program is produced by the Defense and Veterans Brain Injury Center, otherwise known as DVBIC. I’m your host today, Amanda Gano. So, this is a very special episode of CUBIST, today. I’ll be talking with Ms. Stacey Harcum and Dr. Joanne Gold about the newly revised clinical recommendation, or CR, that is being released by DVBIC, and this CR is called “Sleep Disturbances Following Concussion/mTBI: Guidance for the Primary Care Manager in Deployed and Non-Deployed Settings.” We will refer to as the Sleep CR from now on. Ms. Harcum is an occupational therapist and neuroscience clinician and Dr. Gold is a clinical pharmacist and neuroscience clinician working at DVBIC.

Gano: I’m so happy to have you guys on the show today, and I’m excited to talk about this new product from DVBIC. So Stacey, could you tell us a little bit about the revised Sleep CR?

Harcum: Sure, and thanks for having us Amanda. The clinical recommendation for sleep is really designed for the primary care manager, and the goal is to really assist in the diagnosis and management of sleep disturbances for patients who’ve had a concussion. It was originally developed back in 2014, but it was really due for an update and revision this year. The revised recommendations really incorporates the latest and most up-to-date science and hopefully highlights how important this topic is for our military and force readiness.

Gano: Yeah, sleep is a really important topic especially for our military service members. So can you guys expand a little bit more about what this CR is and why these clinical recommendations were developed?

Harcum: We know that individuals with mild traumatic brain injury, or mTBI, experience sleep disorders at a higher prevalence compared to the general population. And we also know that sleep is a modifiable factor, meaning it’s something we can have an impact on following concussion. And addressing sleep after an mTBI is something that we can do, as clinicians, to promote recovery and help prevent chronic symptoms in our patients. This is a project that I was really excited to get involved with because I think we all inherently understand the importance of healthy sleep. I know that I am not able to perform at my best when I haven’t got adequate sleep. And so when I think about adding to that, somebody who is trying to recover from a concussion, whose brain is trying to heal, and also thinking about our service
members who’re facing unique stressors like high-operational tempo and shift work, long hours. All of these things can impact sleep. And so I see this as a really important need for providers to address and our goal was to provide them with the tools to do that effectively.

**Gano:** Yeah, that definitely sound like providers need to really ask every patient that’s been diagnosed with a concussion about their sleep. So, Joanne, could tell us a little bit about how this CR is intended to be used?

**Gold:** Also a great question. So the new CR has been restructured from a very lengthy narrative into a concise, step-by-step guide, and it’s intended to aid primary care managers in the diagnosis and management of sleep disturbances as we’ve said. So it starts with recommended screening questions, and we have guidance on potentially emergent symptoms, and then it goes into potentially contributing factors like medications, co-morbid conditions, and maladaptive sleep behaviors. Then the CR is organized by sleep disorder, and each disorder includes diagnostic criteria, recommended evaluations or assessment tools and appropriate interventions that are feasible at the primary care level.

**Gano:** Wow that sounds like it’s going to be a really great resource for helping PCMs recognize and diagnose sleep disorders after concussions. Joanne, which sleep disorders are covered in the CR, and why were they included?

**Gold:** So the newly revised Sleep CR has been expanded from the 2014 version to include additional sleep disturbances that are relevant following concussion. So this includes Restless Leg syndrome, Insufficient Sleep Syndrome, and parasomnias.

**Gano:** That’s great. So what kind of guidance does the CR give for treatment?

**Gold:** The CR broken down in each disorder to recommendations for non-pharmacologic and pharmacologic treatment recommendations. So this includes medication dosing recommendations as well as precautions and other considerations that are relevant when treating concussion in the military population specifically. And these recommendations were aligned with the newly published 2019 DoD/VA Chronic Insomnia and Obstructive Sleep Apnea Clinical Practice Guideline and the American Academy of Sleep Medicine recommendations.

**Gano:** So, Stacey, what do you want providers to know about this new CR?

**Harcum:** One thing that I think is important for providers know is how these recommendations are developed and where these guidelines come from. So this CR was updated, first-and-foremost, based on peer reviewed literature. Unfortunately, there are still some areas where we don’t have sufficient research to make a clear recommendation based on that alone. And so, in those instances, the recommendations were augmented by a group of service-selected subject matter experts, and these folks covered the fields of sleep medicine, neurology, psychiatry, psychology, and pharmacology and primary care. And so this recommendation is really the result of input from the scientific community as well as clinicians working together to provide the best guidance available.

**Gano:** Yeah, absolutely, it sounds like a really great clinical tool for providers to use. Thank you so much Stacey and Joanne. It sounds like this new clinical recommendation for sleep after mTBI is going to be a great resource for primary care providers.

**Gold:** Yeah we think so too. Also, the new format, how concise it is, we hope it’ll be well received by primary care providers that are operating under extreme time constraints often.

**Gano:** Absolutely, I know that’s a major issue for primary care providers.

**Harcum:** Yeah, thanks so much for having us. I know a lot of people at DVBIC put a lot of time and effort into this and we’re really excited about it and really hopeful that it will be helpful to providers and service members.

**Gano:** You can find the clinical recommendations for Sleep Disturbances Following Concussion/mTBI, as well as a corresponding patient factsheet on the DVBIC website. We will also include a link in the description of this episode. You
can stay up-to-date on future episodes by subscribing to “CUBIST” on iTunes, Sound Cloud, Stitcher, or wherever you listen to podcasts, where you can also find links to the articles we discuss and other relevant resources.

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“CUBIST” is produced and edited by Vinnie White and was hosted today by me, Amanda Gano. It is a product of the Defense and Veterans Brain Injury Center, led by Division Chief Captain Scott Pyne, Medical Corps, United States Navy.

Thank you for listening to this episode. Next time, we will discuss TBI research getting attention in the mainstream press.

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