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COMMITTEE ON
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UNITED STATES SENATE

HEARING TO RECEIVE TESTIMONY ON THE CURRENT STATE OF RESEARCH, DIAGNOSIS, AND TREATMENT FOR POST-TRAUMATIC STRESS DISORDER AND TRAUMATIC BRAIN INJURY

Wednesday, April 20, 2016

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U.S. Senate
Subcommittee on Personnel
Committee on Armed Services
Washington, D.C.

The subcommittee met, pursuant to notice, at 2:36 p.m. in Room SR-222, Russell Senate Office Building, Hon. Lindsey O. Graham, chairman of the subcommittee, presiding.

Committee Members Present: Senators Graham [presiding], Cotton, Tillis, Sullivan, Gillibrand, Blumenthal, and King.

OPENING STATEMENT OF HON. LINDSEY GRAHAM, U.S. SENATOR FROM SOUTH CAROLINA

Senator Graham: The hearing will come to order.

We're here to receive testimony on research, diagnosis, and treatment of post-traumatic stress and traumatic brain injury in the Department of Defense and Department of Veterans Affairs.

The committee meets this afternoon to receive testimony from the Department of Defense and Department of Veterans Affairs on research, diagnosis, and treatment of post-traumatic stress and traumatic brain injury. This is an important hearing. We must do everything we can to help servicemen and -women and veterans suffering from PTS and TBI.

We're fortunate to have a distinguished panel of witnesses joining us today: Captain Walter Green- -- say it --

Captain Greenhalgh: Greenhalgh.

Senator Gillibrand: -- Greenhalgh, sorry about that -- Medical Corps, United States Navy, Director for the National Intrepid Center of Excellence at Walter Reed National Military Medical Center; Captain Mike Colston, Medical Corps, United States Navy, Director of the Defense Center of Excellence for Psychological Health and Traumatic Brain Injury; and Dr. Amy Street, Deputy Director of the Women's

Health Division, National Center for Post-Traumatic Stress, Department of Veterans Affairs.

Post-traumatic stress and traumatic brain injury have been called the signature wounds of the Afghan and Iraq conflict. Since 2001, about 5 percent of the over 2.7 million servicemembers deployed in support of the wars in Afghanistan and Iraq were diagnosed with PTS. And from 2000 through September 2015, there are over 339,000 TBI cases diagnosed, with most of these being mild TBI diagnosed in garrison locations. With the significant impacts that both PTS and TBI have made on our servicemembers and veterans, it is vitally important that we better understand, through well-developed medical research, the causes of PTS and TBI, and develop appropriate measures to treat and eventually prevent PTS and TBI. While both DOD and VA have made significant research investments to learn more about PTS and TBI leading to major advancements in diagnosis and treatments, more work must be done on prevention.

Today, I want our witnesses to tell us what DOD and the VA are doing to prevent, diagnose, and treat PTS and TBI, and to give us an overview of promising treatments, therapies, and technologies that may be available in the near future. Finally, tell us what this subcommittee can do to help your department provide better care for servicemen and -women and veterans who may suffer from PTS and TBI.

Senator Gillibrand.

STATEMENT OF HON. KIRSTEN E. GILLIBRAND, U.S. SENATOR FROM NEW YORK

Senator Gillibrand: Thank you so much, Chairman Graham, for your leadership. I'm so grateful I get to serve on this subcommittee with you.

Senator Graham: Thank you.

Senator Gillibrand: It's extremely meaningful, the work that we do.

I want to welcome our witnesses. Thank you for your service, and thank you for the focus you have on the state of research, diagnosis, and treatment for post-traumatic stress disorder and traumatic brain injury.

I'm pleased we have witnesses here, both from the DOD and the Department of Veterans Affairs. Both of these agencies are addressing significant caseloads of PTSD and TBI. I look forward to learning about how each agency responds to the challenges of research treating these conditions, and if there are different approaches in how to do this. Although PTSD and TBI are widely recognized as signature wounds of our recent conflict in Iraq and Afghanistan, we know that these conditions are more than just war injuries. We know that PTSD is triggered by a traumatic event. That traumatic event can be combat-related, but all too frequently, the trigger event can be military sexual assault. While we continue our efforts to

rid the military of this scourge, we must provide world-class treatment to the survivors of this horrendous crime.

I am particularly interested in learning more about PTSD that is caused by sexual assaults. Specifically, I would like to know if PTSD presents itself differently in male survivors versus female survivors, and how treatment for PTSD meets the unique needs of male survivors of sexual assault.

I'd also like to hear more about the state of the art in diagnosing and treating PTSD and TBI, the interaction between the two, and the ongoing research to improve diagnosis and treatment of these conditions. Over the years, our understanding of PTSD and TBI has grown substantially; however, there remains much more to be learned.

Furthermore, we need to ensure that those who suffer from PTSD and TBI related to military service have access to a healthcare system that is able to meet their physical and mental healthcare needs. Our servicemembers, retirees, and their families deserve the highest-quality care.

So, thank you each to our witnesses for the time and effort they've put into this important issue.

Thank you.

Senator Graham: Well, one, thank you for the compliment, Senator Gillibrand. It's been a pleasure

working with you and your staff.

Captain, please.

STATEMENT OF CAPTAIN WALTER M. GREENHALGH, MC, USN, DIRECTOR FOR THE NATIONAL INTREPID CENTER OF EXCELLENCE DIRECTORATE, WALTER REED NATIONAL MILITARY MEDICAL CENTER

Captain Greenhalgh: Well, good afternoon, sir. Thank you.

Well, good afternoon, Chairman Graham, Ranking Member Gillibrand, and members of the subcommittee. Thank you all for the opportunity to discuss with you the Department of Defense's efforts to prevent, diagnose, treat, and research traumatic brain injury, or TBI, and its associated psychological health comorbidities.

As the Director for the National Intrepid Center of Excellence, or NICoE, at the Walter Reed National Military Medical Center in Bethesda, I lead a team of exceptional professionals whose mission is to improve the lives of patients and families impacted by TBI and psychological health issues.

Through the generosity of the American people and the Intrepid Fallen Heroes Fund, NICoE opened in 2010 on the Walter Reed Bethesda campus, followed by five of the proposed nine Intrepid Spirit Centers, or NICoE satellites, to be build on military installations around the country. Together, we've created an integrated TBI care network. It's a very important component of the military health system's TBI pathway of care, as managed by the Defense and

Veterans Brain Injury Center.

This past year, NICoE officially transitioned into the Walter Reed National Military Medical Center command structure, becoming a directorate within the flagship of military medicine and formalizing research support and collaboration from the Uniformed Services University of the Health Sciences, also on the Bethesda campus.

This completely integrated approach to our work, leveraging the expertise and resources of Walter Reed's outpatient TBI programs, inpatient consultation service, and Uniformed Services University's research capabilities allows us to serve our unique patient population in a seamless fashion, using the entire TBI care portfolio available on America's Academic Health Campus in Bethesda.

An important part of the Federal TBI continuum of care in the TBI research mission -- is the TBI research mission. NICoE and the network of military health system TBI Care Centers, in collaboration with partners, including the Veterans Administration, National Institutes of Health, Uniformed Services University, and other Federal academic and private institutions, continue to push the boundaries of innovation with cutting-edge translational research.

One signature collaborative project is the congressionally mandated longitudinal 15-year study to comprehensively categorize servicemembers and their

caregivers affected by TBI. Another example is the neuroimaging core research project, with over 1,000 servicemembers affected by TBR thus far evaluated clinically and with state-of-the-art neuroimaging capability, collecting over 40,000 imaging and clinical datapoints for study per patient.

In addition to our high-tech research, NICoE is actively engaged in clinical research on our high-touch aspects of our program, such as our National Endowment for the Arts-supported Therapeutic Arts Program and our congressionally supported research on K-9 assisted therapy. And by tracking both the short- and long-term outcomes of our programs, we are also able to rapidly assess and accelerate discovery more effectively using every taxpayer dollar by putting the research and its findings immediately to use at the deckplates amongst our patients.

So, I'm grateful for the opportunity to represent the men and women working at NICoE, as well as the patients we're honored to serve. I look forward to answering your questions today.

Thank you.

[The joint prepared statement of Captain Greenhalgh and Captain Colston follows:]

STATEMENT OF CAPTAIN MICHAEL J. COLSTON, MC, USN, DIRECTOR, DEFENSE CENTERS OF EXCELLENCE FOR PSYCHOLOGICAL HEALTH AND TRAUMATIC BRAIN INJURY

Captain Colston: Chairman Graham, Ranking Member Gillibrand, members of the subcommittee, thank you for support of our Nation's servicemembers, veterans, and their families.

I'm pleased to share DOD's efforts to foster research for PTSD and other psychological health conditions, TBI, and comorbidities, including substance-use disorders, pain disorders, and suicide.

Last year, over a quarter of our servicemembers were treated for these conditions, so please allow me to discuss how we evolved to support the need. We reduced barriers to care, including stigma. We expanded access to care by tripling the size of our mental health infrastructure. We improved transition points in the continuum of care. And we improved our system's ability to treat the sickest patients. All the while, we developed a comprehensive research portfolio to study PTSD, TBI, and suicide.

DOD partners with other government agencies, academia, and the private sector in research. The centerpiece of our collaborative efforts is the National Research Action Plan, or NRAP. NRAP brings together DOD, VA, the Department of Health and Human Services, and the Department of Education,

improving our understanding of TBI and PTSD. But, there are challenges. One challenge is ascertaining why PTSD, TBI, depression, substance-use disorders, and chronic pain all present together. Longitudinal research efforts, like the Millennium Cohort Study and the 15-year study on TBI, will aid our understanding, just as the Framingham Study helped elucidate factors in cardiovascular disease.

PTSD treatment has a wide evidence base, with A-level evidence supporting the use of therapy and medications for PTSD survivors, irrespective of trauma, be it developmental, be it sexual, or be it from the ravages of war. We, nonetheless, face challenges in how best to structure our health system to support those interventions.

Health systems research is imperative. Answering mandates from Congress in NDAAs '13 and '15, agency priority goals, and DOD's Cost Analysis and Program Evaluation Office, my center, the Defense Centers of Excellence for Psychological Health and TBI, is halfway through a 5-year effort to evaluate psychological health in TBI programs for effectiveness, including outcomes and fiscal granularity. Cooperation with academia and federally funded research and development centers aids us in this effort, leading to analyses focused on results.

With your continued support, I'm confident our discoveries will bear fruit in the years ahead. And I look

forward to answering your questions.

STATEMENT OF AMY E. STREET, DEPUTY DIRECTOR, WOMEN'S HEALTH SCIENCES DIVISION, NATIONAL CENTER FOR POSTTRAUMATIC STRESS DISORDER

Dr. Street: Good afternoon, Chairman Graham, Ranking Member Gillibrand, and members of the subcommittee.

As a researcher whose work is focused on military sexual trauma, MST, and a psychologist with the Department of Veterans Affairs who works with veterans who have experienced MST, I am grateful for the opportunity to speak about the current state of research related to MST and the diagnosis and treatment of conditions associated with MST, with a particular focus on post-traumatic stress disorder. I'm also honored to be seated with my colleagues representing the Department of Defense.

Research indicates that experiences of sexual harassment and sexual assault during military service are far too common. Data from the 2014 RAND Military Workplace Study indicated that 1 percent of servicemen and 5 percent of servicewomen were sexually assaulted in the past year, impacting an estimated 20,300 Active Duty servicemembers. The majority of these assaults occurred in military settings or were perpetrated by military personnel.

Experiences that constitute sexual harassment are even more common, with 7 percent of servicemen and 22 percent of servicewomen experiencing sexual harassment in the past

year. My own research demonstrates that experiences of sexual harassment and sexual assault are common among troops deployed in support of military operations in Afghanistan and Iraq, raising the possibility that servicemembers may have been exposed to multiple types of severe traumatic stress during military operations in these countries.

MST is an experience, not a diagnosis. And servicemembers and veterans will vary in their reactions to MST. Our men and women in uniform are remarkably resilient after being exposed to traumatic events, but, sadly, many will go on to face long-term difficulties with mental health after experiencing MST.

MST is strongly associated with a range of mental health conditions, but MST has a particularly strong association with PTSD. Research data from veteran samples indicates that experiences of MST are an equal or stronger predictor of PTSD, as compared to other military-related stressors, including exposure to combat.

In my clinical experience, veterans who have experienced MST often struggle with feelings of betrayal, either by perpetrators whom they believed to be comrades in arms or by the military system that they believed should have protected them. MST survivors may also struggle to integrate a victim identity with the value they place on their own strength and self-sufficiency as former or current

servicemembers. Others who felt that they had to leave military service prematurely may experience grief or anger at losing a military career due to the tangible and intangible injuries caused by their alleged perpetrators, or, in their view, inadequate action taken by their leadership to protect them from such harm.

Many still think that only servicewomen experience MST, but servicemen do, too. Although the rates of sexual assault are lower among military men than among military women, in absolute numbers, more servicemen than servicewomen experienced sexual assault in the past year.

Research on the mental health consequences of sexual trauma among men has lagged behind similar research among women, but, increasingly, the data suggests that the mental health consequences of MST may be more significant for male veterans than for female veterans.

Fortunately, recovery is possible after experiences of MST. And VHA has services spanning the full continuum of counseling, care, and services to assist eligible veterans in these efforts. Recognizing that many survivors of sexual trauma do not disclose their experiences unless asked directly, it is VA policy that all veterans receiving healthcare be screened for experiences of MST. Veterans who disclose MST experiences are offered a referral for mental health services. All VA counseling, care, and services

determined to be necessary to overcome the psychological trauma of MST is provided free of charge. A veteran's eligibility for MST-related care is entirely separate from the veteran's entitlement to VA disability compensation for the same conditions. Every VA Medical Center provides MST-related counseling, care, and services. MST coordinators are available at every VA Medical Center to assist veterans in accessing these services.

Issues related to brain health and head trauma transcend the veteran and military community, impacting all Americans. Today, Secretary Bob McDonald is participating in VA's groundbreaking 2-day event focused on brain health, Brain Trust Pathways to Innovation. This first annual public-private partnership event is convening many of the most influential voices in the field of brain health, to include the Department of Defense, the sports industry, private sector, Federal Government, veterans, and community partners, to identify and advance solutions for mild traumatic brain injury and post-traumatic stress disorder. The event will also serve as a showcase for many of the advancements that VA is pioneering to improve brain health for veterans, the military, and for the American public.

Mr. Chairman, I appreciate the opportunity to appear before you today. And I'm prepared to answer any questions you or the committee may have.

[The prepared statement of Dr. Street follows:]

Senator Graham: Well, thank you all very much.

I'll start. And it was a excellent --

Dr. Street, if someone is a victim of sexual assault in the military, can they get a disability rating because of the PTS?

Dr. Street: So, a disability rating would be provided for PTSD. So, because military sexual trauma is the experience and not the diagnosis, it would be the diagnosis related to the experience -- in this case, PTSD -- that the disability rating would come from. And yes, they can.

Senator Graham: So, if someone has been assaulted, and they get PTSD, they qualify.

Dr. Street: That's right. They would then go through the same process that a veteran who experienced PTSD related to combat --

Senator Graham: Okay.

Dr. Street: -- that same disability assessment process.

Senator Graham: Captain Greenhalgh, when -- what's the process we use when people return from the battle theater, in terms of evaluating them to make sure that we're catching things that they may have experienced?

Captain Greenhalgh: Yes, sir. Well, the -- you know, if we're talking about traumatic brain injury, for example, it actually doesn't start after they leave the battlefield;

it starts on the battlefield, with -- not necessarily symptom-related evaluations and screening, but event-related. So, if a servicemember, for example, is involved in a -- an IED -- if they're within 50 meters of an IED blast, for example, or a rollover accident, it's not up to, necessarily, the medical leadership to say they need to get screened; the line leadership, the battle buddy, will ensure that that person is screened on the battlefield or at the local, you know, forward medical unit. So, that's when the screening does begin.

Now, certainly if somebody falls through that crack or is not, you know, involved in a significant --

Senator Graham: Right.

Captain Greenhalgh: -- injury or event, when they return from the battlefield, there is immediate post-deployment health risk assessments that are performed. Actually, a cycle of three of them are performed within -- shortly after return, then 90 days later, 180 days later.

Senator Graham: What have we -- how old is this system?

Captain Greenhalgh: Excuse me, sir?

Senator Graham: How old is this system that you've just described?

Captain Greenhalgh: Well, I, myself, deployed about 4 years ago, and it had already been in effect several years

before that. Now, it's been modified, I think, you know, at --

Senator Graham: Do you think it's working?

Captain Greenhalgh: I think it's as good as it can be right now, because we are -- you know, we're basically not waiting for the patients to come to us with --

Senator Graham: Right.

Captain Greenhalgh: -- symptoms; we're basically asking them about symptoms that maybe others wouldn't necessarily associate with a traumatic brain injury, and they're --

Senator Graham: When it comes to prevention -- I'm sure there are all kind of technical things we're trying to do to protect the brain in a IED attack, but when it comes to PTS or -- what kind of preventive measures are we employing?

Captain Greenhalgh: With regards to the psychological health, sir?

Senator Graham: Yes.

Captain Greenhalgh: I mean, I think that prevention begins long before they deploy, and it has to do with training and -- being adequately trained and knowing their -- you know, kind of knowing their algorithms. You know, we don't want to overtrain people. You want -- you know, when they're in training, you would say, you know, "train like

you fight," but you want them to have adequate rest, let -- to allow, you know, brain rest, as well. But, you know, sort of --

Senator Graham: Are we teaching people what to watch out for in their buddies?

Captain Greenhalgh: No, absolutely. I think there's -- just from the psychological health perspective, certainly, and from the traumatic brain injury perspective, as well, there's a lot of training that goes on before they deploy. And then, depending on how long a servicemember is in theater, there's mandatory screening that occurs if they're there for more than 6 months, even if they're not involved in any sort of any specific event.

Senator Graham: Do you feel you have adequate resources at the moment to do your job?

Captain Greenhalgh: Well, sir, you know, we'd always love to have more.

Senator Graham: Right.

Captain Greenhalgh: But, I think that, especially with a drawdown in commitments overseas, what we're finding is that the resources aren't necessarily needed for the Active, you know, returning-off-the-battlefield servicemember as much as they were just 3 or 4 years ago. I think it's more for the long-term commitment that we have to these servicemembers, some of whom were injured years ago,

understanding that it's not a, you know, patch 'em up and send 'em back out to the real world. Some of these --

Senator Graham: Right.

Captain Greenhalgh: -- people suffer for years. And along with our, you know, VA colleagues, this is a long-term commitment, and that's where I think the nature of the type of support that we need definitely changes.

Senator Graham: Do you think the handoff between DOD and the VA is working?

Captain Greenhalgh: I think it's working better than it ever has, sir.

Senator Graham: Do you agree with that, Ms. Street -- Dr. Street?

Dr. Street: I do.

Senator Graham: Captain Colston, you said that 25 percent of the force has been treated for -- for what?

Captain Colston: Yes, sir. So, one of the things that we actually do is, in transition, where we -- when we do handoffs from DOD to VA, we look at who's been treated in the last year. And it's at about 20 percent for psychological health conditions, and then, for other conditions, such as substance-use disorders, pain disorders, depression, that kicks it over 25 percent. So, we have a large cohort of treated people right now, sir.

Senator Graham: So, from a DOD perspective, this is a

problem.

Captain Colston: Oh, absolutely, sir. And it's one, certainly, that we've devoted a lot of resources to, that we have really made a number of turnarounds for.

Senator Graham: Well, just to stay within time, here -- do you see any promising therapies in the future? Hyperbaric oxygen treatment, I've heard a lot about that. There's a program, I think, in Myrtle Beach. People really believe in it. There are all kind of ideas out there. Could you tell me a little bit about that treatment and what you see coming in the future?

Captain Colston: Well, I think hyperbaric oxygen treatment, we've done about seven studies on that right now. None of them failed to show any effect beyond a placebo effect. But, we have all kinds of innovative strategies, and we also have a number of A-level evidence-based strategies for PTSD. I think innovations in the future are going to include biomarkers, neuroimaging, and, really, better ascertainment of the disease states of PTSD and TBI and the other things that run with it.

Senator Graham: Okay. Well, we'll let the hyperbaric people -- you'll have your say. You can write us a report about it.

Senator Gillibrand.

Senator Gillibrand: Thank you, Mr. Chairman.

Victims and experts have stated that the response to military sexual trauma is more similar to that of incest than other forms of sexual assault. How many survivors of MST go on to develop PTSD, is the first question? And for MST survivors who develop PTSD, how do they present differently from those with PTSD stemming from other kinds of traumatic events?

Doctor?

Dr. Street: We know that experiences of sexual assault, including experiences of sexual assault during military service, are one of the strongest predictors of PTSD. It's the type of event that's associated with PTSD symptoms among both women and men, as I mentioned, even more strongly for men than for women.

And the symptoms of PTSD related to MST look really quite similar than the symptoms of PTSD related to other forms of traumatic stress, although survivors of MST may report certain kinds of issues more frequently than other types of trauma survivors. So, for example, issues around intimacy and sexuality, issues around interpersonal relationships and boundaries, certainly issues around trust, issues around self-blame. Those are issues that come up, I think, much more frequently in -- when working with sexual trauma survivors.

Senator Gillibrand: In the last report we got, 62

percent of the people who reported that they were sexually assaulted were retaliated against -- from their perspective, some form of retaliation. How does the experience of not being believed or being retaliated against affect PTSD symptoms?

Dr. Street: It worsens it. I've done research indicating that a victim's experiences in reporting, in the system, and how they feel about that experience -- if they feel positively about it, if they feel like they were believed -- that is a strong predictor above and beyond the traumatic experience of how they're doing, years later, in terms of PTSD and depression symptoms.

Senator Gillibrand: Last December, there was a study completed by the VA researchers that was published in the American Journal of Preventive Medicine on the link between military sexual trauma and death by suicide. The study found that MST was a significant risk factor for suicide among men and women, even controlling for other psychiatric disorders. What implications do these findings have for screening and treating patients with MST?

And then, to Captain Colston, how do these findings inform screenings and treatment of servicemembers? And what kind of outreach do you encourage survivors of MST to seek care?

Dr. Street: So, we do, as I mentioned, screen every

veteran for experiences of MST, in the VA, which that study would suggest is particularly important, because, unlike other types of traumatic events, the risk associated with MST for suicide doesn't run fully through PTSD or depression; it exists separate from that. So, it's just why it's so important that we screen specifically for experiences of military sexual trauma, so that those patients can be followed up with, in terms of suicide risk, directly.

Senator Gillibrand: Captain?

Captain Colston: Yes, ma'am. I'd agree with -- yes, ma'am, I'd agree with Dr. Street. Suicide risk is increased from sexual assaults, aside from PTSD. PTSD itself is not necessarily a robust risk factor for suicide. It does have a hazard ratio that suggests that it's associated with suicide, but certainly sexual trauma is a really big factor.

Developmental trauma, especially developmental sexual trauma, stuff that I've seen as a child psychiatrist, that's a huge risk factor and something that actually affects the brain as it develops, makes you kind of check the horizon for if you're safe all the time.

Senator Gillibrand: Although the prevalence for military sexual trauma is higher among women, given the significantly larger portion of men in the Armed Forces, there are similar numbers of men and women who have survived

sexual trauma. How do men differ in their response to MST? And how do VA services meet the unique needs of men who have survived MST? And are treatments for PTSD related to MST different for men and women? And, if so, how? And is there a detectable difference in male suicide rates?

Dr. Street: So, male and female survivors of MST look more similar than they do different, although men's experiences may be exacerbated, in terms of symptomatology, although the symptoms themselves are the same. Men -- male survivors do struggle uniquely with concerns about their masculinity, understanding what this says about their sexual orientation, a lot of self-blame, "Why was I targeted for this?" This isn't something that men usually experience.

In terms of treatments, the treatments look very similar. I think differences, in terms of male and female survivors, really comes in when we think about our social marketing and our outreach. We're very careful to have outreach materials that are specifically targeted to male survivors, to include pictures of men on all of our outreach materials about MST, in addition to pictures of women, so that men can understand that our MST treatment services are there for them as well as those for women.

Captain Colston: I'd say one of the things that we struggle with, the prevalence of sexual assault in women compared to men is probably about five to one. And Dr.

Street's data and Nate Galbreath's data at SAPRO, and some of Ron Kessler's data from Harvard, support that.

One of the things that we struggle with is getting men into care. Men are less apt to engage in care for sexual assault. And, in fact, in therapy, that's something that you may address way downstream. It's not an initial or presenting problem.

Senator Gillibrand: It's why I have a concern that the suicide rate might be higher, because if --

Captain Colston: Well, I --

Senator Gillibrand: -- male survivors won't report, they don't get any care. And, just anecdotally, I met a male survivor who attempted suicide, was not successful, paralyzed himself in his -- shooting himself in the spine, and was paralyzed for the rest of his life. But, he couldn't face his life, he couldn't face his wife, he couldn't face anything after it. And instead of seeking treatment -- or, actually -- he actually did, but, for many survivors, instead of seeking treatment, they just commit suicide.

Captain Colston: There's no question that it's a trauma that's very hard to overcome. And it's very hard for us to get granular exactly about what the problem is. There's --

Senator Gillibrand: Yeah.

Captain Colston: -- on the order of 300 risk factors associated with suicide. Certainly, sexual assault is one of them. PTSD is one of them.

One thing is, I think, you know, with regard to VA care and some of the promising things, we see that veterans who have PTSD have lower suicide rates than other veterans. So, I think there are some promising developments in the treatment and in the turnover from DOD to VA.

Senator Gillibrand: Thank you.

Senator Graham: For the record, Senator Cotton served a tour of duty in combat in Iraq. I think you were a platoon leader and -- is that correct?

So, Senator Cotton.

Senator Cotton: Thank you, Chairman Graham.

And I can say that the system that Captain Greenhalgh described has been in effect for at least 10 years, at least in the Army.

I want to talk briefly about the relationship between traumatic brain injury and post-traumatic stress. Does -- one does not necessarily presume or infer the other. Is that correct?

Captain Greenhalgh: Not necessarily, sir. I think, certainly, if someone has been exposed in a traumatic event downrange that resulted in a traumatic brain injury, I think the possibility is greater that they will also have comorbid

post-traumatic stress along with that. I do believe that a history of TBI sort of predisposes someone to be more vulnerable to psychological health issues downrange, or down the road. And some of that has to do with the chronic effects, if that is a servicemember who has chronic effects of the TBI, developing some symptoms that are very suggestive also of psychological health issues. There's a lot of overlap there, as well.

Captain Colston: And I'd say patients often present to us in an undifferentiated state. They'll present, maybe, with their -- with a problem with suicidality, maybe a substance-use disorder, maybe a pain disorder. Sometimes it's very hard for us to discern what the precipitant was.

Dr. Street: I have nothing to add.

Senator Cotton: Is one easier to diagnose than the other?

Captain Greenhalgh: From a --

Senator Cotton: To the extent that you can separate the comorbidity of the two.

Captain Greenhalgh: Well -- so, my background, sir, is primary care, so I would say, certainly, we see a lot of behavioral health in the primary care setting. But, given that, we have very strong CPGs for a lot of things that we take care of in the -- you know, in military medicine and just medicine in general.

When I see a patient who has a history that sort of fits within the clinical practice guideline description for certain kind of diagnosis, I find that, from the primary care perspective, the TBI is certainly an easy one to try and fit into that, you know, diagnostic realm.

Captain Colston: Some of it has to do with the patients that present in front of us. For Walt, in a primary care setting, he's going to see a different patient population than I'll see in a psychiatric setting. One of the things that occurs to me is, the science for PTSD is probably more developed than the science is for TBI. Science for TBI is really in a nascent stage, so PTSD is a little easier to discern. It's a little easier to discern from a child psychiatry standpoint with regard to developmental trauma, just because the prevalence of that is so high.

Dr. Street: And just to add, I concur that the research base on PTSD is a bit further along. And, as part of that, we have existing well-validated instruments for the screening and diagnosis of PTSD. And I think those instruments are being developed for TBI, but are not as far along, haven't undergone as rigorous tests.

Captain Greenhalgh: If I --

Senator Cotton: So, the science for PTS is further along than TBI. Is that simply because of the volume of

patients that the medical world has seen with post-traumatic stress, as opposed to TBI?

Captain Colston: I think it's a number of factors. The science of TBI is -- has been really hard to get a handle on, just from the standpoint of -- you know, it took -- I'll give you an example, sir -- it took 20 years and $50 billion to get on top of HIV. HIV has about a dozen genes and two serotypes. The brain uses about 20,000 of the 30,000 genes in the human genome. Understanding the way the brain works, especially a brain that's traumatized, is extremely hard.

With regard to PTSD, we at least have a long history of looking at people who were traumatized, and a long history of treatment interventions, so I think the science is more developed for that reason. The prevalences of both of those -- in DOD, the prevalence of TB- -- of PTSD is about 2 percent; TBI, slightly lower.

Dr. Street: I think, from a historical perspective, we really became aware of PTSD, following the Vietnam War. And so, we've had that span of history to really think about the disorder, the diagnosis, and the treatment of the disorder. TBI is something that we've become so much more aware of, due to the recent conflicts in Iraq and Afghanistan.

Captain Greenhalgh: And, if I could just add, sir. Again, from the primary care perspective, there have been

versions of PTS, it seems, from conflicts centuries ago, as well, this -- the idea of shell-shock and things like that. I think we've gotten more of a handle on it after the Vietnam conflict. But, as Captain Colston alluded to, with technology, neuroimaging capacity, that really has just been a phenomenon of our generation. And so, I think there's a lot of potential there. And again, from the primary care perspective, having neuroimaging support certain diagnostic criteria for traumatic brain injury, I think that's where there's a lot of potential for the science. But, I agree, I think we've been describing things like PTS for quite a lot longer than we have traumatic brain injury.

Senator Cotton: One word I think I heard you use twice, maybe three times, was "longitudinal." The root of that is "long," which is a little worsened, given the number of people who suffer from PTS or TBI. Obviously, when you're conducting a longitudinal study, it takes many years to get results. Is that something about which we should be concerned?

Captain Colston: Yes, sir, but it's the only way that we can do it, because these things don't present in silos. PTS doesn't present in a silo. TBI doesn't present in a silo. So, we've got to get a handle on where the patients are. And we have a lot of efforts. We've got the millennium cohort study, we've got the 15-year TBI study.

We have the STARS longitudinal study on suicide. So, we're looking at several hundred-thousand patients now to get an idea of where patients are coming from.

Captain Greenhalgh: And if I can add onto that, "longitudinal" doesn't mean that we have to wait until the study is over to start gathering data, so the 15-year study, for example, has report-outs every 4 years. The next one is due next year. Not to mention the constant stream of data and research that is being formulated into papers and publications along the way. That's just a small example.

So, longitudinal really, I think, if anything, connotes a commitment to a long-term study of this, not to say that we're going to not give you any answers for 15 more years, sir.

Senator Cotton: Can -- do you, can you, would it be productive to expand the dataset to look at other occupations that might have similar risk factors, like, say, professional football, professional hockey, boxing? There may be others.

Dr. Street: Certainly, the brain trust meeting that I described that's happening today and tomorrow is doing exactly that, and it's bringing in a researcher from my institution who was one of the first to identify this issue among professional football players, and taking that information and then applying it to the military and veteran

community. So, for sure, these public-private partnerships in which you can identify knowledge that's been gathered in other places and applied to this population, I think are very promising.

Senator Graham: Senator Blumenthal.

Senator Blumenthal: Thanks, Mr. Chairman.

Dr. Street, I think you've touched briefly on the transition from Active Duty out of service or into the Reserves or care of the Veterans Administration. How well do you think that transition is going these days, in terms of the computer compatibility, not only in records, but also in transition on pharmaceutical drugs, the prescriptions, and so forth? Maybe you can give us an overview, because I think you're -- you really are in a position to comment on that issue.

Dr. Street: Well, I'm happy to comment from my perspective, although my perspective may be a bit limited, so you may choose to hear from my colleagues, as well. But, in my perspective as a practicing clinician, that transition is going well. I think Captain Greenhalgh, earlier, said it's going better than it ever has. And I know that there's a lot of attention to this issue, a lot of new initiatives. And, in my experience as a practicing clinician, I haven't encountered problems with that.

Captain Colston: Sir, I'd say it's DOD policy right

now that we do a warm handoff from DOD to VA. And it's really important, those transitions. One of the things that we've done is, we've established coaching, an in-transition program, where we actually look at people's medical data and then go in and say, "Hey, can we help you with your follow-on appointments?" And I think that's been used to good effect in the last year.

Senator Blumenthal: Well, it's always been the policy. It's not always been the executed policy. And so, for example, on the interoperability of computer programs, I don't know whether you can give us an up-to-date perspective on how well that's going. It's been a continuing struggle, as you know.

Dr. Street: I don't have an update on the status of that. I'm -- but, I'm happy to take that question for the record, and we could get back to you with a more thorough answer on the updated status of that integration process.

Senator Blumenthal: I would appreciate that. And, as well, on the pharmaceutical drug issue, the transition there has been an issue for some time.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Senator Blumenthal: Let me shift to, again, the post-traumatic stress, military sexual assault trauma. Is that an area where you think more research, as well as clinical treatment, is necessary?

Dr. Street: I'm a researcher. I'll always say that I think more research is necessary. But, I do think this is a case where understanding things that are unique about experiences of military sexual assault, ways in which those experiences differ when they're in the military context from when they're in a civilian context, and better understanding that has a lot of implications for recovery. So, I think our -- research that helps us understand that process, as well as research more generally targeted to the disorder and treatment of the disorder, is extremely valuable.

Senator Blumenthal: And it may seem obvious -- the answer may seem obvious. I think I have an idea about what the answer is, but maybe you can talk a little bit about what the differences are in the civilian-versus-military sexual assault trauma.

Dr. Street: Sure. Senator Gillibrand, earlier, referred to the fact that survivors of military sexual assault in some ways looked clinically more like survivors of childhood sexual abuse than they look like survivors of adult sexual assault in the civilian world. And I think there's some truth to that, certainly in terms of the fact

that survivors from military sexual trauma often talk about the experience of ongoing abuse in which they feel trapped and unable to escape because they're not able to, sort of, leave their position, although there have been policy improvements to make that more possible. They're also dependent, often, on their perpetrators for meeting their basic health needs or for this feeling that their perpetrators are those who are supposed to be watching their back and looking out for them. And I think those kinds of differences gives the survivor, sometimes, a little bit of a flavor for -- that looks more like ongoing childhood abuse.

Of course, also, we know that survivors of traumatic stress are often repeatedly traumatized over a lifespan. So, that earlier trauma increases risk for later trauma. So, many women and men who are survivors of sexual trauma in the military are also survivors of childhood sexual trauma or other interpersonal trauma, as well. So, then those experiences can exacerbate each other, in terms of the severity of the symptom presentation.

Senator Blumenthal: Thank you.

My time is expired. But, I appreciate your taking my earlier questions for the record. Thank you very much.

And thank you all for your service.

Thank you.

Senator Graham: Thank you. I think Senator Tillis is

on the way, but I -- Senator Gillibrand, if you have any followup.

Senator Gillibrand: One of the issues that some of us work on is rescheduling marijuana to become a Schedule 2 drug so more research can be done and so patients that have been prescribed the medication can get access to it more regularly. One of the concerns we've had is, because it's a Schedule 1 drug, it, therefore, prohibits the VA from being able to prescribe it, even though that individual might have been prescribed in their State, where their State's already passed a law. We've heard, anecdotally, from many veterans that marijuana can often be a very useful treatment for PTSD symptoms. Have you studied that issue? Do you have any insight into that issue that you'd like to share?

Captain Colston: Ma'am, I can say DOD hasn't ascertained the answer to that question, for the reason that you --

Senator Gillibrand: For the Schedule 1.

Captain Colston: -- just asked earlier.

One thing that I have seen, as a child psychiatrist, is, there's risks and benefits to any intervention. And with regard to marijuana, one of the things that we struggle with is, it can precipitate psychosis in some people, especially younger people, people of a military age. So, that would be a concern that I would have as we press

forward on this.

Dr. Street: I know that VA has ongoing studies looking at the effectiveness of marijuana for a treatment of PTSD, but I know that there have been issues that have come up related to the quality of the marijuana, the consistency of the marijuana, the strength of the marijuana, that's made it -- there are unique challenges, in terms of studying the effectiveness of that substance on the disorder.

Senator Gillibrand: Would you recommend further study of it so that we could actually have drug companies study it and drug companies produce medicines that then can be tested?

Dr. Street: I'd like to see the results of the early studies, in terms of addressing the, sort of, cost-benefit analysis. If early studies looked promising, then I would make that recommendation. But, if early studies showed a lot of negotiate, unexpected effects, then I would be more cautious in that recommendation.

Senator Gillibrand: Thank you.

Senator Graham: Senator Sullivan.

Senator Sullivan: Thank you, Mr. Chair. And I appreciate you and the Ranking Member calling this hearing. It's a very important topic.

You know, appreciate the witnesses being here. One of the things I really like about this committee, it's very

bipartisan. And this topic comes up a lot in a very bipartisan way. You see members who actually really, really care about this. I certainly happen to be one of them. I think most people who have served in the military can recall more than one instances where a troop member of their squad or unit or -- has succumbed to the -- to depression and suicide. And I think it -- it's a searing experience, of course, for families, but for the troops and the leadership and everybody else who goes through that. So, it's a topic that we need to do a better job at.

I'm sure that's probably already been covered to some degree, but -- What authorities would you view, from our perspective, that you need from this committee or the Congress to do more to address some of the issues of the stigma PTSD or reducing the rates of suicide among our Active Duty and veteran populations? Is there anything more you need from us?

Captain Greenhalgh: Well, sir, I think you talk about two things that are very closely related, which is reducing the rate -- reducing the stigma and then attacking the problem, itself, which is suicide. And I think, with regards to reducing the stigma, we've made great strides over the last decade, I think, at least, in making it not just a, again, symptom-drive approach, the patient coming to the medical provider, looking for help. With our screening

efforts, certainly everybody is asked whether they're symptomatic or not. When we go through our annual health maintenance examinations, that comes up as a very prominent topic, that and TBI history, as well as a lot of the technology and, sort of, the apps that are available, a lot of, you know, IT solutions, where the servicemember doesn't -- and their family -- doesn't necessarily have to go to a clinician to ask the question. They can get a lot of the information they need online. And I think that goes a long way towards destigmatizing, if they can at least get the answer to some of their preliminary questions in, sort of, a non-sort-of-clinical environment. I think that's certainly one step.

Captain Colston?

Captain Colston: With regard to resources, I wouldn't necessarily have anything to say about that. I would say that there is a robust relationship between suicide and depression. And certainly identification and management of depression, especially in a primary care setting, is a very important strategy, and one that we really want to focus on, really in public health.

Senator Sullivan: Let me ask another question that relates to, kind of, my first one on authorities. There is a bill -- and I'm having my team take a look at it -- that I've been looking at. I believe it might be Senator Peters

who has put this bill forward, that -- and I don't want to butcher it here, so we can make sure you get it for the record -- but that is concerned about claims that there's been thousands, maybe tens of thousands, of members of the military who have received discharges that are less-than-honorable discharges related to PTSD or brain-injury type of issues. And are you familiar with this bill, or are you familiar with -- and the bill would ask the military to have a presumption, maybe, in favor of a honorable discharge. In my military career, have not really seen that issue, but I may have been missing something. Are you familiar with this bill? Are you familiar with the problem? And what's your advice? Do you think there's thousands, or even more, members of the military who have been discharged with other-than-honorable designation because of activities of undiagnosed PTSD, and that their discharge designation should be relooked at? And do you need authority to do that, from the Congress?

Captain Colston: Sir, on the bright side, we've already had that authority, and we've used it. So, we've -- we did a mental health review, where we looked at over 200,000 boards. We did a physical disability board review, where we looked at a number of boards for just that problem. And since 2007, patients that you are going to separate for means, be they disciplinary, be they for lack of

performance, they need to be -- PTSD issues and TBI issues need to be addressed before that can be done.

And when we look at the numbers, we look at -- we used to separate about 4,000 folks a year for personality disorder separations. That number is down to 300. So, that number is about 7 percent of what it was. There's been a lot of attention to this issue. And certainly -- about 3 years ago, I think we spent on the order of $10 million looking at boards. And certainly, as Senator Blumenthal's brought up in some previous correspondence with DOD, sometimes we're going all the way back, so the boards of correction for military records have looked at cases from Vietnam veterans, cases even where PTSD didn't exist as a clinical diagnosis. Of course, it's hard to ascertain, you know, exactly what the circumstances were around something that happened a long time ago without records.

Senator Sullivan: So, you --

Sorry, Mr. Chairman. Just a followup.

If you -- so, you already have that authority. Have you seen this bill? And have you weighed in on it? And -- it would be very useful. It's, like I said, something that I've -- I'm very sympathetic to. I don't know what DOD thinks about the bill. At the same time, it sounds like you're already -- you already have the authority to do what the bill does. I don't know if it has a presumption in

favor of a honorable discharge or -- again, I don't know the specifics. I'm sorry, I should have brought it with me. But, have you weighed in, or do you need the authorities, or you think you're good to go in addressing this -- what you're obviously saying is a problem?

Captain Greenhalgh: Well, sir, I mean, I haven't seen the bill. I haven't been asked to weigh in. But, I echo what Captain Colston said, is that I don't think it's an issue of the type of discharge that a patient gets. I think it's a matter of ensuring that they get the correct kind of care that they need prior to discharge, or even after discharge, with that warm handoff to our VA colleagues. Whether it's honorable or dishonorable, I think, is -- isn't necessarily the driving point.

Senator Sullivan: Mr. Chairman, if I may, maybe we can submit that bill. And if they had a view on it --

Senator Graham: Yeah. Well, it sort of is the driving point, because you don't want someone to have a UOTHC, other-than-honorable-conditions discharge, who had a medical condition that may have resulted in it.

Senator Sullivan: Right.

Senator Graham: That's the whole point.

Dr. Street: And this was particularly relevant or military sexual trauma survivors. They were often diagnosed with a personality disorder as part of their discharge after

they had suffered a sexual assault. And with that discharge, they weren't entitled to VA benefits. So, it was a huge problem for them --

Senator Graham: Yeah.

Dr. Street: -- because they have trauma, they've been -- they're a survivor, they need mental health care, and they don't even have access to the VA anymore. So, that -- we wanted those cases to be looked at again to say, Can we get this right?

Senator Graham: Yeah, we -- we'll upgrade the discharge if there's a medical reason that was missed, or PTS suffering.

Captain Colston, the reviews you're familiar with, did you all actually change discharge designations?

Captain Colston: Yes, sir. So, several servicemembers have had discharge determinations changed over the years. And several servicemembers have had their benefits changed. So, especially the Physical Disability Board of Review --

Senator Graham: Could you do this? Could you have that group -- and I applaud your efforts -- give us the results? I mean -- of the 200,000 reviewed, how many discharges were upgraded and how many benefits were restored?

Captain Colston: Yes, sir. The executive agent for that was the Air Force and the Physical Disability Board of

Review is right here --

Senator Graham: Our crack staff --

Captain Colston: -- inside the Beltway.

Senator Graham: -- will get on that, won't you, crack staff? Absolutely.

Senator King.

Senator King: Thank you, Mr. Chairman.

Thank you all for your work in what is a really important area. We see it daily in Maine.

Dr. Street, one of the issues we have in our State -- it's a very rural State, it's large -- large, long distances. How do we deal with the unique challenges facing veterans in PTSD and other mental issues who -- it's just almost impossible to drive a whole day, and drive back, and to have effective treatment. Talk to me about treating this problem in rural areas, and particularly about the possibility of using online resources, telemedicine, those kinds of things.

Dr. Street: Well, you're -- the things you suggest are exactly the kinds of things that we've been working with, really figuring out how we can harness technology to take what we know are effective treatments, but have used -- been, historically, in a sort of face-to-face setting in an office situation, and use technology to make those more widely available. So, certainly telehealth. But,

increasingly now, we've also been developing and testing online technologies. So, for an example, a colleague of mine in Boston recently developed a online intervention for comorbid PTSD and alcohol abuse that's -- that, in early stages, is showing -- shown to be quite effective. We are also harnessing the use of mobile apps that veterans can use, if they have infrequent appointments, in between appointments to help manage their symptoms and improve their process of recovery. So, we're hoping that use of technologies, and really harnessing those technologies, can help address some of the issues with treatment among rural veterans.

Senator King: Just as sort of a parenthetical question, then I'll get back to the technology. Do we know what works? Is -- are there proven treatments to deal with this issue?

Dr. Street: There are. And it's, I think, such an important message to get out there. So -- because I think it provides hope for veterans. But, we have well-established, rigorously-tested treatments for PTSD, primarily psychotherapies in the cognitive behavioral realm that have been shown, in multiple settings, in multiple populations, to be very effective in reducing the incidence of PTSD.

Senator King: I think that's important news out of

this hearing --

Dr. Street: Absolutely.

Senator King: -- that this is not a hopeless situation, that there are --

Dr. Street: Absolutely.

Senator King: -- successful treatments.

Dr. Street: Absolutely.

Senator King: Well, I want to encourage you, in the strongest possible terms, to pursue these technological advances, because time is not on our side. And again, in many places in this country, people are in very rural areas -- in Alaska -- and they just don't -- they just don't have access to a clinic or to a group. It's very difficult.

Dr. Colston, talk -- let's talk about substance abuse as it relates to this issue. Do you -- I'm -- from my anecdotal data from my staff in Maine, there's a lot of overlap. A lot of people that have PTSD end up in a substance-abuse situation, either alcohol or drugs. Is that true? And how do we deal with that issue?

Captain Colston: Yes, sir. There's about a 30-percent overlap between PTSD and substance-use disorders. And one of the really scary things that we're facing right now is the scourge of opiate overdose deaths in this country. So, as people transition --

Senator King: 47,000 a year.

Captain Colston: Yes, sir. Just horrible. And certainly, as people have transitioned into heroin use, more heroin overdoses --

Senator King: Do you think part of it is self-medication?

Captain Colston: Yes, sir, no question. And we've seen that with alcohol. We've seen it with all kinds of illicit drugs. And, you know, certainly now, the drugs that are out there are just scary. They're drugs that you can take once and end up dead. And that's really where the change has been. We recognize that there is an overlap between those systems, so we have a lot of stepdown care in DOD, a lot of intensive outpatient treatment, where we great both your mental health issues, which -- PTSD runs with other things. It runs with TBI, it runs with depression, it runs with substance-use disorders, it runs with pain. And we also treat your substance-use disorders. With regard to opiate-use disorders, we've got medication-assisted therapy. With regard to alcohol-use disorders, lots of new science that supports the use of things like acamprosate, which is a medication-assisted therapy for alcoholism, or other drugs that work really well, like naltrexone.

Senator King: So, you see this as an important area, that the comorbidity is a significant issue.

Captain Colston: Oh, absolutely, sir. Dual-diagnosis

work is really where most of our stepdown work is right now. And Walt, over at the NICoE, sees a fair amount of folks who are struggling in that regard, too.

Senator King: Dr. Street, are there any VA rules that, if you -- if you're suffering from PTSD, but you also have an -- a drug-abuse problem, you can't get treatment, or you're excluded? There's no -- there are no barriers on --

Dr. Street: No, no barriers. And, in fact, increasingly, we're looking at treatments that can treat both of the disorders simultaneously, because we know that they are so interrelated.

Senator King: A final question. I know that a program was created in 2010 to help people moving out of the service into -- called In Transition, I think it's called. My question is, Is it working? And how do we know?

Captain Colston: So, we're collecting -- that's run out of my office, sir -- we're collecting data on it. We ramped up the program tenfold about a year ago.

Senator King: Good.

Captain Colston: One of the things that we're trying to do throughout DOD is get outcome measures. And, luckily, there hasn't been, in this short period that we've been running the program, a suicide in any person who's been coached in the program. Nonetheless, we want outcome measures with regard to things like, How depressed is this

patient? What kind of PTSD symptoms does this patient have? How much healthcare is this patient utilizing? And I think, as our health systems evolve, and as we develop registry data, the ability to get a better idea of where patients are as they move between DOD and VA, we'll get much better answers with regard to outcomes.

Senator King: I think we should be applying the same level of resources, money and personnel, to transition out of the service that we put into recruiting in, because that's where a lot of the slippage occurs, in that sometimes very difficult transition. And that's been something I've -- I just think that's a -- that's a rule of thumb. Let's spend as much helping people when they come out as we spend bringing them in, in the first place.

Thank you very much for your testimony and for your work.

Senator Graham: Senator Tillis.

Senator Tillis: Thank you, Mr. Chair.

Thank you all for being here.

First off, I understand -- I'm sorry I'm late. I had a competing -- actually, I was just following Senator Sullivan through the committee, the concurrent committee circuit. So, I apologize for being late. If you've already answered these questions, I can just refer back to the record.

One thing I wanted to underscore, I think that Senator

Sullivan covered. It's a bill that I support, the Fairness for Vets Act. I think you all got into a discussion here, so I won't ask you to repeat it, but just underscore, I think it -- I think it's important, and I think it provides value. And I believe there's at least consensus among the Department that you do, as well? Thank you. Any problems with it?

Captain Colston: I haven't looked at it yet, sir.

Senator Tillis: Okay. Okay.

And I think Senator Cotton may have mentioned something about public-private partnerships. We go to the easy -- the easy one to identify, which would be the NFL. Based on where I come from, I could argue NASCAR. But, what other sort of network of private partners are out there? And what, specifically, are we doing to really bring in and collaborate, use their expertise, not reinventing the wheel? And, Dr. Street, maybe I should direct that to you.

Dr. Street: Yeah, there's actually a 2-day summit going on today and tomorrow that's really -- the focus of it is public-private partnerships around the issue of TBI, and bringing in folks from VA, from DOD, the NFL, certainly researchers from the private sector who are familiar with those issues, to try to really garner innovative technologies from different sectors and apply them to this population.

I think that's a good general -- this idea of public-private partnerships is a good general model, and one that VA is trying to do more and more of.

Senator Tillis: Have we gone into any of the, maybe, research universities that do a lot of work there, and found partnership opportunities with them? Is that another area you're casting a net?

Dr. Street: Yeah, absolutely. I mean, where I hale from, in Boston, we have very close connections with Boston University. They've done a lot of work around chronic encephalopathy. And many of those investigators actually hold dual appointments in the academic institution and in VA so that we can really harness some of the power of the best scientists in the country who are doing this kind of work.

Senator Tillis: Okay, thank you.

Senator King mentioned the transition piece. I'm on Veterans Affairs Committee. And, obviously, a lot of the challenges we have after a man or woman comes out, they may have undiagnosed TBI, PTSD. And I'm trying to figure out how we do a better job of -- there's this handoff, and, you know, sometimes if you go in transition, you've got the younger soldiers that are in the back of the room with their headphones on, doing their duty, and then moving out there. They may be, in fact, people that should be listening. And what they're thinking about is moving on. To what extent is

the DOD -- it necessarily becomes a VA role, but to what extent is the DOD making sure that -- particularly for ones where you may have evidence to suggest that someone does have something that has not yet been effectively treated -- make sure that those veterans get vectored into the care that they may need through the VA? Does that handoff actually occur, or is it a -- just because of the finite nature of the transition -- I'm trying to get some sense of how we do a better job of making -- the VA may not know that there is someone out there that may -- they may need to help. So, it's -- how do you kind of create an alert system -- or does it already exist -- to make sure there's a good handoff?

Captain Colston: Well, really, three things. First, there's a separation health assessment, where we try to cover all of these issues. For patients who present with any kind of condition, we have an Integrated Disability Evaluation System with the VA. And then we have an in-transition system to coach folks who -- and it's an opt-out system, and it's not an opt-in system -- to help folks get that next appointment.

I'd also say, for the sickest patients, we go all the way to -- when I was at Great Lakes, if I had a 18-year-old patient with schizophrenia who was going to end up at the VA, one of my techs would get on the plane and bring him to

Alabama or bring him to Texas. I mean, that's the level of transition support that's expected.

Senator Tillis: Do you think that we're doing that consistently?

Captain Colston: Sir, I can say we're measuring it right now.

Senator Tillis: Okay.

Captain Colston: And I could certainly take that question for the record as -- with regard to how we're doing.

Senator Tillis: Yeah, I would appreciate that. I mean, just to get some sense.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Senator Tillis: You know, I'm from North Carolina. We've got a million veterans and a lot of folks who either serve at Fort Bragg or Lejeune that end up staying in North Carolina. And just want to make sure we're getting them to the care that we think can help avoid other problems and complications. I work a lot with a drug treatment facility down in Raleigh-Durham that's -- about 60 percent of their clients are people who now have substance-abuse problems, but it's not clear how they got there, what caused them. Some of them are rooted in PTSD. So, I'm very sensitive to this issue to make sure we're capturing as many as possible and getting them in -- into the appropriate sort of care setting. So, I would appreciate that.

Thank you, Mr. Chair.

Senator Graham: Thank you.

This has been a excellent panel. I think you've all acquitted yourselves well.

Just to kind of summarize, one in four military members are affected by what we've been talking about today -- trauma, PTS, drug abuse, alcohol-abuse problems. They've been treated for these problems. Is that correct?

Captain Colston: Yes, sir. We do a DMDC data run, so -- a Defense Management Data Center data run -- for everyone that's getting out, and look and say, "Have you been treated?"

Now, one thing I can say is, we're -- we do a really good job with screening. And certainly, we've evolved to identify more of the illness that's out there. I think, you know, we now have probably the most treated cohort in human history. So --

Senator Graham: Yeah, I would think so.

Captain Colston: -- I think we're doing a good job in that regard.

Senator Graham: Well, and that's the whole point. We want -- you know, somebody asked this, but, you know, as I wrap up here and let other people ask additional questions, please tell us what we can do. Because, you know, we're trusting y'all guys. Everybody seems to be very focused that the veterans and those serving deserve this. About 80 percent of the cases are unrelated to being in combat. TBI -- one thing about the movie -- I haven't seen it, but Senator Gillibrand was telling me -- that you can't look at a TBI injury on a MRI. It's not like looking at a broken bone, right?

Captain Colston: No, sir. There's no neural imaging, no correlation.

Senator Graham: Only God knows how much of this we missed in past conflicts.

Captain Greenhalgh: For the mild TBI, yes, sir.

Senator Graham: Okay.

And I'll just add with this and let members wrap up what they would like to ask.

I've been to a bunch of refugee camps. And I'd bet most of us have. I can only imagine what the people in these refugee camps are going through. From Syria -- I was one in Turkey not long ago -- the children, the women, particularly, victims of sexual assault. So, one thing, as a Nation, as a world, we need to -- there's a -- not a whole lot of treatment, the people who have been through conflict. And I just think they're ticking timebombs if we don't get ahead of this. So, one thing I'd like the Senate to understand is that, when we provide aid to the refugees, it's more than just food and water and clothing. If we don't have a mental health component, I think we're making a huge mistake.

So, anybody else?

Yes, Senator Sullivan.

Senator Sullivan: Just had a followup question.

So, the bill is actually S. 1567, Fairness to Veterans Erroneously Discharged from the Military. That's the name of the bill. So, if you could take a look at that to see if that's providing you additional authorities that you think you need, which is obviously a issue that seems to be a pretty big issue if you're looking at 200,000 cases.

I just had another question. Like Senator Tillis, I'm

on the Veterans Affairs Committee, and I asked the questions of some of our service organizations when they were testifying recently. On the designation PTSD, there's been some discussion of -- you know, we talk about the stigma, the "post-traumatic stress disorder." And so, a "disorder" kind of comes with a little bit of, you know, implications. And so, some people have mentioned to me, "Well, maybe we -- this should be referred to as post-traumatic stress injury." So, if you receive this in combat and you were injured, obviously, that it's like, you know, getting shot. Nobody calls a gut wound or a -- getting shot a "disorder"; they call it a "injury." So -- in some veterans groups think that might be a good idea; others don't, for reasons that might have to do with benefits and how things are actually categorized in the VA. And if you don't call it a "disorder," you might lose a certain amount of --

Do you have any thoughts on that, Dr. Street? Any of you? Just on the -- just the title, itself, which does have certain implications. I was just wondering what your thoughts are on that.

Dr. Street: I'm in favor of retaining the "post-traumatic stress disorder" title. I appreciate the concern about stigma, but I -- I don't believe that changing the title is the way to most effectively combat the stigma.

Senator Sullivan: No, I don't think it would at -- I

mean, I'm not saying it would, but it -- you know, it might be -- might help, right?

Dr. Street: I mean, I think certainly -- just to outline my specific concerns -- I mean, there is -- we've made so much progress, in terms of our ability to diagnose and effective treat the disorder. And, in part, that's due to the fact that the symptoms of PTSD look so similar, regardless of the source of traumatic stress exposure, be that something associated with military service or something from the civilian sector. And I'm concerned that changing the name would introduce confusion that might negatively impact functioning. But, I agree that the issue of stigma is a concern and needs to be addressed. I'm just not sure that this is the most effective way to do it.

Captain Colston: There is a good point to the use of that term, inasmuch as the normal course of being exposed to trauma is toward health, and a vast majority of people who are exposed do get healthy. Sebastian Younger, in Vanity Fair, about a year ago, wrote a very beautiful article about some of his exposures and, you know, the subsequent course, and some of the things that we've seen in the military. It's tough to weather the vicissitudes of military life, especially when you're coming out of combat, especially when you're dealing with austere environments. But, I think that, you know, going back to where General Chiarelli was 5

years ago or so, when he used the term PTS as opposed to PTSD, there's arguments on both sides of the ledger.

I very much agree with Dr. Street's assertion that we've got to call it a "disorder," because we've got to get people services, we've got to get people support, and we've got to make diagnoses, to get paid, in the medical record.

Senator Sullivan: Thank you.

Senator Graham: Yes, sir.

Senator Tillis: This is really just to reinforce what the Chair said. One of the things that I'm really intent on is challenging you all to tell us where past congressional decisions at the time may have made sense; they may not have made sense, they just had the votes; or times have changed. But, the sorts of things that we place on you, particularly in dealing with this -- you know, may end -- well-intentioned policies that do not add value, they add cost or constraints. We need your feedback so that we're not only adding some new good ideas that maybe take the edge off of some of the old ones that are still in place, but really help us do reforms of any -- you've got a very -- you've got a changing environment. Your understanding of PTSD, how to treat it, how to transition, how to keep track of our vets and take care of them change over time. And I really want a committee where they come in here and you tell us, "You need to change this, this" -- or call my office, or call the

Chair's office, and give us an opportunity to look at some of the things that you're currently doing that are no longer value-added and could deploy resources to a better and higher use, in your professional opinion.

Senator Graham: Thank you.

Anything else?

[No response.]

Senator Graham: I move that all outside statements for the record received in advance of the hearing should be included in the official record. Without objection.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Senator Graham: The hearing is adjourned. Well done. Thank you.

[Whereupon, at 3:47 p.m., the hearing was adjourned.]