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[H.A.S.C. No. 111–149]

DEPARTMENT OF DEFENSE MEDICAL CENTERS OF EXCELLENCE

HEARING

BEFORE THE

MILITARY PERSONNEL SUBCOMMITTEE

OF THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

HEARING HELD
APRIL 13, 2010

U.S. GOVERNMENT PRINTING OFFICE
57–401 WASHINGTON : 2010

For sale by the Superintendent of Documents, U.S. Government Printing Office
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DOCUMENTS SUBMITTED FOR THE RECORD:

[There were no Documents submitted.]

WITNESS RESPONSES TO QUESTIONS ASKED DURING THE HEARING:

[There were no Questions submitted during the hearing.]

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[There were no Questions submitted post hearing.]

DEPARTMENT OF DEFENSE MEDICAL CENTERS OF EXCELLENCE

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
MILITARY PERSONNEL SUBCOMMITTEE,
Washington, DC, Tuesday, April 13, 2010.

The subcommittee met, pursuant to call, at 5:30 p.m., in room 2118, Rayburn House Office Building, Hon. Susan A. Davis (chairwoman of the subcommittee) presiding.

OPENING STATEMENT OF HON. SUSAN A. DAVIS, A REPRESENTATIVE FROM CALIFORNIA, CHAIRWOMAN, MILITARY PERSONNEL SUBCOMMITTEE

Mrs. DAVIS. Good afternoon. I was going to say good evening. Good late afternoon.

Today the Military Personnel Subcommittee meets to receive testimony on the progress of Medical Defense Centers of Excellence. Three years ago, as different types of casualties than had been initially anticipated mounted, Congress realized that the Department of Defense [DOD] had to do a better job preventing, diagnosing, mitigating, treating, and rehabilitating these injuries.

One of these injuries, traumatic brain injury, or TBI, was somewhat new for the military and, in truth, for medicine in general. Advances in both protective armor and battlefield medicine were saving lives that would have been lost in previous wars. The knowledge and expertise to deal with TBI was not resident anywhere. So, as has been the case in previous wars, the Department of Defense will need to be at the leading edge of medical research.

Another injury, post-traumatic stress disorder, or PTSD, was better known, but the clinical expertise to deal with it was more resident in the Department of Veterans Affairs [VA].

After many years of relative peace followed by an intense period of conflict, the medical research and development functions of the Department of Defense found themselves inundated with requirements. The military medical establishment has been made great, heroic even, improvements to trauma care during this conflict, but more remains to be done both for initial battlefield treatment and long-term rehabilitation.

This is why these Medical Centers of Excellence that we are going to be talking about today are so important, and why our frustration is so pronounced with the excessive amount of time it has taken to get these centers up and running.

The first appropriation for this purpose was made almost three years ago. Several months after that the House and Senate Armed Services Committees included a requirement to establish centers of

excellence in TBI, PTSD, and vision in the National Defense Authorization Act of 2008. Today, only two of these are in actual operation, combined by the Department as the Defense Center of Excellence.

Little apparent progress has been made in establishing the Vision Center of Excellence nor, as far as we can tell, with either the Hearing Center of Excellence or the Traumatic Extremity Injuries and Amputation Center of Excellence required by the National Defense Authorization Act for 2009. So clearly we are concerned about the Department's slow pace in developing such an important function.

Excessive delays are not our only issue, however. The center that has been established, the Defense Center of Excellence, while having achieved some notable small-scale successes, has not inspired great confidence or enthusiasm thus far. The great hope that it would serve as an information clearinghouse has not yet materialized. The desire that the center become the preeminent catalogue of what research has been done, what is being done, and what needs to be done has not been realized. Part of this is no doubt due to the fact that the Department's Center of Excellence, what we know as DCoE, has had to create or, more accurately, recreate all of the administrative infrastructure and processes required to oversee medical research on such a monumental scale. However, the center has also made some serious management missteps that call into question its ability to properly administer such a large and important function.

We look forward to hearing how the Department plans to improve this organization going forward so it can realize the goals set for it by Congress.

Today we will hear from the senior medical leadership from the Department of Defense. Dr. Charles Rice is the President of the Uniformed Services University of Health Sciences and is currently performing the duties of the Assistant Secretary of Defense for Health Affairs. In this role, Dr. Rice directly oversees the Defense Center of Excellence, as well as the establishment of the other centers of excellence.

We are also fortunate to have with us Surgeons General, Lieutenant General Eric Schoomaker from the Army, Vice Admiral Adam Robinson from the Navy, and Lieutenant General Bruce Green from the Air Force. They will all describe how well the current centers support the requirements of their services.

Welcome, gentlemen.

General Green, I know this is not the first time you have appeared before our panel, but it is the first time since your promotion to Surgeon General of the Air Force, so we welcome you. And thank you to all of you for being here.

Throughout our conversation today, it should go without saying that all of us, members of the legislative and executive branches, are committed to providing the very best care possible to our wounded warriors. It is not hyperbole to say that our military health system has made previously impossible feats routine. This is a testament to the commitment displayed on a daily basis by everyone who is associated with the military health system. We must do our part to make this trend continue.

Once again, thank you for being here. We look forward to an active discussion, and I will turn now to Mr. Wilson for any remarks he would like to make.

[The prepared statement of Mrs. Davis can be found in the Appendix on page 23.]

STATEMENT OF HON. JOE WILSON, A REPRESENTATIVE FROM SOUTH CAROLINA, RANKING MEMBER, MILITARY PERSONNEL SUBCOMMITTEE

Mr. WILSON. Thank you, Chairwoman Davis, and thank you for holding this hearing. I cannot overemphasize the importance of the four Department of Defense medical centers of excellence established by Congress to meet the needs of our returning wounded and injured service members. The medical centers of excellence were intended to be the overarching body for each of the focus areas that coordinates, inspects, and oversees the tremendous amount of good work being done across the nation to help our troops returning with brain injuries, mental health problems, vision and hearing injuries, and extremity injuries and amputations.

As a veteran myself and father of four sons currently serving in the military, I particularly have an understanding of what you are doing and I am so grateful that my second son is a graduate of the Uniformed Services University. I am very grateful that he has served as a Navy doctor with the SEALs and the Rangers in Iraq. General Green, I also have to point out I have a nephew who just concluded six months service in the Air Force in Iraq. So our family is joint service.

I continue to be amazed by the dedication and remarkable accomplishments of the health care and scientific community both in the public and private sectors that have led to the innovation and advancement of battlefield medicine in post trauma care and rehabilitation.

Because of the volume of work being done, it is important to make sure that the efforts are focused and coordinated to avoid duplication and ensure the best use of our resources. In my mind, that is the role of the centers of excellence.

With that, I recognize some of the centers of excellence have been in existence longer than others and thereby there will be a difference in the level of achievement among the centers. I am concerned it takes such an inordinate amount of time to establish a center and to get it up and running once it has been legislated.

I am anxious to hear from our witnesses today how well the centers of excellence are operating and how effective they are in getting the best care and treatment available to our wounded and injured service members. They deserve no less.

Finally, I would like to welcome our witnesses. All of you are so well thought of in the military and by the citizens of our country. Thank you for participating in the hearing today. I echo Chairwoman Davis' welcome in particular to General Green, and I look forward to your testimony.

[The prepared statement of Mr. Wilson can be found in the Appendix on page 26.]

Mrs. DAVIS. Thank you, Mr. Wilson.

We will start with you, Dr. Rice.

STATEMENT OF DR. CHARLES L. RICE, PRESIDENT, UNIFORMED SERVICES UNIVERSITY OF HEALTH SCIENCES, PERFORMING THE DUTIES OF THE ASSISTANT SECRETARY OF DEFENSE FOR HEALTH AFFAIRS, U.S. DEPARTMENT OF DEFENSE

Dr. RICE. Madam Chair, distinguished members of the subcommittee, good afternoon and thank you for the opportunity to discuss with you today the Department's Centers of Excellence. I have submitted a much more comprehensive summary of the accomplishments of the centers as well as an outline of the major milestones for the coming year. So I will confine my remarks to what needs to be accomplished during this year.

Of our four Centers of Excellence in the military health care system, the Center for Psychological Health and Traumatic Brain Injury has been established for the longest period of time and is the furthest along in an operational sense. The Hearing, Vision, and Traumatic Extremity Injuries and Amputation Centers were designated more recently and they are catching up in their organizational development.

Since stepping into my current role six weeks ago, I have communicated to my staff and to the services that we must execute our responsibilities expeditiously in order to meet our obligations. Specifically, the most critical item is the approval of a concept of operations that will be coming to me for final approval very shortly.

Governance issues are equally critical, and we will seek to exercise a consistent governance model across all of the centers. I plan to have our governance structure developed and approved by the end of May.

This summer we will open the National Intrepid Center of Excellence at Bethesda, a major milestone.

We are working closely with our colleagues at the Department of Veterans Affairs to ensure that our approach is integrated and represents the clinical best practices and is informed by the most current research to serve our wounded warriors and our veterans.

We have embarked on a course that will result in more patient centers and higher quality care and service to our patients and to their families. The Department is appreciative of the support and the guidance that the committee has made in the establishment of our Centers of Excellence.

Thank you again, Madam Chair and members of the committee, for the opportunity to be with you today. I look forward to your questions.

[The prepared statement of Dr. Rice can be found in the Appendix on page 29.]

Mrs. DAVIS. Thank you very much. I appreciate your being brief. We are trying to do these special hearings in an hour and to be able to pinpoint the most essential issues that we need to address.

General Schoomaker.

STATEMENT OF LT. GEN. ERIC B. SCHOOMAKER, USA, SURGEON GENERAL, U.S. ARMY

General SCHOOMAKER. Chairwoman Davis, Representative Wilson, and distinguished members of the Personnel Subcommittee, thank you for inviting us to discuss the five Centers of Excellence

directed by Congress in the 2008 and 2009 National Defense Authorization Acts. Like my colleagues, I have submitted a much lengthier statement, but anticipating that your questions will be more illuminating, I will keep my comments very brief.

These Centers of Excellence offer great promise to our warriors and patients, to the Department of Defense and to the nation. I foresee a day when these centers are acknowledged as worldwide leaders in their respective disciplines. However, we are not there yet; and we are moving slowly in some areas, as should be expected of any undertaking of this magnitude.

Despite the growing pains we experienced standing up these centers, I am confident the Department is now moving in the right direction to provide the centers with the governance and the support to allow them to flourish.

Like the Congress, I remain concerned about unnecessary duplication of programs and unnecessary competition among the services and federal agencies that are conducting research and providing care.

Perhaps the greatest contribution offered by these centers will be their role as the conduit for a two-way dialogue receiving external expertise from federal agencies and private industry and academia, and communicating the Department's internal perspective to those same leaders in government, science, education and industry.

These centers serve as what I call the catcher's mitt, a single point of contact for vetting new ideas, for synchronizing competing interests, and for standardizing evidence-based practices and clinical guidelines. Alignment of these programs under a single overarching construct would be ideal to reduce the number of oversight groups and administrative overhead, while ensuring agile and responsive translational research and medical programs.

The Department and the services are working together to establish favorable conditions for these five centers to be models of health care excellence. Ultimately, the centers will achieve their original vision and be critical enablers to improving readiness, health and quality of life for our service members, our veterans, and our family members.

Thank you for holding this hearing and for your steadfast support of Army medicine and the entire military health system. Thank you, ma'am.

[The prepared statement of General Schoomaker can be found in the Appendix on page 41.]

Mrs. DAVIS. Thank you.

Admiral Robinson.

STATEMENT OF VICE ADM. ADAM M. ROBINSON, USN, SURGEON GENERAL, U.S. NAVY

Admiral ROBINSON. Chairwoman Davis, Mr. Wilson, and distinguished members of the subcommittee, thank you for the opportunity to provide my perspective on the Defense Centers of Excellence. More importantly, thank you for your leadership on this issue. Your vision and direction provided us a solid foundation on which to build the Centers of Excellence and further support our responsibility and privilege for the care of our wounded warriors and their families.

As our wounded warriors return from combat and begin the healing process, they deserve a seamless and comprehensive approach to their recovery. We want them to mend in body, mind, and spirit. The Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury were established to leverage the collective efforts of the services by bringing together treatment, research and education and support of this psychological health and traumatic brain injury.

In addition, the DOD has been working to establish three additional Centers of Excellence which Congress directed. These include the Traumatic Extremity Injuries and Amputation, the Center of Excellence for Vision and the Center of Excellence for Hearing.

I have often referred to our obligation to our wounded warriors and their families as a commitment measured in decades, not years. To meet our obligations, we much build supporting organizations for the long haul and continuously adapt our practices to meet the emerging needs of our patients. Military medicine leadership must determine how to best to maximize the operational efficacy of the DCoE and help facilitate their important synchronization efforts. The DCoE must be organized and aligned to provide for the efficient delivery of services to our clinicians, to our patients, and to our families. Our goal must be to enable the DCoE to focus on its core competencies and operate efficiently with the necessary supporting command and control elements in place.

Associated with review of options for the DCoE realignment, there is consensus among the ASD–HA [Office of the Assistant Secretary of Defense for Health Affairs] leadership and the Surgeons General, that the National Intrepid Center of Excellence, the NICoE, currently a DCoE component center, should be organized under the Commander National Naval Medical Center [NNMC] and subsequently the Commander Walter Reed National Military Center Bethesda. As a clinical entity, the model of NICoE being organizationally aligned in NNMC is consistent with the construct of the Center for the Intrepid currently in place at Brooke Army Medical Center, BAMC, in San Antonio.

I, along with my fellow Surgeons General, and the ASDHA leadership are committed to ensuring that we will build on the vision advanced by the Members of Congress and the hard work of the dedicated professionals at all the Centers of Excellence, medical treatment facilities, research centers, and our partners in both the public and private sector.

I want to thank the committee for your support, for your confidence and your leadership. It has been my pleasure to testify before you today. I look forward to your questions.

[The prepared statement of Admiral Robinson can be found in the Appendix on page 49.]

Mrs. DAVIS. Thank you.

General Green.

STATEMENT OF LT. GEN. CHARLES BRUCE GREEN, USAF, SURGEON GENERAL, U.S. AIR FORCE

General GREEN. Chairwoman Davis, Congressman Wilson, and distinguished members of the committee, thank you for the opportunity to discuss the DOD Centers of Excellence, and specifically

the plans for the Air Force Medical Service to establish the Hearing Center of Excellence. We believe these centers support the military health service strategic goals and our mandate for trusted care to those who serve.

The creation of a Hearing Center of Excellence is relevant and necessary for military members and veterans. Hearing loss is a major cost incurring disability for both DOD and VA. In fact, tinnitus and hearing loss were the most prevalent service-connected disabilities for veterans who began receiving compensation in 2009. The Hearing Center of Excellence will be a collaborative DOD and VA team focused on prevention, diagnosis, mitigation, treatment, and rehabilitation of hearing loss and auditory problems. It will bring new technology and research to current hearing conservation programs, but will not replace existing efforts.

The Hearing Center of Excellence executive hub will be in San Antonio at Wilford Hall Medical Center, leveraging the robust Air Force and Army staffing of ENT [ear, nose, throat] and audiology experts, as well as established partnerships with VA hospitals and the University of Texas San Antonio Medical School. San Antonio is a rich research environment with many military and civilian research entities to help with the outreach.

A central aspect of our Hearing Center of Excellence will be a hearing loss and auditory system injury registry that will record injury, diagnose surgical and other inventions for hearing loss and auditory system injuries. An electronic bidirectional exchange of information with the VA will ensure tracking of hearing outcomes for veterans entered into the registry who receive treatment, whether at DOD facilities or the VA.

The Air Force is committed and well prepared to fulfill this important mission. Our long experience with hearing programs will serve as a strong foundation for this center, and we will build upon the many outstanding DOD and VA efforts already in progress. Plans are well underway, and we look forward to exploring new opportunities with our colleagues in DOD, our sister services, the VA, and civilian academic institutions.

We truly appreciate the committee's support, and thank you for this opportunity to testify. We stand ready for your questions.

[The prepared statement of General Green can be found in the Appendix on page 56.]

Mrs. DAVIS. Thank you very much.

To all of you, I appreciate your being here and the work you are doing in the centers.

Dr. Rice, if I can just turn to you first, in your testimony you say that the centers will lead our efforts to identify gaps in our scientific knowledge about wounds, injuries, and diseases, as well as prioritizing and coordinating research efforts to fill those gaps. I think that is really what Congress was intending because we know that there is great interest, and I certainly appreciate my colleagues in wanting to do all that we can for the service members and also for their families who serve as chief caregivers in many of these areas.

And yet that is really what the goal was three years ago, and I know you have only been in this position and it is a temporary one, and we want to acknowledge that. I want to know how you see our

ability to actually realize those goals. What have you done since you have had a chance to just begin this, and I know it has been very, very short, how much longer will it take before the Department actually starts achieving some of those goals and really have the kind of strategic plan to prioritize and do exactly what I think the Surgeons General are saying, we don't want to duplicate a lot of efforts. What do you see more specifically?

Some of this was in your address but you had very brief remarks, so we want to give you an opportunity to talk about that more.

Dr. RICE. Thank you.

I bring to this my perspective from having spent much of my career in the civilian academic world and understanding how efforts like this come together. They are not easy to do when you reach across disciplines, and as I am sure Dr. Snyder will attest, the bringing together different specialties inside the house of medicine and then reaching across into other disciplines, psychology, engineering, pharmacology, what have you, becomes an increasing challenge.

In fact, if you take probably the prototype in academic centers, the canary in the mine, is cancer centers. And the National Institutes of Health recognized the complexity of this problem by actually awarding planning grants for universities that want to establish Cancer Centers of Excellence. These grants go up to five years in length. So the understanding is that bringing a group of disparate professionals together is a complex undertaking.

That said, we all recognize a sense of urgency and feel that sense of urgency.

I think another level of complexity for this particular constellation of injuries is that there is no gold standard diagnostic test for traumatic brain injury or post-traumatic stress, unlike say a myocardial infarction where we have an array of screening tests and then more confirmatory tests, including an angiogram or a technician scan to define precisely the anatomy and the physiology of the injury. In the case of traumatic brain injury or post-traumatic stress, we don't have anything quite like that.

So bringing all of these aspects together has been a complex undertaking. I think we have had some growing pains, and I think we are beginning to get our arms around it. I am very encouraged by what I have seen.

Mrs. DAVIS. Dr. Rice, as you look at organizationally what we have tried to do, and there is discussion about whether the program should basically nest or rest in any one of the services and how that is organized, are there some things, even in this relatively short time you have looked at and you have said, I wonder why did they set that up that way? What were they thinking? Where are those areas?

Dr. RICE. I think General Schoomaker very accurately pointed out that we have an infrastructure for the management of research that all the services share. Much of it is based up at the Medical Research and Materiel Command at Fort Detrick. It is a very well developed and organized operation, and one of the options under consideration for us is to put much of the infrastructure there. The three Surgeons General are discussing that. That is what I alluded to in my testimony. We expect a recommendation to come from

them very shortly that will help us get this organizational infrastructure in the right place so that we can execute swiftly.

Mrs. DAVIS. Is there a sense that perhaps that discussion needed to be much earlier? Is this a little delayed in terms of where we are, and I will certainly give all of the Surgeons General a chance to address that, but has it taken the knowledge of trying to do this time for everyone to catch up in terms of trying to figure out where the best is organizationally?

Dr. RICE. Certainly in retrospect you can make that argument. Prospectively, alluding back to my experience in the civilian academic world, when you are bringing together professionals from, say, the college of nursing, the college of medicine, the college of pharmacy and the school of social work, the only place that this winds up is in the office of provost, which is not really well set up to manage an operational organization.

I think that is analogous to what we saw with the development of the Defense Centers of Excellence. And as time has gone by, I think the realization has come that keeping an operational responsibility inside of what is primarily intended to be a policy development office was not the best choice.

Mrs. DAVIS. Thank you. I want to follow up with one more question. I guess my colleague had to leave already. I am sorry he didn't have a chance to ask a question.

I know you are aware that the House Appropriations Subcommittee on Defense was concerned about the fact that all of the DCoE folks went from Washington to San Diego, and we are always happy to have people in San Diego, for a conference, and there was some concern that perhaps the entire department, everybody involved, did not need to go to build the relationships I happen to believe that are required when people are working together, but there was a way to do this without having it be so costly. Would you like to add to that in any way because I know that they were concerned and they even asked us to help answer that question better.

Dr. RICE. Well, I think we are certainly looking into issues like that and putting management controls, better management controls into place so we make sure that we don't spend money unnecessarily. I can't speak to the decision making that went into that particular conference at the time, but I can assure you that we will make sure that the controls are in place in the future.

Mrs. DAVIS. Thank you.

Mr. Rooney.

Mr. ROONEY. Thank you, Madam Chair. Thank you to the panel. I don't necessarily have any questions. I just want to thank you personally for the work that we are trying to accomplish here, I think together. Having worked on a few pieces of legislation that specifically deal with post-traumatic stress disorder and terminal brain injury, it is enlightening, and I understand it can be as frustrating for you as it is for us. But it is good news that we are able to sit here today and talk about how we are going to get this done, and I know that is the objective of everybody on the panel, as it is for this committee.

With that being said, I just want to thank you for all of the work you have put in and look forward to having a continuous working relationship with all of you.

I yield back.

Mrs. DAVIS. Thank you. Dr. Snyder.

Dr. SNYDER. Thank you, Madam Chair. I want to be sure I understand the very basics. We have five Centers of Excellence at least on paper, correct? Traumatic Brain Injury, Traumatic Injury to Extremities; is that correct?

General SCHOOMAKER. The Defense Center of Excellence for Traumatic Brain Injury and Psychological Health are combined into one center. So two of the centers are combined into one.

Dr. SNYDER. They were authorized by separate appropriations.

General SCHOOMAKER. But the Department chose to put them as a single center.

Dr. SNYDER. Which makes sense. And then we have Extremities Center?

General SCHOOMAKER. Yes. Extremities and Amputation.

Dr. SNYDER. So it was referred to as five, but two were combined into one.

General SCHOOMAKER. Yes.

Dr. SNYDER. Regarding Dr. Rice's comments earlier, I think these have all been set up or established or mandated to do them by legislation and my question is: Did we make a mistake? We are House Members. We are prepared to acknowledge that we make mistakes sometimes. We didn't set up Centers of Excellence for neurological problems or for orthopedic neck injuries or Centers of Excellence for cancer or heart disease or lung disease or toxicological injuries or from fires. We set up these because we hear from constituents and we thought there was a gap.

My question is a general one. Are we barking up the wrong tree here? Perhaps we should not have mandated Centers of Excellence, perhaps there should be other ways, maybe greater funding of research, maybe oversight and coordination amongst different health care institutions? I am almost asking your personal opinion, did we make a mistake by requiring these Centers of Excellence? Dr. Rice, do you want to start?

Dr. RICE. No, sir, I don't think so. I think what you did was galvanize the Department's attention around a complex set of injuries that we had not really dealt with very much in the past, in part because this is a different kind of war with a different kind of enemy and in part because our success rate for resuscitation in the field is so much greater than it was in previous engagements.

I do think that you bring up a very good point, and if I may draw on my civilian academic experience, one of the things that has served most institutions well is to require somewhere around the five to seven-year mark a review to ask is this structure really still the right one? Is it necessary for this to continue as is? And if I might suggest, I would propose that perhaps we have a discussion about whether undertaking something like that might serve our patients well.

Dr. SNYDER. At the five-year mark should this be continued or completely discontinued, and recognize that there may be a different way of getting at it or adjust it?

Dr. RICE. Or evolve into a different structure, yes.

General SCHOOMAKER. Well, sir, I would have to agree with Dr. Rice. I think that the Congress did not fundamentally make an error in directing that these centers be established. But I will concede that I don't think that we executed it flawlessly.

I think having said that, I believe there has been more done than may be readily apparent to many folks. These are not brick and mortar centers. We avoided deliberately the attempt to put structure, physical structure, where it was not needed. And I would point out that Congress preceded this in the NDAA [National Defense Authorization Act] 2006 by mandating that the Department look very proactively and exhaustively at all, especially research dollars, that were directed to the same language, prevention, mitigation, management, and treatment of blast injury. That was without money attached to it, but it forced us and the Department chose to take that legislative mandate and to delegate that to the Army and then to Army Medicine and then to the Medical Research and Materiel Command [MRMC] where we did a gap and redundancy analysis and identified what areas both in research and treatment we were most lacking in.

I always saw that as an effort on the part of Congress and the Department to create the highway for when moneys began to flow to direct those efforts. When you all then created the five centers, I saw that as highlighting areas within the blast injury program we had identified as particularly vulnerable areas and where we were getting most of our concerns for patient care.

And it is at that point I think we began the internal dialogue that you are hearing us talk about here in how do we execute those centers. I do believe and I hope we have an opportunity to talk about what the centers have achieved because again, for example in the case of extremity injury and amputation, I think we have done some terrific things, and that your mandating in legislation that we have this center has allowed us to align and cobble together efforts across all of the three services and the Veterans Administration and the private sector in I think a very positive and proactive way.

Admiral ROBINSON. First of all, I am not going to be the only SG [Surgeon General] that says you made a mistake; you did fine. And I mean that sincerely. I think what we have found is in executing this we haven't been very facile in our attempts to get the organizational structure to execute the plan. I think that the MRMC, which is long established and has the infrastructure, as already has been stated, was the right thing. And once we got the DCoE, the psychological health, once we got some of the DCoE studies there, we have made tremendous progress. For example, hyperbaric oxygen therapy, does it work? Is it helpful in traumatic brain injuries? We don't have the answers to that, but we have a really good prospective randomized trial set up and ready to go and it is being executed now. It took us a long time to get there but the reason is we didn't have the proper infrastructure, which MRMC had and we were looking at the wrong places.

We thought, General Schoomaker and I thought of that a couple of months back, but it took a while to get there.

Also, and it has been alluded to, the Centers of Excellence have to leverage the Department of Veterans Affairs as well as the academic community, and I underline the Department of Veterans Affairs because, as I have said repeatedly through the year, the systematic rehabilitative care issues, which are now becoming all of our responsibilities, need to be funded through the traditional organization that had the responsibility for systematic rehabilitative care. So I am not suggesting that it is now only residing with DVA [Department of Veterans Affairs], it resides with us also. But we need to leverage that information and a lot of the resources, both intellectual, academic, and research and practical that DVA has.

So I think to add onto this, I think it is a focused area that we now have and we need to be very careful as to how we proceed. I would also say in a five-year period or some period of time, looking back and being honest with do we need this center now, may be the thing to do or how should we change this center as opposed to just letting it go in perpetuity.

General GREEN. Dr. Snyder, I would say on first blush I agree with you, that we have looked at certain centers and didn't take on a lot of other disease processes and perhaps things that would be equally valuable to gain research and put dollars towards. But I have to admit as I looked into this, and I will talk more to the hearing, but even with all of the other centers, it was an extremely wise thing to identify gaps and get us thinking. And so with the five centers that have been stood up, looking at what has happened over in the AOR [area of responsibility] and the type of injuries that have been coming back and the rehabilitative needs of those folks and our wounded warriors, in essence what Congress was able to do for us was to get us to improve our communication. The influx of dollars gave the ability for us to not only talk better with our civilian counterparts, but also amongst ourselves to leverage the different assets that we had.

I think it was wise for us not to set up brick and mortar structures to do this. I think this is really about establishing research networks. So the tricky part is kind of establishing what are those governance and the controls, if you will, on how we are going to do that. Should it all be conferences or research, or should it all be telemedicine in terms of how we communicate? And the answer is it is taking a little bit of all of them.

So what you are seeing evolve over the last two years is the understanding that we don't necessarily need to build new infrastructure to do this, that we need to take advantage of the structures that are in place. We all recognize the large dollars that are up at MRMC in terms of how they manage the research agenda for us in large part. The Navy labs are also quite large, and the Air Force is a fairly small player in terms of how this works, and yet we have good programs just like the other services and the civilian sector does. And so when you get us all talking together, and similar to how the NIH [National Institutes of Health] doles out dollars for research based on the most promising technologies and ways we can move forward, you now start seeing the progress that we are hoping for.

So what we have learned is that we don't want to set up duplicative infrastructure, that we do want these registries to be attached,

and we do want to be able to share information even between the centers, and the way to do that is to kind of look at front shop, back shop where not everybody needs to have public affairs guidance and ways to interface with Congress but there needs to be that back shop activity that knows the questions that are being asked and knows how to formulate solution sets to move forward and to get things out into the public domain so that we can let contracts and seek researchers who have promising technologies. So I think that is where we are right now. We are realizing that we need to leverage the services' existing capabilities, place back shop functions in places where they have those skills, and take the research agenda and perhaps the executive oversight for a particular research area, one of these COEs [Centers of Excellence], and now leverage that expertise to bring a whole different group of people together rather than just putting money into some of the older projects that have been ongoing because there may be new things that haven't been considered simply because of how they were funded.

So I think that is the advantage of doing the COEs. Whether we pick the right gaps or not, I can't answer for you, sir, but it is creating communication and it is moving us forward.

Dr. SNYDER. Thank you.

Mrs. DAVIS. Thank you. I think that your responses get largely into the interchange that I would love to see amongst the three of you as thinking about perhaps ways in which the Congress set this up or the way some of the organization moves forward, it has created some inhibitions in terms of what you have actually wanted to see accomplished or where you felt some of the frustrations in not being able to move forward in the way that you thought. Are there some things that we could even at this point, because not all of this is so developed that you cannot go back and say okay, there is another way to do this, are there some areas in which you would really like to have it move in somewhat of a different direction perhaps?

You mentioned the NIH, the way the NIH doles out grants. I don't have a clear picture. If there is a really great idea out there, how does that get heard and how are those grants realized at this point, either within, among the services and through the DCoE as a whole?

General SCHOOMAKER. I think this is really one of the real benefits of the approach that we now are taking. I talked about that in my opening statement, we have a single catcher's mitt now.

One of the things that we need to acknowledge, ma'am, I think all of us do, is that none of this has been static. Even battlefield injury hasn't been static. The definition of what constitutes concussive injury, the fact that sequential concussive injury, undiagnosed, unmanaged, untreated, as it is on the sports field or in the civilian sector, has contributed to some of our problems. And the overlap between concussive injury and post-traumatic stress and post-traumatic stress disorder, those are only being defined as the war has been fought and as we have tried to grapple with these.

What I think the centers do offer us is an opportunity to in a sense funnel in all of those interests and emerging ideas, practices, research avenues and, as I said before, to focus the dialogue inter-

nally from the standpoint of the provider and the communities of our services in such a way that we vet and prioritize rack and stack and how we go forward and, once those have been established, to clearly establish practice guidelines, standard policies as they apply to how we manage them. And I think we are starting to get some experience with that.

The Defense Center of Excellence for Traumatic Brain Injury and Psychological Health, for example, has helped us with battlefield protocols, with how we identify and manage at the point of injury concussive injury and such mundane matters as what do you do with your soldiers, sailors, airmen and marines who have had a concussive injury when it comes time to drive a vehicle.

Those kinds of standard protocols and standard practice guidelines are now being generated by the centers, and I anticipate that is going to be more and more the work while the services execute how the programs are done sort of in the field.

Admiral ROBINSON. I would then say taking that broad view and taking a much less broad view and one that is going into the administration and the process, something that General Green talked about in terms of the infrastructure, don't create five registries, create one and make sure that we can overlap those. Don't create an IT [information technology] system for each new center, have one and make sure that we are interconnected. Don't create practice guidelines in one center and find out they are sort of contradictory with a center over here. Put them together and make sure that we have this integrated from an infrastructure and a process point of view from the beginning as we start this.

I think part of the slowness in getting the centers up, I will just comment, we were trying to figure out in some respects how to execute this, and it became very clear to General Schoomaker and myself a while back that there were—MRMC was in place and there were processes and there was infrastructure that was in place at the Navy Medical Command and the Air Force has similar things, we didn't have to recreate or create new things, but we needed to get these centers into the right places so we could actually execute what we had. That was making sure that we were in alignment and that was Health Affairs and others giving us that policy guidance to make sure that we were together, and then leveraging our interagency partners and the academic community in addition.

So it has been slow, but it has been fruitful in that this has been an ongoing and a very robust discussion within the services.

Dr. RICE. One of the issues, one of the opportunities that we have had the opportunity at the university in a parallel effort was given to us by the 2008 appropriation which established the Center for Neuro Regenerative Medicine, also focused on traumatic brain injury and post-traumatic stress. But from much more of a basic point of view, I alluded earlier that there is no gold standard for the diagnosis of these injuries, and this is an effort to help identify those.

That language in the appropriation specifically authorized the Department of Defense to reach across Wisconsin Avenue to collaborate with the National Institutes of Health and that has proven to have a galvanic effect. The people at the National Institutes of Health were eager to assist us in dealing with these injuries,

and that particular language made that easy to do without the constraints of using part of a defense appropriation at another agency. So that is one example of something that the Congress might consider.

Mrs. DAVIS. General Green, did you want to add to that?

General GREEN. Briefly, I think it is important to understand whenever you are trying to arrive at a common vision, you have to basically explore where you are coming from. And so the trick with the COEs are when you bring a lot of different efforts together, especially when you go outside of medicine, each person thinks that they have the answer. So then you have to design the studies to try and find out what the evidence truly says is correct.

You folks, probably much more than us, are approached by lobbyists and special interest groups from all over who think that they have a solution set for what we need. And what this effort is about is trying to find out what is it we need and how do we prove that this will actually do what it is said it will do. That takes a lot of time actually to design some of these things. Although I would love for us to have this infrastructure set up a little more robustly so that we could move forward, I am not too surprised that it has taken us some time to reach a common vision and that vision I think is to use our existing resources and now start defining these problems more closely.

General SCHOOMAKER. Ma'am, two more comments, quickly because I think there are some features of how we are now operating these three services in health affairs at the DOD level that are very, very favorable. The first is the rapidity with which we are making clinical improvements in battlefield medicine, evacuation, and care back here in CONUS [continental United States] based upon what my colleague, Admiral Robinson, just talked about is the creation of a single database. The Joint Theater Trauma Registry and its application through the three services and the DOD to look comprehensively across all services in all venues at how we manage traumatic care is almost unprecedented. We have essentially established what a large metropolitan community in the United States would have but across three continents and 8,000 miles. In doing that, we have created the framework for rapid movement of new knowledge and standardization of practices that has resulted in some of the unprecedented survival that you see today. And that has penetrated all of the way into areas like amputee care, which really quite frankly begins at the battlefield. Amputation medicine and extremity injury medicine begins in Balad, it begins in Bagram, at the first—in the corpsmen and the medic forward. Penetrating head injury is another good example in which the services have collaborated in advancing very rapidly the science and the clinical practice of penetrating injury.

The second area that I think you need to recognize as a Congress that we are doing very well within the services is translational medicine: taking bench insights and basic science insights that are historically the purview of the Academy and groups like the NIH, and rapidly moving them across into applications, either intellectual products as in the case of battlefield medicine, or in the creation of new material products. That really requires the focus that these centers can provide for us. That is that we are not going to

stop simply at proliferating new ideas and new basic science insights, we are going to rapidly move them across the chasm into the kind of advanced development, clinical trials and material development of new products that we need.

Mrs. DAVIS. Thank you. I appreciate that. I guess the one question and sort of the bottom line on this is whether or not the work that is being done and the data that is being collected is being translated in the field to the extent that unit commanders are respectful of that data. Is that a concern that maybe I shouldn't be worried about? When we hear about the number of traumas, or even the multiple deployments for that matter that people have sustained, and we know that that cumulative effect has obviously—is going to have an impact on the service member. I don't know whether that is in your purview, to have a sense of whether people are really listening to that information you are working so hard to obtain. It obviously can restrict the commander in the field in terms of their ability to mobilize units to do the work that needs to be done out there.

Admiral ROBINSON. Well, I will speak for the Marine Corps in one example, and that is with blast injuries. With blast injuries, there are a couple of examinations that can be given, the ANAM [Automated Neurological Assessment Metric] and the MACE [Mild Acute Concussive Evaluation]. The key here is that with the Marine Corps in the field, the Marine Corps leadership has recognized that there are a number of men and women who are subjected to blast that aren't unconscious or don't have any outward effects and we don't necessarily know that they are not injured. So there is a database in theater in Afghanistan in which they are looking at the number of personnel and the number of people that have three blasts. And three blasts, it doesn't mean that you come all of the way back to the states, but you come out and get a complete neurological exam and actually get looked at professionally to decide and determine if you have been injured and that injury was just unseen.

I will leave that.

There is the attempt to have baseline studies for the ANAM and other neurologic exams so that as we put people in theater we will have a baseline so we know if it does change.

My point is there are attempts to look exactly at some of the things that you are saying, real-time actually today based upon what we have learned over the last two, three, four, five, six years regarding how we are taking care of individuals.

Dr. SCHOOMAKER. In the Army, ma'am, there is a growing and profound recognition on the part of the field commanders of the value of the joint medical system for the well-being of their soldiers and by extension their families.

I have had field commanders tell me that it goes down to the detail of support, say, of medical evacuation in theater in Iraq and Afghanistan today. That combat aviation brigades, in whom we now embed Army medical evacuation, have organized much of their battlefield processes around support of the medical evacuation.

What has been more difficult, because this is a learning process for us, is the impact of psychological health and such injuries as concussion. You know, I have said before we are in unfamiliar ter-

rain: an Army entering into its ninth year of war in a cycle of deployment and redeploying soldiers that has never been experienced in history, with a dwell time back at home that is well below where we would like to see it. So I think this is a very active process of learning.

But to answer your question directly, the respect that I think our line commanders have for this all of the way up to the senior leadership of the Army is very profound.

Mrs. DAVIS. Dr. Snyder.

Dr. SNYDER. Just a follow-up question that maybe can be answered just with a nod of the head or shaking of the head. Going back to how Congress should provide oversight of this, I came into the hearing today thinking we have got five different centers and two of them combined and established at different times. If I heard you correctly, would a more helpful way for Congress to look at this and follow this along in the next several years would be to see this as five different centers but they are all attacking the same problem which is the blast injury? There are clearly going to be things that each of these centers look at that are apart from blast injuries, but we should see each of these centers of attacking the same problem of blast injury and we ought to look at all them together, not as five separate entities. Is that a fair statement, Dr. Rice?

Dr. RICE. Yes, sir, I think it is. The fact is that patients don't get just a single injury. They may very well have mild TBI as well as hearing loss and loss of an extremity. So I think it is very important that these centers work together in a cohesive manner.

Dr. SNYDER. Thank you.

General SCHOOMAKER. Sir, I have rejected the notion that we have a signature injury of this war. We have a signature weapon of this war, and it is blast. That blast burns, it blinds, it deafens, it takes off limbs, and it causes enormous extremity injury. And I fully agree with what you said.

Mrs. DAVIS. Thank you. The bells are ringing, but just a quick question.

General, you mentioned the Joint Center of Excellence for Battlefield Health and Trauma Research that is under construction in San Antonio. What is that supposed to do when it is finished?

General SCHOOMAKER. We didn't mention this, but it was alluded to by General Green that in addition to the alignment of clinical and research efforts through things like the blast injury program and now these centers, is the alignment physically and collocation through the base realignment and closure of many of our assets. So Navy medicine and trauma is being relocated with Army medicine and trauma along with the Air Force.

That includes things like biodefense assets which are being collocated in some laboratories in Fort Detrick and other places. So we are going to see an alignment, as in the Joint Battlefield Trauma Center down in San Antonio of the Army's Institute of Surgical Research along with the Air Force and the Navy's efforts in dental research and in other aspects of trauma.

Mrs. DAVIS. And that doesn't represent any kind of duplication then?

General SCHOOMAKER. No, ma'am. I think that is the physical brick and mortar of this.

Mrs. DAVIS. The ability to focus it together. Okay. Thank you.

And Admiral Robinson, could you just provide us a little bit more detail on the hyperbaric oxygen therapy clinical trials that are being conducted right now? Is there something particular that we should know about that?

Admiral ROBINSON. Nothing except we have now with the help of Colonel Scott Miller, who is an infectious disease physician at MRMC, he is also an Army physician, we have been able to actually develop prospective randomized trials to look at patients who have had had traumatic brain injuries, mild traumatic brain injuries, and whether they would benefit from having hyperbaric oxygen therapy. We have several centers where this is now occurring—Pendleton, LeJeune, Fort Carson I think, and also San Antonio. It is a tri-service event. We have now included more patients in the studies that we have to date than we have had in any of the literature that has been describing it for the last many years. And I think we have—it is blinded and it actually has a cohort that is a sham which means we are going to see if this actually works or if this is just a placebo effect.

So I think we have good science and a good study in place that over the course of the next 24 to 36 months is going to actually give us definitive information as to whether hyperbaric oxygen works, at what tour it works, and also if it is harmful because that is the other question that people have. And from this, I think we can develop practical and successful and reproducible clinical guidelines or not based upon science and not anecdotal evidence.

Mrs. DAVIS. Thank you.

General SCHOOMAKER. And, ma'am, for the record, lest our critics point out that we are using an infectious disease expert to run hyperbaric oxygen research, his expertise in infectious disease gave him great skills in randomized prospective trials and in FDA [Food and Drug Administration] certification of trials. So we have leveraged that.

Mrs. DAVIS. Great. Thank you. As we look at the next authorization, maybe for the record some things that you would particularly like us to focus on, if we were to even have a hearing even six or nine months from now, you know, just thinking a little bit more about shortcomings that you think we might be talking about at that time that are of concern to you but also where we might place some additional resources to help you further do your jobs and to make certain that this does all the things that we really would like it to do for our service members. If you could be thinking some about that and get us that information, that would be helpful.

Anything you want to add right off the bat to that? Or we will come back. All right. Thank you very much for all of you for being here. Thank you for the work that you do.

General SCHOOMAKER. Thank you.

[Whereupon, at 6:45 p.m., the subcommittee was adjourned.]

A P P E N D I X

April 13, 2010

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

April 13, 2010

Opening Statement of the Chair
Hearing on Medical Defense Centers of Excellence
April 13, 2010

Today the Military Personnel subcommittee meets to receive testimony on the progress of medical Defense Centers of Excellence. Three years ago, as different types of casualties than had been initially anticipated mounted, Congress realized that the Department of Defense had to do a better job preventing, diagnosing, mitigating, treatment, and rehabilitating these injuries.

One of these injuries, traumatic brain injury, or TBI, was somewhat new for the military, and in truth for medicine in general. Advances in both protective armor and battlefield medicine were savings lives that would have been lost in previously wars. The knowledge and expertise to deal with TBI were not resident anywhere, so as has been the case in previous wars, the Department of Defense would need to be at the leading edge of medical research. Another injury, post traumatic stress disorder, or PTSD, was better known, but the clinical expertise to deal with it was more resident in the Department of Veterans Affairs.

After many years of relative peace followed by an intense period of conflict, the medical research and development functions of the Department of Defense found themselves inundated with requirements. The military medical establishment has made great, heroic even, improvements to trauma care during this conflict, but more remains to be done, both for initial battlefield treatment and long-term rehabilitation. This is why these medical centers of excellence are so important. And why our frustration is so pronounced with the excessive amount of time it has taken to get these centers up and running.

The first appropriation for this purpose was made almost three years ago. Several months after that the House and Senate Armed Services Committees included a requirement to establish centers of excellence in TBI, PTSD, and

vision in the National Defense Authorization Act for 2008. Today, only two of these are in actually operation, combined by the department as the Defense Center of Excellence. Little apparent progress has been made in establishing the Vision Center of Excellence, nor as far as we can tell, with either the Hearing Center of Excellence or the Traumatic Extremity Injuries and Amputations Center of Excellence required by the National Defense Authorization Act for 2009.

So, clearly, we are concerned about the department's slow pace in developing such an important function. However, excessive delays are not our only issue.

The center that has been established, the Defense Center of Excellence, while having achieved some notable small-scale successes, has not inspired great confidence or enthusiasm thus far. The great hope that it would serve as an information clearinghouse has not yet materialized. The desire that the center become the preeminent catalogue of what research has been done, what is being done, and what needs to be done has not been realized. Part of this is no doubt due to the fact that the DCoE (dee COE) has had to create, or more accurately recreate, all of the administrative infrastructure and processes required to oversee medical research on such a monumental scale. However, the center has also made some serious management missteps that call into question its ability to properly administer such a large and important function. We will look forward to hearing how the department plans to improve this organization going forward so that it can realize the goals set for it my Congress.

Today we will hear from the senior medical leadership of the Department of Defense. Dr. Charles Rice is the President of the Uniformed Services University of Health Sciences, as is currently Performing the Duties of the Assistant Secretary of Defense for Health Affairs. In this role, Dr. Rice directly oversees the Defense Center of Excellence, as well as the establishment of the other centers of excellence. We are also fortunate to have with us the service surgeons-general, Lieutenant General Eric Schoomaker from the Army, Vice Admiral Adam Robinson from the Navy,

and Lieutenant General Bruce Green from the Air Force, my, to describe how well the current centers supports the requirements of their services. Gentlemen, welcome. General Green, this is not the first time that you have appeared before our panel, but it is the first time since your promotion to Surgeon General of the Air Force, so welcome.

Throughout our conversations today, it should go without saying that all of us, both members of the legislative and executive branches, are committed to providing the best care possible to our wounded warriors. It is not hyperbole to say that our Military Health System has made previously impossible feats routine.

This is a testament to the commitment displayed on a daily basis by everyone who is associated the Military Health System. We must all do our part to make sure this trend continues.

Opening Remarks – Congressman Wilson
Military Personnel Subcommittee Hearing
DOD Medical Centers of Excellence
April 13, 2010

Thank you Chairwoman Davis, and thank you for holding this hearing. I cannot over emphasize the importance of the four Department of Defense Medical Centers of Excellence established by Congress to meet the needs of our returning wounded and injured service members.

The Medical Centers of Excellence were intended to be the overarching body for each of the focus areas that coordinates, inspects, and oversees the tremendous amount of good work being done across the nation to help our troops returning with brain injuries, mental health problems, vision and hearing injuries, and extremity injuries and amputations.

I continue to be amazed by the dedication and remarkable accomplishments of the health care and scientific community, both in the public and private sectors, that have led to the innovation and

advancement of battlefield medicine and post trauma care and rehabilitation. Because of the volume of work being done, it is important to make sure the efforts are focused and coordinated to avoid duplication and ensure the best use of our resources. In my mind, that is the role of the Centers of Excellence.

With that, I recognize some of the Centers of Excellence have been in existence longer than the others and there will be a difference in the level of achievement among the Centers. I am concerned it appears to take an inordinate amount of time to establish a Center and get it up and running once it has been legislated.

I am anxious to hear from our witnesses today how well the centers of Excellence are operating and how effective they are in getting best care and treatment available to our wounded and injured service members. They deserve no less.

Finally, I would like to welcome our witnesses and thank them for participating in the hearing today. I

echo Chairwoman Davis' welcome to General Green. I look forward to your testimony.

PREPARED STATEMENT

OF

CHARLES L. RICE, M.D.

PRESIDENT, UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES, PERFORMING THE DUTIES OF THE ASSISTANT SECRETARY OF DEFENSE, HEALTH AFFAIRS AND ACTING DIRECTOR, TRICARE MANAGEMENT ACTIVITY

BEFORE THE

HOUSE ARMED SERVICES COMMITTEE

SUBCOMMITTEE ON MILITARY PERSONNEL

APRIL 13, 2010

NOT FOR PUBLICATION UNTIL RELEASED BY:

THE HOUSE COMMITTEE ON ARMED SERVICES

Madam Chairwoman, Members of the Committee, good afternoon and thank you for the opportunity to outline the accomplishments of the Defense Centers of Excellence (DCoE) for Psychological Health and Traumatic Brain Injury (TBI), the progress we have made to prepare for the establishment of three additional Centers of Excellence within the Department of Defense (DoD) -- Vision, Hearing, and Traumatic Extremity Injuries and Amputations -- and our plans for sustaining these centers for the long term.

I am pleased to be joined today by the Surgeons General - Lieutenant General Schoomaker, Vice Admiral Robinson, and Lieutenant General Green. Together, we have confronted the clinical and administrative challenges of dealing with severe and complex war-related wounds, both physical and psychological, and with managing the increased demands on the Military Health System (MHS) for long-term rehabilitative care for our wounded, ill, and injured combat veterans. Our obligations to these Service members are immense and we are working to ensure they get the very best our health systems can offer.

Since major combat operations commenced more than eight years ago, the MHS has engineered remarkable improvements in our ability to stabilize Service members with acute trauma far forward in the theater of operations and the delivery of critical care in flight. As a result, survival rates for those wounded in action have never been higher in the history of our military, or any other military force. Our progress with rehabilitation of wounded, ill, and injured Service members is helping improve their opportunity to either return to duty or to have a more fulfilling life following severe injuries.

We engage in this effort with the knowledge that our direct care system alone cannot meet all of the clinical and rehabilitative needs of our Service members. We have reached out across the federal health sector, particularly with the Department of Veterans Affairs (VA), as well as with selected civilian institutions, to provide the best possible medical services to our wounded warriors.

The Centers of Excellence we are discussing today are a reflection of our commitment to our injured or ill Service members. The Centers are organized to bring about improvements in care based upon three pillars:

- **Identify and Proliferate Best Practices** – These Centers will help us more effectively connect and communicate with clinical centers across the Services, VA, and civilian sector to identify and communicate best clinical practices throughout the medical community.
- **Prioritize our Medical Research Agenda** – The Centers will lead our efforts to identify gaps in our scientific knowledge about wounds, injuries,

and diseases, as well as prioritize and coordinate research efforts to fill those gaps.

- **Enhance Patient-Centered Care** – The Centers will assist integration of services across the continuum of care by communicating with clinical centers, care coordinators, and case managers; establishing and using disease registry functions based upon the clinical data repository improving the ability to share information across agencies and with civilian partners; and helping ensure patients receive the right services to meet their medical needs at the right time and place to optimize the speed and degree of recovery.

Progress has been made in these areas; more is planned. In the pages that follow, I will outline the specific and important accomplishments made by the DCoE in the past year, our progress in establishing additional centers, and our major milestones for the coming year.

Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury

DoD established the DCoE in November 2007. In partnership with VA, academia, and others, the DCoE is leading the effort to develop excellence in prevention, diagnosis, practice standards, training, outreach, and direct care for those with TBI and psychological heath conditions. DCoE is comprised of six component centers, which provide care, support training, and advance science through complementary missions, goals, and objectives. These Centers are:

- The Defense and Veterans Brain Injury Center (DVBIC)
- The National Intrepid Center of Excellence (NICoE)
- The Center for the Study of Traumatic Stress (CSTS)
- The Deployment Health Clinical Center (DHCC)
- The Center for Deployment Psychology (CDP)
- The National Center for Telehealth and Technology (T2)

Since its inception, the DCoE has focused its efforts on the development and improvement of a patient-centered network dedicated to issues related to psychological health and TBI. In a little more than two years, the DCoE has introduced an impressive set of resources and programs in fulfillment of its mission objectives, and is aligned with the three pillars of our Centers of Excellence model. Accomplishments include the following:

Pillar 1: Identify and Proliferate Best Practices

1. Developed clinical practice guidelines that establish DoD standards of care

- DCoE developed evidence-based guidelines for comprehensive care for severe injuries, developed clinical guidance related to cognitive rehabilitation, and participated with the VA and Services to develop and publish the VA/DoD Mild Traumatic Brain Injury Clinical Practice Guidelines (CPGs).
- In the past year, DCoE worked with the DoD Evidence Based Working Group and the VA Office of Quality Management to complete DoD/VA CPGs on major depressive disorder and substance abuse, and is currently working with these committees toward the development of DoD/VA CPGs on post traumatic stress disorder (PTSD), bipolar disorder, and chronic opioid dependence.
- The DCoE is working with the Services and VA to develop clinical guidance regarding the evaluation of driving ability following TBI.

2. Developed in-theater protocols to ensure very early identification and intervention for those with psychological health problems and TBIs

- DCoE developed the protocol for mild TBI/concussion, directing medical staff to provide consistent, evidence-based actions when a Service member is exposed to a possible TBI. This protocol includes incident-based mandatory evaluations. DCoE promulgated the clinical guidance on recurrent concussion with the goal of reducing the potential long-term harm associated with repeated concussions.
- We are developing a psychological health in-theater protocol to train line leaders and medics/corpsmen to identify those with potential psychological health problems and empower our medical providers to perform initial interventions in most cases, while ensuring that Service members receive evidence-based mental health care, if needed, as soon as possible.
- DCoE developed pocket cards to provide theater medical personnel with the most current clinical practice guidelines to diagnose and treat possible cases of TBI.

3. Trained medical providers on evidence-based modalities

- The Center for Deployment Psychology trains providers from DoD, federal agencies, and the civilian sector in the use of state–of-the-art, evidence-based treatments for PTSD (specifically prolonged exposure and cognitive processing therapy).

- The DVBIC training initiatives included:
  - Development of a mild TBI training module for the Uniformed Services University of the Health Sciences (USUHS) nursing students;
  - Hosted the third annual TBI military training event held to train over 850 providers on evidence or consensus-based treatments of TBI;
  - Collaborated with the Army Office of Proponency, Rehabilitation and Reintegration in the development of a series of TBI modules for service members and for providers;
  - Trained providers and psychologists in the use of the Automated Neuropsychological Assessment Metrics (ANAM);
  - Provided outreach TBI training programs to military treatment facilities (MTFs); and
  - Facilitated access to TBI grand rounds given at Walter Reed Army Medical Center to all treatment facilities.

4. Consolidated standard surveillance information regarding suicide events, risk and protective factors, across the Services

- The Suicide Prevention and Risk Reduction Committee (SPARRC) is ensuring suicide prevention is a coordinated, joint Service effort. The DoD Suicide Event Report (DoDSER) collects information on suicide events, and their risk and protective factors, across the Services.
- With a recently awarded $50 million grant, the Center for the Study of Traumatic Stress (CSTS) began work with several other government and academic institutions to develop a major suicide prevention study under the guidance of the National Institutes of Mental Health.

5. Partnered with the DoD, VA, and a national network of military and civilian agencies, community leaders, advocacy groups, clinical experts, and academic institutions to establish best practices and quality standards for the treatment of psychological health and TBI

- Partnerships were built across these major areas: clinical care; education and training; prevention; research and patient, family and community outreach. A few examples of partnering included:
  - Department of Labor's America's Heroes at Work Program.
  - The DoD's Telemedicine and Advanced Technology Research Center on Community Based Warrior Transition Units. This initiative explored mobile care protocols for personal tele-rehabilition using cell phones targeted at Reserve Component members with TBI.

Pillar 2: Prioritize the DoD Medical Research Agenda

1. Directed research funds for studying PTSD and TBI

- The DCoE has directed $50 million in funding for further research on psychological health and TBI, which includes $5 million directed to Complementary and Alternative Medicine research. Some of the research categories include: studies of human PTSD brain tissue that advanced the scientific understanding of the role critical proteins play in patients with PTSD; the impact of blast physics on brain tissue; and advanced technologies (virtual reality, avatars, videogames, telehealth, etc.).
- This past year, DCoE developed the investment strategy and review process for $90.4 million in congressional special interest (CSI) funding and $75 million for the Fiscal Year (FY) 2009 Warfighter Supplemental Appropriation.

2. Initiated targeted research and program evaluation efforts aimed at producing rapid results and the ability to quickly transfer the science to field use

- The DCoE sponsored a study with RAND, Inc., to evaluate 20 of the most promising psychological health and TBI programs for effectiveness, support the growth of the most effective programs, and then make the program evaluation process publicly available.
- The DCoE is sponsoring a resilience pilot project to test four major resilience programs (Comprehensive Soldier Fitness (starting with the National Guard), Gallup StrengthFinders, Human Performance Institute, and Magis Group Warrior Optimization) at one site in each Service to determine which have the most promise for use across the DoD.

3. Led or participated in groundbreaking medical research

- Scientists from the CSTS, in collaboration with leading academic and research institutions, discovered two new critical paths in the neurobiology of PTSD, which may lead to new treatments.
- The CSTS examined the molecular mechanisms underlying disorders like PTSD and translated findings to inform clinical and therapeutic interventions for diagnosis and treatment.
- CSTS led an innovative public health study involving longitudinal research to understand the vulnerability and resilience of public health responders and their work in the hurricanes of 2004 and 2005.

- The DHCC launched STEPS-UP, a multi-site clinical effectiveness trial involving centralized care management and preference-based stepped care for PTSD delivered in the primary care setting.
- CSTS scientists published over 50 articles in various journals and books.

Pillar 3: Enhance Patient-Centered Care

1. Provided resources for Service members, veterans, families, military leaders, clinicians, educators, support personnel, clergy, and researchers

- The DCoE established a 24/7 call center in January 2009. The outreach center also includes online chat capability and provides confidential answers, tools, tips and resources about psychological health issues and TBI. Our experts can refer callers to services and assist them with navigating the system of care.
- The Real Warriors Campaign, launched in May 2009, addresses the stigma associated with seeking assistance for concerns related to psychological health and TBI. The campaign features stories of Service members who have sought treatment and are continuing to achieve successful military careers. We have effectively used public service announcements to reach more than one million Service members per week through the Armed Forces Radio and Television Service channels, and have partnered with 30 national civilian television and radio networks to assist in our outreach efforts.
- The DCoE has developed other outreach programs, to include:
  - A project which developed and distributed more than 700,000 DVDs to help families, especially children, cope with deployed parents and/or loved ones who have been injured physically or psychologically.
  - A partnership with Sesame Workshop to develop the "Sesame Street Family Connections" Web site, which allows Service members and their families to stay connected in a safe, online environment when distance or injury makes everyday communication difficult. In September 2009, a new program was initiated with Sesame Workshop to help children cope with the death of a parent, friend, or loved one. A Public Broadcasting Service prime time special will be broadcast this month to coincide with the release of the kit program.
- Afterdeployment.org -- an online mental wellness and behavioral health Web site -- addresses post-deployment issues for all Service members, veterans, and military families.

2. The T2, a component center of the DCoE, furthered the use of telehealth services to increase access to care for warriors and their families

- The DCoE leads efforts to standardize DoD telehealth services for psychological health and TBI, including the establishment of a Federal Partners Exploratory Committee on telemental health.
- Leveraging the capabilities of the Services, TRICARE, and civilian providers, the DCoE has recently begun serving as a coordinating and resource center for an emerging telehealth network of systems across DoD. Efforts are focused on establishing a collaborative network to rural and underserved locations by connecting various rural patients with treatment facilities via telehealth technologies, including web-based applications.
- The DCoE led in the coordination and development of TRICARE's web-based assistance program (TRIAP), launched in August 2009. The TRIAP demonstration offers counseling assistance by video, and is available 24/7 to Active Duty and family members over the age of 18 as well as TRICARE Reserve Select enrollees.

3. Established the NICoE, which is currently under construction and scheduled to open in 2010. The NICoE will be an advanced facility dedicated to the assessment, diagnosis, and treatment planning of military personnel with complex psychological and TBI issues

- The NICoE will use an innovative, holistic approach to the referral, assessment, diagnosis, and treatment of those with complex psychological health and TBI disorders. NICoE will be a global leader in generating, improving, and harnessing the latest advances in science, therapy, telehealth, education, research and technology, while also providing compassionate family-centered care for Service members and their loved ones throughout the recovery and community reintegration process.
- The NICoE has developed actionable and substantial relationships with government agencies to include VA, National Institutes of Health, and USUHS, as well as with philanthropic organizations like the Intrepid Fallen Heroes Fund and the Fisher House Foundation. The latter is particularly unique in that a specially designed Fisher House will provide a living environment of hope, inspiration, and community for warriors and their families during treatment at NICoE.
- To provide Service members with the best possible care, NICoE is nearing completion of its hiring effort, which is focused on staffing a select group of approximately 90 seasoned professionals specializing in military psychological health and TBI. The ribbon-cutting ceremony to open the NICoE is scheduled for late June 2010.

Our 2010 efforts focus on providing the optimal organizational platform for the DCoE. I will work closely with the Services to develop a long-term governance plan, in which we are seeking to provide a common governance approach across all Centers of Excellence.

Hearing, Vision, and Traumatic Extremity Injuries and Amputations

The establishment of the Vision Center of Excellence (VCE) was directed by Congress in the National Defense Authorization Act (NDAA) for FY 2008. The Hearing and Traumatic Extremity Injuries and Amputations Centers of Excellence were directed approximately one year later, with the passage of the NDAA for FY 2009.

We have allocated funding, assigned provisional Service responsibility for operational support, designated either interim or full-time directors, and begun to identify the registry requirements for the conditions covered. The patient registry requirements identification process is a significant and necessary baseline milestone for optimally coordinating the care and developing a solid foundation for an accurate longitudinal record and research base for these Service members.

The initial stand-up activities for these three Centers did not move at the pace expected – by beneficiary organizations, the Congress, or by my office. Nonetheless, we have made significant progress during the past several months and expect this momentum will continue. Ensuring these Centers achieve initial and then full operational capability is one of my highest priorities since stepping into this position a little over four weeks ago.

The Surgeons General with specific lead component responsibilities for the Centers of Excellence will address their areas in more detail. I will briefly describe our progress and outline this year's major milestones.

Establishing Organizational Ownership – In November 2009, the Assistant Secretary of Defense for Health Affairs (ASD(HA)) assigned each of the Centers to a specific Service as lead component. Army is the lead component for the Traumatic Extremity Injuries and Amputations Center of Excellence; Navy will lead the VCE, and the Air Force is the lead component for the Hearing Center of Excellence. We are also collaborating closely with VA on all of our Center activities, to include shared leadership and staffing as we will describe later in this statement.

Defining The Mission – Together with the Surgeons General, my office established the overarching mission objectives for the Centers. These include:

- **Clinical care:** We will optimize outcomes by analysis of evidence-based data and provide guidance for clinical practice guidelines and best practices in prevention, diagnosis, mitigation, treatment, and rehabilitation for all Service members, veterans, and other eligible beneficiaries being treated by DoD, VA, and civilian programs.

- **Collaboration:** We will communicate and work with VA, institutions of higher education, and other appropriate public and private entities (including international entities) to identify evidence-based best practices for clinical care as outlined above and to establish clinical practice guidelines.

- **Patient tracking:** We will establish a registry for use by both DoD and VA to facilitate case management, support of longitudinal care, assessment of outcomes, and research. As mentioned in the introduction, we have made significant progress in establishing these registry requirements across all domains.

- **Research:** We will monitor and analyze published research for technical and clinical advances potentially applicable to changes in best practices; lead or participate in processes to establish DoD and VA research priorities, and when possible initiate and conduct research. We will work with VA to establish efficient and effective research agendas increasing knowledge base for treatment of Service members, veterans, and other eligible beneficiaries by leveraging existing resources and avoiding duplication of efforts.

- **Knowledge transfer:** We will communicate up-to-date information about best practices via medical journals and other media and provide input for use in DoD/VA sponsored education and training curricula on an ongoing basis. Engage in dynamic transfer of scientific and medical knowledge to support clinicians in the care setting – clinical guidelines, best practices, optimal outcomes.

- **Support Cultural Transformation:** We will ensure evidence-based clinical and research knowledge integration is directed horizontally across the Services and with VA as well as vertically to the DoD MTFs and VA Medical Centers. We will provide operational program oversight across the continuum of care, leveraging telehealth technologies and seeking other ways to provide appropriate outreach to our patients.

Setting the Centers' Objectives – The ASD(HA) established, and the Services and VA have participated in, specific workgroups for each of the centers. These workgroups, comprised of subject matter experts in their specific fields, helped set the Center's objectives for the prevention, diagnosis, mitigation, treatment, rehabilitation, and research agenda for that specific center. The Vision workgroup was established in August 2008, the Hearing workgroup was established in February 2009, and the Extremity Injuries and Amputations workgroup began in April 2009.

Selecting Leadership – In November 2008, the ASD(HA) named the Director designate and VA named the Deputy Director designate for the VCE. For the Traumatic Extremity Injuries and Amputations and Hearing CoEs, the lead components identified interim directors in January and February, respectively.

The interim and designate directors, working in concert with their established workgroups and through their Service lead components, developed concepts of operations (CONOPS) for their respective Centers of Excellence. These CONOPS are currently in final coordination and will come to me for approval by the end of April.

Establishing Patient Registries – A major focus of the VCE has been the development of functional requirements for the Defense and Veterans Eye Injury and Vision Registry. These requirements have been approved and the project has moved on to the technical evaluation, costing, and development phase. Both the Hearing and Extremity Injuries and Amputations workgroups are currently developing functional requirements for their registries. These registries will play an important role for tracking and development of research to identify best practices. DoD's vision is to establish these registries to leverage a common data base and to ensure maintenance of a patient-centered focus so individuals identified in several registries due to the nature of their injuries, still receive "whole person" care.

Funding Center Operations – Resources have been set aside this fiscal year and in future years for the Centers. Their CONOPS will further define requirements and the optimal funding and staffing levels.

There are three significant milestones for 2010 that I am managing and monitoring closely:

- Governance – We will be making decisions in the coming weeks to define how to integrate Center operations and share resources with our VA partners and establish governance procedures to ensure effectual oversight of the effectiveness of the centers and visibility across Service and VA lines.

- Operational Guidance – I will approve the CONOPS for the three newest Centers by April 30, 2010, providing clear guidance and establishing clear expectations to the organizations on their mission and responsibilities.
- Opening of the NICoE – On June 30th, we will open this state-of-the-art facility, accomplished with the generous support and ongoing, constructive engagement of the Fisher House Foundation. Initial and full operational capabilities will follow and require continued, close management oversight.

The Vision, Hearing, and Traumatic Extremity Injuries and Amputations Centers of Excellence will become vital components of the MHS. These Centers represent an important advancement in the manner which the MHS delivers clinical care to our wounded and injured Service members. They will serve as the central coordinating point for DoD integration with other federal and private sector health care delivery systems.

The Centers will be responsible for identifying strategies for preventing and mitigating injuries, directing research, and finding and communicating evidence-based, best practices. Ultimately, these Centers will raise the standards of excellence in both DoD, and the larger Federal health delivery systems.

We remain deeply appreciative of the support and guidance the Committee has made in the establishment and funding of our Centers of Excellence. We are grateful for the continued investments in these new approaches to better integrate services with our VA and private sector partners. Tremendous progress has been made to move from conceptual models to realizing the vision for these centers.

Thank you again, Madam Chairwoman, for the opportunity to be here today. I look forward to your questions.

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DRAFT VERSION

STATEMENT BY

LIEUTENANT GENERAL ERIC B. SCHOOMAKER, MD, PhD
THE SURGEON GENERAL OF THE UNITED STATES ARMY
AND COMMANDER, US ARMY MEDICAL COMMAND

COMMITTEE ON ARMED SERVICES
SUBCOMMITTEE ON MILITARY PERSONNEL

UNITED STATES HOUSE OF REPRESENTATIVES

SECOND SESSION, 111TH CONGRESS

CENTERS OF EXCELLENCE

13 APRIL 2010

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
COMMITTEE ON ARMED SERVICES

Chairwoman Davis, Representative Wilson, and distinguished members of the Military Personnel Subcommittee, thank you for inviting us to discuss the five Centers of Excellence directed by Congress in the 2008 and 2009 National Defense Authorization Acts (NDAA). These Centers of Excellence offer great promise to our Warriors and patients, to the Department of Defense (DoD), and to the Nation. I foresee a day when these centers are acknowledged as the worldwide leaders in their respective disciplines. However, we are not there yet and we are moving slowly in some areas.

Nevertheless, I am confident that we will achieve the original vision of these Centers, as embodied in the following attributes:

- Collaborative – collaborating within DoD, with the Department of Veterans Affairs (VA), with institutions of higher education, with other public and private entities—including industry leaders--and with worldwide partners
- Comprehensive – addressing the full spectrum of health including prevention, mitigation, diagnosis, treatment, rehabilitation, and transition
- Creative -- fostering innovation in an open, transparent manner
- Multi-disciplinary – including all professional specialties across the range of health services to ensure a diversity of expertise and development of full-spectrum solutions
- Evidence-based – operating according to sound scientific principles while basing decisions on solid evidence and expert consensus
- Efficient – maximizing value for health services by publishing clinical practice guidelines, promoting best practices, and reducing unwarranted variation across the Military Health System
- Strategic – envisioning long-term success by seeing over the horizon and developing the plans necessary to create our future

The Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (TBI), known as the DCoE, are the most developed of the five Centers, largely because the Department received significant supplemental

funding for psychological health and TBI late in Fiscal Year 2007 that helped kick-start the DCoE. Although not established by Congress until the following year, the Center of Excellence for Traumatic Extremity Injuries and Amputations is also well-developed because of the extensive joint and inter-agency groundwork laid by the Armed Forces Amputee Patient Care Program and the Military Amputee Research Program, two programs that have been operating jointly and collaborating closely with the VA and academia since the start of overseas contingency operations.

The DCoE were established in the fall of 2007 with a reporting structure through the Office of the Assistant Secretary of Defense for Health Affairs to the Deputy Secretary of Defense. Recognizing that there may be advantages to different governing structures, OSD Health Affairs recently formed a tri-service work group to determine the most appropriate governance structure for the DCoE. The work group is expected to make a recommendation to the Senior Military Medical Advisory Council within the next month and I look forward to hearing its recommendations.

Having learned from the development of the DCoE, the Centers of Excellence for Hearing, Vision, and Extremity Injury have each recently been aligned with a service. I support this alignment of the Centers and believe it will provide the most effective structure to improve readiness, health, and quality of life. Once matured, the Centers will provide platforms for integrated research, clinical best practices, training and education systems, and information management systems that will stimulate innovation in patient care, enhance outreach, and support translational research.

Since Army has been designated the lead service for the Center of Excellence for Traumatic Extremity Injuries and Amputations, I would like to provide an update on the status of this Center and the exciting progress the Department has made in this area over the last nine years.

The 2009 NDAA directed the Secretary of Defense and the Secretary of Veterans Affairs to jointly establish a Center of Excellence for Traumatic Extremity Injuries and Amputations. This joint governance is unique among the

five Centers, but is consistent with the way DoD and VA have been collaborating on extremity injury over the last several years. Our collective goal from the outset has been to optimize function of individuals with extremity injuries. This goal is shared by many, and we continue to draw from the best and brightest of American medicine to make this goal a reality. Our approach continues to be multidisciplinary, focused not only on the return of physical function but the return of full psychological and emotional health. This is especially important as many wounds are combined injuries. We believe all Warriors with limb loss as well as limb threatening injuries should have the opportunity to return to their highest level of function.

Following the September 11th attacks and as the US prepared to enter Afghanistan, LTG James Peake, then the Army Surgeon General and later Secretary of the Department of Veterans Affairs, asked for an estimate on the number of amputee patients that could be expected from a war in Afghanistan. Between 1984 and 1987 the Soviets reported 30-45% of all injuries were related to land mines with a high percentage resulting in amputations. Based upon this and other information, LTG Peake asked that an effective program be developed to manage a potentially large number of patients with severe extremity trauma and amputations. He issued guidance on October 31, 2001, to develop a virtual program, where level of care was consistent across Army Medicine and centered on care at Walter Reed Army Medical Center (WRAMC), Washington DC.

We consulted experts from the civilian health care system, the military health care system, and the VA. Based upon their input, we worked to fine-tune policies and doctrine for treatment, to evaluate the physical plant at WRAMC, and to identify requirements and shortfalls within the DoD health care system as related to extremity trauma and amputation care.

In 2003, we established a civilian advisory board under the Federal Advisory Committee Act; the Board's first planning meeting was held on September 15, 2003. The Board focuses on both amputation and functional limb loss and serves in an advisory capacity to broaden the scope of vision for the

extremity trauma and amputee care program. Following the guidance of the Board, we established the Armed Forces Amputee Patient Care Program in 2003. Initially centered on WRAMC and later expanded to include Brooke Army Medical Center (BAMC) in San Antonio, Texas, Balboa Naval Medical Center, in San Diego, California, and VA facilities, this program has received national and international recognition for the outstanding care provided to our wounded warriors. Further guidance from the Board in 2005 led the Program to expand its focus from amputee care to include functional limb loss and traumatic extremity injuries undergoing limb salvage. The Board continues to be very active, meeting twice annually, and will continue to guide the Center of Excellence.

Today, the amputee and extremity trauma program provides state-of-the-art treatment as a "virtual," multi-site, coordinated complex of facilities that includes: Landstuhl Army Medical Center in Germany; BAMC; WRAMC; Balboa; the VA Amputation System of Care (ASC); and other military and civilian treatment facilities. The presence of the VA's ASC as well as the DoD's Center for the Intrepid (CFI) at BAMC; the Military Advanced Training Center (MATC) at WRAMC (and the plans for like capabilities within the new Walter Reed National Military Medical Center); and the Comprehensive Combat and Complex Casualty Care (C5) Balboa Naval Medical Center, provide the backbone for a nationwide virtual Center of Excellence for Traumatic Extremity Injuries and Amputations.

The VA's ASC assures consistency of amputation rehabilitation across the VA and enhances the environment of care for the new generation of veterans. The ASC incorporates seven Regional Amputation Centers (RACs), twenty-one Polytrauma/Amputation Network Sites (PANs), networking thorough Amputation Clinic Teams (ACT), and Amputation Point of Contact (APOC). The ASC was developed to provide state-of-the-art amputation rehabilitation by incorporating the latest practice in medical rehabilitation management, rehabilitation therapies and technological advances in prosthetic componentry.

Further, within our existing healthcare systems, the DoD and VA have disseminated the most current standards of care and evidence-based advances

to the individual provider level. To date the DOD and VA have published and distributed the VA/DOD Clinical Practice Guideline for the Rehabilitation of Lower Limb Amputation as well as the Patient Education Handbook that accompanies this guideline.

The second mandate from the 2009 NDAA was to conduct basic, translational, and clinical research to develop scientific information aimed at saving injured extremities, avoiding amputations, and preserving the function of injured extremities. Again, we have already accomplished much in this area, but the NDAA provides us the impetus to enhance these ongoing efforts. In November 2003, the US Army and the VA held an Orthopaedic and Prosthetic Workshop to develop interagency research efforts to address the growing need for innovative and functional prostheses. There have been a number of joint and interagency meetings since then, including a very recent VA/DoD Prosthetics and Orthotics State of the Arts conference held in March 2010.

The CFI, the MATC, and the C5 each have established human performance laboratories that support the Military Amputee Research Program (MARP). The MARP was established in 2004 to identify research gaps and coordinate amputee care research efforts within the DoD. This program has led to significant advances in the care of our Wounded, Ill, and Injured service members. Our research efforts have since broadened beyond amputee care to include all traumatic extremity injury. In 2006, Congress established the Orthopaedic Extremity Trauma Research Program (OETRP), a Congressionally directed, peer reviewed research program. The OETRP funded 26 proposals (7 clinical and 19 preclinical studies) during the first two years.

The emphasis on extremity research is significant because the majority of battlefield wounds occur to the extremities. In fact, 82% of battlefield injured Warriors have at least one extremity injury--penetrating soft tissue wounds and open fractures account for most of these wounds. Infection, non-union, heterotopic ossification, and impaired/loss of muscle function are common outcomes. These extremity injuries account for approximately two-thirds of inpatient hospital costs and resulting disability payments. They are the primary

burden of disease and source of morbidity from this war. In addition to the OETRP, Congress recently created the Peer Reviewed Orthopaedic Research Program (PRORP). This program will fund over $110M of orthopaedic research from its FY09 budget. A new call for proposals is expected this summer or early fall with $20M appropriated for 2010.

The Joint Center of Excellence for Battlefield Health and Trauma Research (BHT) is currently under construction and expected to open in Summer 2010 in San Antonio, Texas. The BHT will be the home of trauma research programs for the Army, Navy, and Air Force, with extensive capabilities for conducting both pre-clinical and clinical research. Research capabilities include over 200,000 square feet of laboratory space, over 300 scientists, physicians, engineers and technical staff, extensive research facilities, animal surgery and ICU capability, state of the art imaging technology, and world class IT infrastructure including the Joint Theater Trauma Registry. The units that will comprise the BHT have a distinguished record of advancing extremity trauma research, with significant advances in acute extremity trauma care as well as in regenerative medicine. The BHT will collaborate with the VA's Office of Research and Development which also has a long history of leading research in the rehabilitation of wounded warriors.

As this discussion of accomplishments demonstrates, the formalized establishment of a Center of Excellence for Amputations and Extremity Injury is the culmination of joint efforts in research and direct patient care dating back to 2001. The new Center of Excellence will lead to a stronger organizational structure and provide a single point of contact for DoD and VA issues related to amputation and extremity injury. While there has been terrific collaboration among the three services, DoD, and VA over the past nine years, the focus has been on immediate needs and solving local issues without having a true long-range corporate strategy for both Departments. The Center of Excellence is planning to have a small central staff with the time and resources to provide leadership, policy recommendations, and long term strategies to make the best

use of existing resources, prevent unwarranted variation, and enhance the care provided to our warriors.

In summary, despite the growing pains we experienced establishing the five congressionally-directed Centers of Excellence, I am confident that the Department is now moving in the right direction to provide the Centers with the governance and support to allow them to flourish. I remain concerned about unnecessary duplication of programs and unnecessary competition among the Services and Federal agencies conducting research and providing care. Alignment of these programs under a single overarching construct which reduces the number of oversight groups and administrative overhead, while ensuring agile and responsive translational research and medical programs is ideal. We are establishing favorable conditions to produce models of healthcare excellence that ultimately improve readiness, health, and quality of life for our service members, veterans, and family members.

Thank you for holding this hearing and for your unwavering support of Army Medicine and the Military Health System.

Not for Publication until released by
the House Armed Services Committee

Statement of

Vice Admiral Adam M. Robinson, Jr., MC, USN

Surgeon General of the Navy

Before the

Subcommittee on Military Personnel

of the

House Armed Services Committee

Subject:

Defense Centers of Excellence

13 April 2010

Not for Publication until released by
the House Armed Services Committee

Introduction

Chairwoman Davis, Representative Wilson, distinguished Members of the Subcommittee, I am honored to be with you today to provide our perspectives on the Defense Centers of Excellence. Thank you for this opportunity and, more importantly, thank you for your leadership on this issue. Your vision and direction were instrumental in establishing, collectively, the Centers of Excellence. You provided us a solid foundation on which to build, and further support our responsibility and privilege to care for our Wounded Warriors and their families.

As our Wounded Warriors return from combat and begin the healing process, they deserve a seamless and comprehensive approach to their recovery. We want them to mend in body, mind and spirit. The Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) was established to leverage the collective efforts of the Services by bringing together treatment, research and education in support of Psychological Health and Traumatic Brain Injury. In addition, DoD has been working to establish the three additional Centers of Excellence which Congress directed. These include: the Center of Excellence for Traumatic Extremities and Amputations; the Vision Center of Excellence; and the Hearing Center of Excellence. While we have made progress, I believe there is much more to do.

Since its inception in 2007, the DCoE has evolved to include six component centers: Defense and Veterans Brain Injury Center (DVBIC); Center for the Study of Traumatic Stress (CSTS); Center for Deployment Psychology (CDP); Deployment Health Clinical Center (DHCC); National Center for Telehealth and Technology (T2); and the National Intrepid Center of Excellence (NICoE). These centers represent an

impressive array of talent and resources. The current organizational construct provides that the DCoE currently reports to the Assistant Secretary of Defense (Health Affairs)/Director, TRICARE Management Activity.

Support from the Services, U.S. Public Health Service and the Department of Veterans Affairs has been evident, particularly in the area of staffing. We have assigned some of our most talented subject matter experts to the DCoE. In addition, Navy Medicine professionals - clinicians, researchers, educators and program managers - are working collaboratively with the DCoE staff to improve their important research, education and outreach efforts.

Progress

As first director of the DCoE, Brigadier General Loree Sutton has been a champion in leading this ambitious project, particularly during its initial phase. Her passion and drive with respect to integrating the component centers and fostering strategic partnerships with both public and private institutions has been most noteworthy. I am thankful to have her commitment, dedication, and enthusiasm at this important time in the evolution of the DCoE.

While there are several successes thus far, one of the notable achievements has been the development of the Real Warriors Campaign. Launched in May 2009, it confronts one of our most challenging issues – reducing the stigma surrounding Psychological Health and TBI. We know that this stigma is often a significant barrier to getting the care our Warriors need. We also know that this is an important leadership imperative. I continue to reiterate how important it is to recognize that asking for assistance is an act of strength, not weakness. The Real Warriors Campaign, with its

expansive multimedia outreach strategy, will continue to make progress in encouraging service members to seek treatment and access the resources they and their families need.

I am also encouraged by the work being conducted in support of TBI, both within the DCoE, its components, and in close coordination with experts within the Services. Our collaborative efforts in support of developing and providing advanced TBI-specific clinical guidelines, research, and education is critical to our ability to care for our Warriors suffering with TBI.

Challenges

I have often referred to our obligation to our Wounded Warriors and their families as a commitment measured in decades, not years. To meet our obligations, we must build supporting organizations for the long-haul and continuously adapt our practices to meet the emerging needs our patients. This is the bedrock of compassionate patient and family-centered care and why we must continue to act with a sense of urgency in supporting our Wounded Warriors. While we can be encouraged by the work of the DCoE thus far, I believe we are still in the nascent stages of what must be accomplished in order to meet the needs our Warriors. It is time to decide how to best leverage our efforts moving forward.

One area that requires careful assessment is the current organizational placement and reporting relationship of the DCoE to the Assistant Secretary of Defense (Health Affairs). Collectively, Military Medicine leadership must determine how to best maximize the operational efficacy of the DCoE and help facilitate their important synchronization efforts. As the principal advisor to the Secretary of Defense, ASD (HA)'s role is to develop healthcare policy in support of the Military Health System

(MHS). Correspondingly, the DCoE must be organized and aligned to provide for the efficient delivery of services to our clinicians, patients and families. Our goal must be to enable the DCoE to focus on its core competencies and operate efficiently with the necessary supporting command and control elements in place.

The initial placement reporting to ASD (HA) may have been appropriate in the early stages of development; however, we must now determine the organizational realignment decisions that best support the DCoE moving forward. ASD (HA), in concert with the Surgeons General, is in the process of considering alternative organizational models that will improve alignment and help support the DCoE mission. A careful assessment of funding, personnel, facilities, research support and partnerships must be completed. A component of any realignment, in addition to ensuring efficiencies, should support the priority of improved communication and collaboration with the Services, the Department of Veterans Affairs, and leading academic and research institutions.

Associated with review of options for DCoE realignment, there is consensus among the ASD (HA) leadership and the Surgeons General that the National Intrepid Center of Excellence (NICoE) - currently a DCoE component center - should be organized under the Commander, National Naval Medical Center (NNMC), and subsequently, Commander, Walter Reed National Military Medicine Center (WRNMMC), Bethesda. As a clinical entity, the model of NICoE being organizationally aligned in NNMC is consistent with the construct of the Center for the Intrepid (CFI) currently in place at Brooke Army Medical Center (BAMC) in San Antonio.

In addition, it would also be appropriate to consider options for how best to integrate and align the Center for Excellence for Traumatic Extremities and Amputations, Vision Center of Excellence and the Hearing Center of Excellence to support unity of effort and maximize efficiencies. Preliminary work is underway in support of the ASD (HA) plan to designate each of the Services with lead operational support responsibilities for one of these Centers: Navy – Vision Center of Excellence; Army – Center of Excellence for Traumatic Extremities and Amputations; and Air Force – Hearing Center of Excellence.

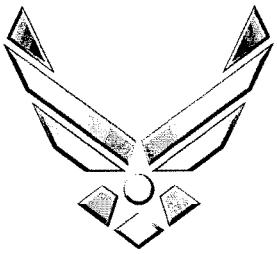
We can be proud of the work to date, but not satisfied. General Sutton and her staff have done an outstanding job in moving from a concept to implementation. Likewise, Colonel Donald Gagliano, as Director of the Vision Center of Excellence, is making significant progress and we in Navy Medicine are working closely with him to develop concept of operations. As their efforts have matured, the decision is now determining how to best support their work, improve our efficiencies for all the Centers of Excellence to sustain and enhance collaboration.

Way Ahead

I, along with my fellow Surgeons General and the ASD (HA) leadership are committed to ensuring that we build on the vision advanced by the Members of Congress and the hard work of the dedicated professionals at all the Centers of Excellence, MTFs, research centers and our partners in both the public and private sectors. These Centers of Excellence have become important components of the Military Health System and their work in support of clinical best practices, research, outreach and treatment must continue with unity of effort and our strong support.

On behalf of the men and women of Navy Medicine, I want to thank the Committee for your tremendous support, confidence and leadership. It has been my pleasure to testify before you today and I look forward to your questions.

United States Air Force



Presentation

Before the House Committee on Armed Services, Subcommittee on Military Personnel

Department of Defense Medical Centers of Excellence

Witness Statement of Lieutenant General (Dr.) Charles B. Green, Air Force Surgeon General

April 13, 2010

Not for publication until released by the House Armed Services Committee, Subcommittee on Military Personnel

Chairwoman Davis, Representative Wilson, and distinguished members of the Committee, thank you for this opportunity to discuss Department of Defense (DoD) Centers of Excellence and, specifically, plans for the Hearing Center of Excellence. The Centers of Excellence are an outstanding example of how the Military Health System strives to achieve "the Quadruple Aim." This new MHS strategic view for care to our beneficiaries focuses on readiness, population health, a positive patient experience and responsible management of health care costs. The Center of Excellence supports our efforts to meet these goals through focused research, training and education.

The creation of a Center of Excellence in prevention, diagnosis, mitigation, treatment, and rehabilitation of hearing loss and auditory system injuries, as set forth in the 2009 National Defense Authorization Act, is an important step in responsive care of our military members and veterans. Hearing loss is a significant cost-incurring disability for the DoD and the Department of Veterans Affairs (VA). Tinnitus is the number one diagnosis of veterans of Operations ENDURING FREEDOM and IRAQI FREEDOM. Tinnitus and hearing loss were the most prevalent service-connected disabilities for veterans who began receiving compensation during Fiscal Year 2009. As our patients age, those eligible and seeking benefits may increase and drive the cost higher.

The Hearing Center of Excellence (HCE) is a collaborative DoD and VA team effort to address prevention, diagnosis, mitigation, treatment and rehabilitation of hearing loss, auditory system injury, as well as multisensory injuries that include inner ear dysfunction. In October 2009, the MHS designated the Air Force Medical Service as the Lead Component to guide the Hearing Center of Excellence journey with the goal of ensuring optimal DoD and VA collaboration. The executive hub will be located in San Antonio at Wilford Hall Medical Center

on Lackland Air Force Base. Lt. Col. Mark Packer, an Air Force neurotologist stationed at Wilford Hall, has been named Interim Director and is guiding HCE's development.

The HCE will bring new methods and research to current hearing conservation programs, but will not replace existing hearing conservation efforts. DoD-VA will collaborate on comprehensive plans for tracking hearing loss and auditory system injury incurred by members of the Armed Forces while serving on active duty. We are developing a Hearing Loss and Auditory System Injury Registry to meet this objective. The Registry will include injury, diagnosis, surgical interventions and other therapeutic interventions for hearing loss and auditory system injuries that occur during the course of care for Armed Forces members. It will also include an electronic, bidirectional exchange of information with the VA to ensure tracking of eventual hearing outcomes for veterans who are entered into the registry and subsequently receive treatment through the VA. The Hearing Center of Excellence will provide policy oversight and will coordinate the sharing of information and clinical advances in all areas of auditory system injury to optimize prevention, clinical care and research.

The HCE is working closely with the other DoD Centers of Excellence, as exemplified by the collaborative approach to establishing the Registry. The HCE, shaped by input from a working group of multidisciplinary representatives from each Service and the VA, is working to finalize identification of the hearing loss and auditory injury-specific data fields for the core Registry structure originally developed by the Vision Center of Excellence. The HCE executive office will be comprised of a lean cadre of staff working as an administrative hub leveraging technology to create and sustain a network of regional treatment facilities across DoD and VA. Additionally, Centers of Excellence leaders are regularly meeting to identify and leverage common support functions to achieve optimal efficiency and effectiveness.

Wilford Hall Medical Center is an excellent site for the HCE hub. With ten Air Force otolaryngologists, five Army otolaryngologists and nine audiologists, Wilford Hall is the most robust clinical otolaryngology and audiology department in the DoD and rivals the excellence found in the best civilian and academic departments. Wilford Hall is integrated with Brooke Army Medical Center supporting Graduate Medical Education of otolaryngology and audiology residents. The Wilford Hall/Brooke Army partnership provides support for the Audie Murphy and Central Texas VA hospitals, and provides didactic and surgical training support for the University of Texas at San Antonio Medical School. This local support underpinning the Hearing Center of Excellence hub will ensure success as links with other regional facilities are developed. The BRAC-directed integration of hospitals to the San Antonio Military Medical Center will provide convenient, top-quality platforms critical for focused preventive, clinical and research activities.

Wilford Hall otolaryngology and audiology providers have a strong legacy and understanding of deployment medicine supporting special operations, aeromedical evacuation, and humanitarian roles and are keenly aware of the ongoing dichotomy faced by troops between hearing protection and the essential need for optimal situational awareness and communication. Additionally, the departments have a solid research foundation and working relationship with the Army system, the VA system, and joint trauma surgeons, and have established collaborative teaching and research ties with the Navy, acclaimed universities, and national and international industry leaders. The San Antonio military medical community supports Ft. Hood, the Army's largest armored post, the Center for the Intrepid, Air Force entry-level enlisted training and the new military Medical Education and Training Campus located on Fort Sam Houston.

San Antonio is a rich research environment. It is the site of the Joint Center of Excellence for Battlefield Health and Trauma, as well as Centers of Excellence in molecular research, cardiovascular care, diabetes care, and maternal-fetal medicine. It is home to the Institute of Surgical Research, enroute care research center, and the Air Force combat casualty care center. It has two full-scale clinical investigations labs, a medical education simulation and training lab, an advanced diagnostics lab, and a state-of-the-art temporal bone lab. Wilford Hall otology and audiology departments have ties to the University of Texas at San Antonio bioengineering lab, and have collaborated in the development of both semi and fully implantable hearing technologies with new interest in bone conduction devices.

Troop readiness and population health are top priorities of HCE focus. To promote responsible management of health care costs, interagency regional directors will be identified and leveraged at spoke medical centers and research sites that will network with the central hub. Through this network, collaborative, evidence-based work will be coordinated to establish, promote, and implement the best preventive, therapeutic, and rehabilitative strategies. Since troop readiness is a function of troop capacity, initial and sustained efforts of the HCE will be to prevent hearing loss, promote protection, and deliver clarity throughout a Service member's career to enhance capability, retainability and longevity.

The DoD and VA have a long history of excellent clinical care for those with hearing loss and auditory injury. This system of regional medical facilities has well trained and well equipped experts who deliver excellent evidence-based care and routinely deliver positive patient experiences. The addition of access to the central Registry and development of an integrated DoD/VA Electronic Health Record will further facilitate implementation of best practice clinical

guidelines and longitudinal continuity for better outcomes. The Hearing Center of Excellence will facilitate identification and implementation of optimal mitigation and therapeutic choices.

Auditory research is already in progress within DoD and VA. Establishment of the Hearing Center of Excellence will greatly enhance research efforts by creating synergistic work, communication, coordination, collaboration, and reporting to fuel efficient, productive research. The Hearing Center of Excellence will provide collaborative research through: 1) Institutional Review Board assurance portability between centers or agencies; 2) retention and continuity among research-oriented providers; 3) knowledge of potential funding sources; 4) tracking of health records between agencies (DoD/VA); and 5) good availability of computable audiometric data. Data available from the Registry will spur a research agenda leading to better prevention, optimal diagnosis, best practice guidelines and optimal rehabilitation strategies. The Hearing Center of Excellence will pursue these objectives through communication, funding advocacy, and clinical case management for continuity and coordination in electronic health records.

An initial state-of-the-science seminar was held with Telemedicine and Advanced Technology Research Center (TATRC), following the Association of Research in Otolaryngology international conference, to detail current understandings of hearing, hearing loss, tinnitus, and balance function, dysfunction, and rehabilitation. Gaps were identified, and research lines were proposed to address specific needs based on injury patterns seen in current conflicts. Twenty-three projects were identified with joint applicability. These research lines focus on prevention, diagnosis, rescue and rehabilitation of hearing loss, tinnitus and inner ear function as well as the ear as a shock organ relating to blast injury. Many of these projects will be facilitated by the Registry. Several collaborative efforts are being pursued, but broad scale

sustained collaboration, integration of outcomes, and dedicated focus will require coordination by the Hearing Center of Excellence.

Since designation of AFMS as Lead Component for the HCE, the Interim Director has worked with the Tri-Service/VA working group to draft the concept of operations and to direct and define the functional needs for the hearing loss and auditory injury Registry. The Lead Component structure supports cross-talk with other DoD Centers of Excellence and enables the Service Surgeons General to be fully engaged in the execution of activities down to the military treatment facility level.

In conclusion, establishment of the DoD's Hearing Center of Excellence is well underway. The Hearing Center of Excellence is positioned to roll out the necessary programs to connect, coordinate and focus the DoD and VA prevention, clinical care and research efforts for each injured military member and the expanding population of auditory disabled Veterans.

We could not achieve our goals of better readiness, better health, better care and best value for our heroes and their families without your support. Thank you.

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