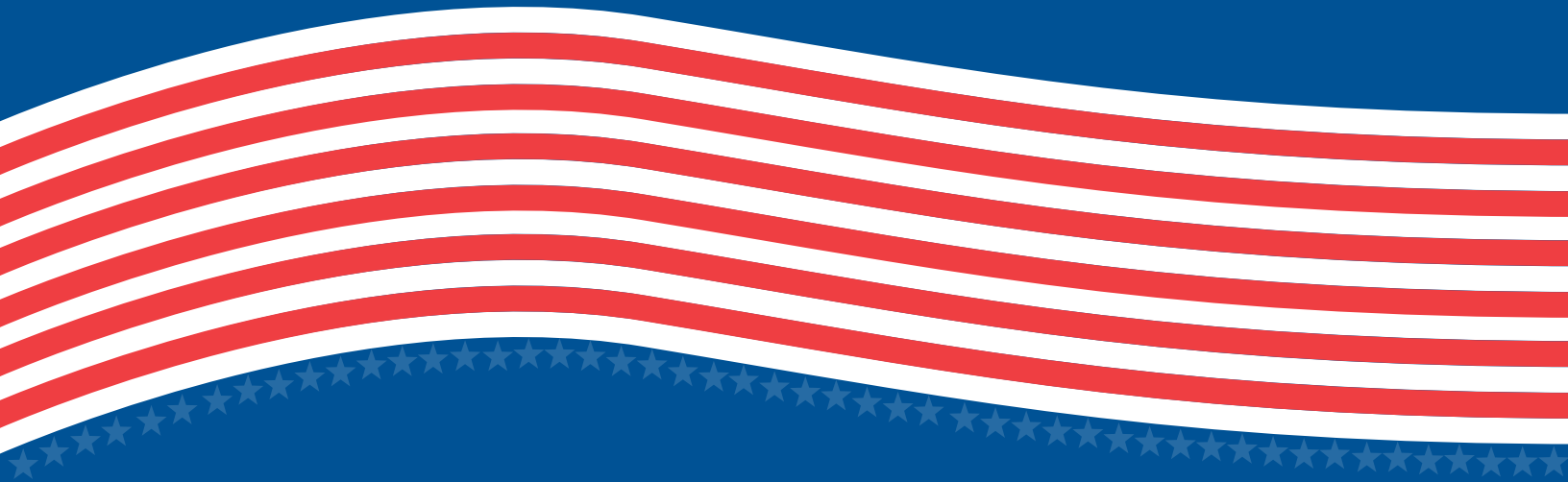




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Joining Forces: Results of an AAMC Survey



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Executive Summary

In January 2012, the Association of American Medical Colleges (AAMC) announced a commitment by 110 U.S. M.D.-granting medical schools to mobilize their education, research, and clinical care missions to meet the unique health care needs of military service members, veterans, and their families as part of the Joining Forces initiative. School leaders pledged to enrich medical education to ensure that physicians are trained in the best practices needed to care for this special population; to disseminate cutting-edge diagnostic and therapeutic information as it relates to traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD); to grow the body of knowledge through research that results in improved care and wellness for military service members, veterans, and their families; and to work collaboratively with others to strengthen the supportive community for these groups.

As part of their pledge to Joining Forces, schools were asked to complete a survey pertaining to their current and planned efforts related to the initiative. The survey was completed by 104 schools. The results of the survey indicate that TBI, PTSD, and cultural competence are generally covered as topics in the curriculum for the M.D. degree as they apply to the general population and that a little more than half of the schools address these topics as they pertain to military service members, veterans, and their families. The percentages are somewhat higher, about two-thirds during residency training, but are substantially lower with respect to training related to continuing medical education (CME). Recognizing shortfalls in their existing programs, essentially all of the participating schools said they have taken steps to advance training in undergraduate medical education (UME) and graduate medical education (GME); CME-related training was rarely noted as a target for future efforts.

Schools responding in the affirmative with respect to providing educational activities related to the needs of military personnel, veterans, and their families were asked to describe these programs briefly. For the most part, educational efforts center on patient care, largely through rotations at a Veterans Affairs (VA) or military medical centers as part of a clerkship or residency program. Otherwise, there may be didactics—grand rounds, lectures, and other classroom instruction—that include a patient case or session using military personnel or veterans as the topic. The majority of respondents said that their schools had not taken steps to support educational activities related to supporting family members.

About 80 percent of institutions have plans to enhance their work with the VA, the Department of Defense (DOD), or another organization on initiatives related to Joining Forces. The majority of responses cited increased engagement with respect to educational (including curriculum enhancement), research, and clinical programs.

At the inception of this initiative, the AAMC created iCollaborative, <https://www.aamc.org/icollaborative/joiningforces>, as a repository for sharing educational activities and programs that address caring for military personnel, their families, and veterans. When responding to the survey, about half of the participating schools indicated they were already aware of this resource, another third said they are planning to submit resources to it; two-thirds plan to disseminate information contained in iCollaborative to students, residents, and faculty. Access to best practices and resources (including online content) were the most frequently cited needs.

Respondents were asked about specific actions that the AAMC could take to help support medical schools to better meet the needs of military members and their families. The responses to this question seem to fall into a small number of categories:

- (1) Continue to build/support iCollaborative to facilitate sharing of materials.
- (2) Identify additional materials.
- (3) Provide grant support and/or funding sources to develop materials/programs.
- (4) Create an annual award related to a commitment to the goals of the initiative.
- (5) Take steps to help schools better understand the needs of military personnel, veterans, and their families.
- (6) Organize a national meeting and/or incorporate issues into an identifiable track in the AAMC Annual Meeting.

The results of the survey suggest that current commitments are fairly extensive—with the exception of the CME domain. The Joining Forces initiative appears to have created a heightened awareness among participating schools for the unique and nuanced needs of military members, veterans, and their families. While some schools are considering curriculum enhancements to address these needs for the military patient population, other schools have had long-standing relationships with their local VA medical centers and had created robust programs and services that were in place for patients prior to Joining Forces.

Many schools described new and planned commitments. However, the great majority of these are in the development and/or implementation stage. Because of the cyclical nature of medical school curricula and the academic year, integrating these new efforts into curricula may take some time. Joining Forces offers a venue for elevating these efforts, which have been locally created, to a national level. Additionally, centralizing educational resources through AAMC's iCollaborative repository appears to support schools with curriculum change and sharing.

A key limitation of the findings cited in the full report is the level of detail that some respondents provided when asked to give complete, comprehensive descriptions of current or planned activities and programs. It is likely that several schools not cited in the full report have taken significant steps and implemented programs to meet the needs of military personnel, veterans, and their families. However, their actions are not cited due to the brevity of the response submitted by the designated contact.

Conclusions/Recommendations

Regarding the provision of educational activities related to cultural competence and the identification and treatment of PTSD and TBI for military service members, veterans, and their families:

- (1) Many schools provide training at the undergraduate and graduate medical level. Even so, there appear to be significant opportunities to enhance this training. Included among current factors that present barriers to achieving this is the identification of best practices.
- (2) The responses related to CME-level training suggest the need for a commitment of new resources or refocused efforts to meet the needs of military personnel, veterans, and their families who are being treated outside VA medical centers.

- (3) The responses to questions about steps that schools have taken to support educational activities related to helping family members understand and meet the needs of a relative in the military or a veteran suggest the need for a commitment of new resources and/or refocused efforts at both the UME and GME levels.
- (4) The responses to questions about steps that schools have taken to provide educational activities related to helping students, residents, or physicians treat family members who suffer with illnesses related to the stress of being part of a military family suggest the need for a commitment of new resources and/or refocused efforts.

The AAMC is working on several steps to address the needs described above. We plan to initiate a process to work with constituents, the VA, and the DOD to identify a limited set of best practices that will focus on identifying and treating PTSD and TBI related to its occurrence in military personnel and veterans, and also working with family members dealing with these tragic illnesses. Part of achieving these steps are enhancements to iCollaborative.

In addition, plans are under way for sessions at the 2012 AAMC Annual Meeting in collaboration with partners from the VA and the DOD. Association staff also are developing a week-long program, called Joining Forces Wellness Week (JFWW), that will commence around Veterans Day. The program will offer resources and activities for medical schools to participate in and sponsor for their learners.

Results of the Survey

In January 2012, the Association of American Medical Colleges (AAMC) announced a commitment by 110 U.S. medical schools to mobilize their education, research, and clinical care missions to meet the unique health care needs of military service members, veterans, and their families as part of the Joining Forces initiative. School leaders pledged to enrich medical education to ensure that physicians are trained in the best practices needed to care for this special population, to disseminate cutting-edge diagnostic and therapeutic information as it relates to TBI and PTSD, to grow the body of knowledge through research that results in improved care and wellness for military service members, veterans, and their families, and to work collaboratively with others to strengthen the supportive community for these groups. As part of their pledge to the initiative, medical schools committed to participate in a survey pertaining to their current and planned efforts related to the initiative. This report summarizes the results of the responses submitted to the survey.

The survey was sent to the institutional-designated contact for the Joining Forces initiative. The survey was launched in mid-February as a Web-based application. Follow-up reminders were sent to nonrespondents throughout March. The survey was closed on April 11. Reflecting a 94 percent response rate, 104 medical schools participated in the survey.

Medical Schools and Curriculum

Q1: Please indicate if your school covers the following topics as they pertain to the civilian population and where they occur in the curriculum. (Respondents were asked to check all situations that applied.) The following table summarizes the responses to the question.

		UME	GME	CME	Total
Cultural Competence	Count	97	81	46	104
	% by Row	93.3%	77.9%	44.2%	
Post-Traumatic Stress Disorder (PTSD)	Count	94	83	50	104
	% by Row	90.4%	79.8%	48.1%	
Traumatic Brain Injury (TBI)	Count	82	80	50	104
	% by Row	78.8%	76.9%	48.1%	

As one would expect, the majority of responses indicate that schools cover PTSD, TBI, and cultural competence as they pertain to the civilian population in the undergraduate medical education (UME) curriculum. The extent to which these subjects are addressed in graduate medical education (GME) training is more difficult to ascertain. Based on staff experience and descriptions found on schools' Web sites, it seems likely that these subjects are addressed during residency training.

We are uncertain about how to interpret the limited coverage of these subjects in continuing medical education (CME) courses—fewer than 50 percent of respondents indicated that they address them in their schools’ CME-sponsored courses. Given the frequent occurrence of PTSD and TBI-related injuries in the civilian context (e.g., accidents, sports injuries, family- and work-related stress, etc.), the percentages may be higher than is reflected in the table.

Q2a: Please indicate if your school covers the following topics as they pertain to military service members or veterans, and where they occur in the curriculum. (Respondents were asked to check all situations that applied.)The following table summarizes the responses to the question.

		UME	GME	CME	Not covered anywhere	Total
Military cultural competence	Count	22	32	17	52	104
	% by Row	21.2%	30.8%	16.3%	50.0%	
PTSD	Count	59	69	36	21	104
	% by Row	56.7%	66.3%	34.6%	20.2%	
TBI	Count	49	64	41	23	104
	% by Row	47.1%	61.5%	39.4%	22.1%	

The data reported in the table suggest that less than 60 percent of schools address one or more of these topics in the UME curriculum. However, a review of the responses to question 2b, which asks respondents to describe their programs, suggests that the level of activity may be higher.

The percentages are higher at the GME level, with about two-thirds of the schools reporting that one or more topics are covered. This result is likely due to resident training occurring at affiliated VA medical centers (VAMCs).

The responses related to CME training suggest a serious deficit in this domain. The written responses to Q2b yielded no additional data to suggest that the situation may be otherwise. In 2010, there were approximately 23 million veterans in the United States.¹ According to statistics reported by the VA National Center for Veterans Analysis and Statistics, about 8 million people were enrolled in the VA Healthcare System during this period. Of these, some 5 million received care at a VA facility, suggesting that another 18 million received their care in non-VA facilities.² This suggests that between 60 and 80 percent of veterans received at least some care in non-VA facilities. As such, the data suggest that there are serious training shortfalls in the CME domain as most veterans are seeking medical care from community physicians.

¹ GAO, VA Health Care: Number of Veterans Receiving Care, Barriers Faced, and Efforts to Increase Access, GAO-12-12 (Washington: Oct. 14, 2011).

² Actually, the number is likely higher. A recent statement by Robert Petzel, M.D., undersecretary for health, U.S. Department of Veterans Affairs, at the National Academic Affiliations Council Meeting, February 8–9, 2012, suggested that 30 percent to 40 percent of VA patients receive care in the private sector as well as at the VA.

Q2b. For the answers you selected above, please briefly describe the educational activities that occur at your institution that are related to educating medical students, residents, or physicians to care for military personnel and veterans.

The most frequently cited responses to Q2b pertained to patient care activity involving rotations at a VAMC or a military medical center as part of a clerkship or residency program. Also cited were grand rounds, lectures, and other classroom instruction that included a patient case or session using military personnel or veterans as the topic. About 10 percent of the written responses indicated that these topics were not addressed in the context of identifying and treating PTSD and TBI for active military personnel or veterans—albeit, they are addressed in the general curriculum.

Descriptions and examples of specific program activities follow:

The **University of Hawaii at Mānoa John A. Burns School of Medicine** reported that the school has special programs for military service members and veterans that involve students and residents (e.g., Ho’oikaika, To Strive, http://manoa.hawaii.edu/pbrrtc/hooikaika/?page_id=52). The program brings together people with TBI to share their knowledge and experience or brings in a guest speaker with a military connection.

Wake Forest School of Medicine of Wake Forest Baptist Medical Center reported that the Salisbury VAMC (a Wake Forest affiliate) has one of the Mental Illness Research, Education, and Clinical Centers (MIRECCs), <http://www.mirecc.va.gov/visn6/>. The goal of the education component is to develop educational materials and experiences that positively affect the mental health of Operation Enduring Freedom (OEF in Afghanistan) and Operation Iraqi Freedom (OIF) veterans. Members of this center teach the residents and students, who rotate through the clinics at the VAMC that houses the MIRECC.

University of Chicago Division of the Biological Sciences Pritzker School of Medicine reported that it has a course, Human Behavior and Health and Illness (Second-Year Medical School), in which PTSD is covered in some detail. The role that combat can play in the development of PTSD is discussed. In a neurobiology course (second year), PTSD and TBI are covered, including both pathophysiology and epidemiology in military personnel. In the clerkship for psychiatry (third year), PTSD is discussed with specific reference to the role it plays in veterans. In the Psychiatry residency program, PTSD is discussed both outside and within the context of the military. Specific topic areas covered include biological mechanisms and treatments, including psychotherapy approaches. The school also hosts CME conferences on Education in Palliative and End-of-life Care (EPEC) for veterans and palliative care education in the VA system.

Harvard Medical School reported that it supports the Home Base Program, which is run by Massachusetts General Hospital. The program offers continuing education to physicians, community health providers, and mental health providers about caring for veterans and increasing awareness of the visible and invisible wounds of war.

Johns Hopkins University School of Medicine (JHU) reported that its first two years of undergraduate medical education include courses in global health, disaster and triage medicine, and pain care that relate specifically to the mission and areas of responsibility encountered by military personnel. Additionally, the communication and cultural competence curriculum leverages small-group discussion, modeling, reflection, and practice to refine a student's ability to deal with situations encountered by military and veteran patients and their families. The clinical undergraduate curriculum includes rotations in neurology, psychiatry, and chronic disease and disability, which address issues related to TBI and PTSD. A new course in regenerative medicine, which will address neuro-regenerative capacity and plasticity as it relates to TBI and PTSD, is being planned for the fourth-year curriculum.

Regarding graduate medical education, JHU reports that many areas address the specific needs of military personnel and veterans. For example, residents in physical medicine and rehabilitation (PM&R) spend three months focused on pediatric TBI, inpatient TBI, and outpatient TBI rotations. The neurology, psychiatry, and PM&R residents as well as neuro-critical care fellows are given didactic and bedside instruction on the treatment of TBI and PTSD. Psychiatry and PM&R residents receive additional training in the long-term sequelae of TBI and PTSD, which is also offered during psychiatry clerkship rotations. An anxiety disorders teaching program with a major focus on PTSD targeted at medical students and residents in psychiatry has also been created. Additionally, pediatric and emergency medicine residents receive significant training in TBI tailored to the patients they encounter.

JHU also supports a joint fellowship in behavioral neurology and neuropsychiatry that includes an in-depth curriculum on TBI, with rotations through the TBI clinics in psychiatry and PM&R. With regard to TBI, specific emphasis is placed on clinical practice guidelines (CPGs) that are identical to those used in the military. Furthermore, the faculty have developed adaptations to the Brain Trauma Foundation CPGs for use by deployed health care providers. This is particularly relevant, because active-duty neurology residents from Walter Reed National Military Medical Center receive their neuro-critical care training at JHU in Baltimore. This long-standing relationship between JHU and the Department of Defense has trained hundreds of active-duty neurologists, neuro-critical care fellows, and pulmonary critical care fellows within the military.

JHU reported that it sponsors numerous continuing medical education efforts focused on the needs of the military and veteran communities. For example in June 2010, JHU sponsored a forum with the National Football League and the DOD to discuss an evidence-based review of TBI. The first national conference on TBI, titled "From Impact to Recovery," was hosted in May 2011. In June 2012, the JHU School of Medicine plans to host the second annual national conference on TBI, with a primary focus on the effects of repetitive head injury. In November 2011, the Department of Plastic and Reconstructive Surgery sponsored a multi-institutional meeting with the DOD with the goal of reaching consensus on issues related to hand and face transplants.

On average, JHU sponsors approximately one CME course dedicated to TBI, PTSD, and related issues affecting the military and veteran communities every three months. Additionally, the JHU Brain Sciences Institute (BSI), created in 2007, has the core mission to solve fundamental questions about brain development and function and to use these insights to understand the mechanisms of brain disease. To support this mission, several working groups within JHU BSI regularly discuss issues relevant to the military, including those dedicated to pain, neural regeneration, and traumatic brain

injury. The JHU BSI hosts regular “Brain Night” symposia to bring together faculty with medical, graduate, and undergraduate students interested in the neurosciences.

The University of Michigan Medical School reported that it has developed a strong affiliation with the Veterans Affairs Ann Arbor Healthcare System. All physicians at the Ann Arbor VA have faculty appointments at the University of Michigan Medical School. As a result, the education for students and residents of many disciplines involves significant time rotating through the VA hospital. Medical students are exposed to the issue of PTSD/depression/substance abuse during their second year, and several medical students rotate through the VA for their psychiatry clerkship during their third year of medical school. During these experiences they are able to work with veterans who may suffer from PTSD, and possibly TBI as well, on both an inpatient and an outpatient basis.

Michigan notes that internal medicine residents have the opportunity to care for patients with PTSD in ambulatory settings, continuity clinics in primary care, and inpatient services. Education comes from experiential learning and working with psychiatric consultants and attendings. Psychiatry residents also spend a great deal of time at the VA in multiple settings and have experiential learning and didactic learning in the areas of PTSD, depression, and substance abuse. PM&R residents have both experiential and didactic learning in TBI clinics at the VA.

Duke University School of Medicine reported that its first-year neurosciences course includes a one-hour session addressing the neurobiology of PTSD and a subsequent one-hour session on anxiety disorders that includes discussion of PTSD. TBI is covered in case discussions. Medical students rotating through the VA are exposed to veteran patients. The psychiatry core clerkship includes education on PTSD, including military PTSD. In GME activities, the psychiatry residents receive extensive education on military-specific conditions (PTSD, TBI, substance use disorders, mood disorders) and the unique cultural aspects of military service. In CME activities, Duke faculty have created and taught several courses that pertain to these issues.

The **University of Pittsburgh School of Medicine** reported that its preclinical Introduction to Psychiatry course (late in year one), tackles issues of trauma and traumatic injury as part of a one-hour small-group session. This session takes students through a scenario of a family physician seeing a returning Afghanistan veteran who has suffered a probable TBI and PTSD. The session covers neurobiology as well as assessment and management issues, with particular attention to returning veterans. The same course offers a two-hour session on anxiety, including much emphasis on PTSD. It also shows a video about a returning veteran (from the Iraq war) and how PTSD has affected him. <http://www.washingtonpost.com/wp-srv/nation/interactives/walterreed/ptsdvideos.html>

The University of Pittsburgh also sponsors a clinical neuroscience clerkship (year three) that picks up the PTSD theme with a 45-minute didactic session on anxiety; it also provides self-learning materials, including PTSD practice guidelines and self-assessment quizzes (with the latter geared toward combat-related PTSD). The school also provides periodic sessions and selected opportunities related to military medicine, TBI, and PTSD for interested students.

Boston University School of Medicine reports that its undergraduate medical school curriculum includes training that addresses military life, military injuries, and a soldier’s response to those injuries. Lectures are taught by active-duty military personnel. Special Forces officers have been brought in to address the assessment of TBI in the field. In addition, the psychiatry department has

collaborated with the VA to develop a detailed seminar for clinicians on how to address PTSD in the military population. The seminar has also been offered to the Massachusetts Psychiatric Association.

Each year, the VA Maryland Health Care System (VAMHCS) supports the training of nearly 120 residents and 314 medical students from the **University of Maryland School of Medicine** (UMSOM).

UMSOM faculty members have many ongoing studies at the VAMHCS that will expand the knowledge of the veteran patient population and make state-of-the-art medical interventions and treatments available to them.

Q3a. Please briefly describe the educational activities that occur at your institution in these areas for students, residents, or physicians that are related to helping family members care for military personnel and veterans?

The majority of respondents said that their schools had not taken steps to support educational activities related to supporting family members. The most frequently cited affirmative response pertained to exposure in VA facilities through clerkship and residency training. Descriptions and examples of cited activities include the following:

Wake Forest reported working with the Salisbury VAMC, which has multiple supports for patients, including multifamily therapy groups, individual marriage and family therapy, full case-management services for veterans returning from the current wars and their families, TBI clinics, PTSD outpatient clinics and inpatient services, caregiver support programs, as well as multiple research study opportunities for patients. All these services are designed to be teaching services and have students, residents, or postdoctoral fellows rotating in them. The school has postdoctoral fellowships working with this population. It also noted that students/residents/postdoctoral fellows rotate through much of these services all the time.

Texas A&M Health Science Center College of Medicine reported that it has a program called TexVet that is designed to help connect veterans and their families to support services outside the government sector. The university system has adopted a military-friendly initiative to encourage veterans to apply.

The **University of Kansas Medical Center** (KU Medical Center) reported that it has a continuing medical education program that it runs in partnership with the American Academy of Family Physicians. The program includes the production and distribution of a continuing education podcast on the care of returning veterans. It focuses on TBI, blast injury syndromes, PTSD, suicide risk, and reintegration of returning veterans and families.

Harvard reported that the VA Boston Family Caregiver Program provides physicians and providers with educational opportunities that include guidance for the family pertaining to the completion of necessary documentation for program referrals and how to include the family member/caregiver in future treatment planning. In addition, it also provides guidance about how to meet the needs, both physical and mental health, of the veteran. Massachusetts General Hospital's Home Base Program joins the VA in presenting an online educational series, "From the War Zone to the Home Front: Supporting the Mental Health of Veterans and Families," to a broad audience of clinicians, mental

health providers, clergy, and other community health providers/counselors who will interact with veterans and their family members.

JHU reported that the frequent requirement to care for patients with TBI necessitated a culture of caring that begins upon admission and extends to family members of patients with TBI and PTSD. TBI is, unfortunately, a common condition in the JHU Neuro-Critical Care Unit (NCCU) and in its outpatient clinics. Educating family members about TBI is routine and includes bedside instruction and community outreach with involvement from students, residents, and faculty.

Duke reported that its faculty has created a CME program focused on family issues related to military-veteran deployment health. The DOD was a key partner in this educational activity. This program has now been fielded across all nine area health education center (AHEC) regions of North Carolina and soon will be posted as an online accredited Category I CME activity.

The **University of Washington School of Medicine** reported that trainees and physicians involved in clinical programs at VA Puget Sound and Boise VA are exposed to assisting and educating families in the routine care of veterans. It noted that a number of excellent Web sites providing education appropriate for veterans and their families are available. Specialized programs in PTSD, including a 20-bed long-term residential PTSD program and an intensive psychosocial PTSD day hospital, provide support for families and provide settings for trainees to acquire skills in assisting family members of veterans. A Polytrauma Care program, which emphasizes family and caregiver support, offers specialized TBI rehabilitation services at the VA. The inpatient and outpatient rehabilitation medicine service at the VA and the Spinal Cord Injury Unit provide support for families dealing with rehabilitation issues. The VA outpatient psychiatry service provides some support for caregivers and spouses of veterans receiving ambulatory services.

The **Virginia Commonwealth University (VCU) School of Medicine** offered that five of its PM&R faculty members are working with the associate dean of students to update the first- and second-year student curriculum to include military and veteran-specific TBI and psychological health education modules, which will begin in September 2012. Additionally, two of its PM&R faculty members serve as the national VA program office directors for PM&R/Polytrauma and Amputation Care.

Q3b: Please briefly describe the educational activities in these areas at your institution for students, residents, or physicians that are related to treating family members when they are the patient with illnesses related to the stress of being a military family?

The majority of responses to this question suggest little formal activity in this area. The institutions that described more robust content tended to be those with a contingent of students who had residencies in VA medical centers and military hospitals. Included among the examples of activities in this area are the following:

Harvard reported that the Boston VA's Caregiver program provides education to students, residents, and physicians on caregiver stress, need for respite care, and accessing mental health care for themselves as needed in addition to guidance around how to meet the needs, both physical and mental health, of the veteran.

JHU reported a long-standing commitment to, and partnership with, the Military Health System. JHU provides comprehensive preventive and clinical care to more than 36,000 military retirees and active-duty family members through a Department of Defense contract that has evolved over the past 30 years. The Johns Hopkins U.S. Family Health Plan, which administers the TRICARE Prime benefit in Maryland, the District of Columbia, and parts of adjoining states, routinely achieves exceptionally high member-satisfaction ratings.

The plan's health care benefits are largely provided by the 36 regional health care locations of Johns Hopkins Community Physicians. Maintaining this exceedingly high level of quality requires a commitment to military members and their families that extends well beyond routine wellness to providing specialty and hospital care at the time of greatest need. More important, regular exposure to the needs of military members and their families provides JHU clinicians, residents, and students with a unique perspective on this important patient population.

JHU clinicians and faculty have been heavily invested in educational research and community activities focused on the unique stress of being affiliated with the military. In particular, several JHU studies have looked at the longitudinal effects of deployment on military families. The Military Child Initiative was one such study under the Bloomberg School of Public Health and the Center on School, Family, and Community Partnerships. Among the many goals of the initiative was one to identify effective programs that improve the social, emotional, academic, and health outcomes for children in military environments. This is particularly important since there are nearly 1.9 million children of military parents with more than 225,000 of those parents actively deployed.

Regarding community engagement, Johns Hopkins Medicine became a signatory partner in 2011 of the Joining Forces Military Spouse Employment Partnership (MSEP) to increase employment opportunities for military spouses. It is hoped that the stress associated with frequent moves and deployments in the military might be lessened by this partnership, particularly since JHU is Maryland's largest employer. Dissemination of information regarding these and related opportunities for military personnel and their families was a core component of the MSEP pledge from the School of Medicine.

KU Medical Center reported that its graduate medical education program currently provides psychological support for military personnel and their families while residents are doing rotations at VA facilities. Continuing medical education is provided in partnership with the American Academy of Family Physicians. The school produces and distributes a continuing education podcast on care of returning veterans. It focuses on TBI, blast injury syndromes, PTSD, suicide risk, and reintegration of returning veterans and families. The school also fields an online resident-training curriculum on treating military families. For the past three years, the KU Medical Center's Center for Child Health and Development has traveled to the Army's Fort Leavenworth facility to do outreach clinics to help children of military personnel get diagnostic evaluations for stress and other psychological problems.

The **David Geffen School of Medicine at UCLA** helped launch the National Intrepid Center of Excellence and has provided Blue Ribbon Symposia for the Pentagon.

The **Medical College of Georgia at Georgia Health Sciences University** reported that its students have the opportunity to rotate on clerkships and electives at the VAMC, the Dwight D. Eisenhower Army Medical Center, Fort Benning, and Fort Stewart. During these clinical experiences, students participate in treating family members when they are patients with illnesses related to the stress of being a military family.

Collaboration with Other Organizations

Q4a: Please briefly describe the ways in which your institution works with the Veterans Affairs the Department of Defense (DOD), and the Military Health Service.

The majority of responses referenced partnerships between medical schools and their affiliated VAMCs involving jointly sponsored residency (e.g., in medicine, surgery, neurology, psychiatry, PM&R, etc.) and clerkship training programs; collaborative research; and patient care enabled through joint faculty appointments (part and full time), and contractual care. Respondents cited the Dean's Committee as a point of interaction between their schools and affiliated VAs. A more limited set of responses referenced collaborations between health system partners (including medicine, nursing, pharmacy, physical therapy, and public health) and their affiliated VA and DOD facilities; DOD-supported research; faculty practice plans serving as TRICARE/CHAMPUS providers; and CME-supported activities.

A few respondents described programs established by their schools and/or in partnership with their VA/DOD affiliates. These included Operation Mend, UCLA (<http://operationmend.ucla.edu>), and C-STARS, or Center for Sustainment of Trauma and Readiness Skills (<http://tinyurl.com/6sa7lbv>), which includes St. Louis University School of Medicine, University of Cincinnati College of Medicine, University of Maryland School of Medicine, and JHU.

Descriptions and examples of other cited activities include the following:

Southern Illinois University School of Medicine (SIU) reported that its office of CME has begun collaborative efforts with the VAMC in Marion, Ill., to provide CME activities in the Southern Illinois region. SIU is a joint sponsor of three regularly scheduled series at the Marion VA, including grand rounds, cancer case review, and a tumor board. Plans for fiscal year 2013 are to increase the number of collaborative activities in the region.

The **University of Chicago Pritzker School of Medicine** reported that it receives strong support for its research programs from the Department of Defense. The research programs have been sponsored by DOD and NASA. The funds are used in support of grants programs in hematology-oncology (particularly cancers resulting from radiation exposure), bioterrorism, and sleep medicine. During the past five years, faculty at Chicago-Pritzker received approximately \$30 million in grant support for these efforts.

Louisiana State University Health Sciences Center School of Medicine in New Orleans (LSU) reported that 9 of its 54 residency and fellowship programs have rotations with the VA. The department of psychiatry has educational and training programs that are given at the nearby Belle Chase Naval Air Station and various educational institutions that serve the military. It also has programs with two Wounded Warrior programs, a program for returning veterans, and other

programs with the military/DOD. All include evidence-based practices and cultural competency training.

JHU reported that several entities within its organization work with the Military Health System of the Department of Defense and with the Department of Veterans Affairs. The JHU Applied Physics Laboratory (APL) serves as a trusted agent for the U.S. government under its status as a university affiliated research center (UARC) and contracts primarily with the Department of Defense. APL provides research and development in areas of critical national challenges, which include health care and biomedical research. Specifically, it is involved in numerous advanced health information technology, neuroscience, and advanced prosthetics initiatives on behalf of the military to address critical needs in these areas.

JHU also reported that in addition to the APL/DOD relationship, it frequently hosts meetings with senior leadership in the military. Most recently, JHU hosted the second annual Army Medical Department Clinical Champion Conference, where senior leaders from JHU and the five global regions of Army medicine came together to address issues of clinical best practices, patient safety, and personalized patient-focused care. The conference resulted in several follow-on initiatives, including a patient-centered medical home summit between Johns Hopkins Community Physicians and the Army, Navy, and Air Force medical home leadership in January 2012.

In addition to institutional involvement, numerous relationships exist at the faculty level between JHU and the DOD/VA. These include direct faculty appointments and exchange programs between numerous departments, including neuro-critical care and plastic and reconstructive surgery. Additionally, JHU participates actively in the Intergovernmental Personnel Act (IPA) mobility program with the Department of Defense. The IPA program is intended to facilitate cooperation with the federal government through the temporary assignment of skilled personnel to assist in the transfer and use of new technologies and approaches to solving governmental problems.

Duke reported that it enjoys a close working relationship with the Durham VA Medical Center, a regional Tier 1A tertiary referral facility. This relationship includes training rotations for medical students, physician assistant students, and GME trainees in residency and fellowship programs. Most Durham VA staff physicians hold Duke faculty appointments. The VA's Mid-Atlantic MIRECC is headquartered at the Durham VA. This MIRECC focuses exclusively on deployment mental health and has been active and effective in identifying, developing, and disseminating best practices in support of service members, veterans, and their families. Many Duke faculty members receive VA and DOD funding for their research in PTSD, TBI, or substance use disorders.

The University of Toledo, College of Medicine, reported that its psychiatry department is currently conducting a study on risk and resilience factors related to PTSD and other post-deployment psychopathologies. The study is being jointly conducted with Case Western Reserve University School of Medicine. The school is also collaborating with Columbia University College of Physicians and Surgeons and the University of Michigan. The main project is an epidemiologic, longitudinal study that consists of annual telephone surveys and annual in-depth, in-person clinical interviews of a subsample of the larger phone group. The program is in its fourth year.

The first year's telephone sample consisted of 2,616 soldiers. They were asked a wide range of demographic questions and questions that explored deployment and trauma experiences, coping

skills, childhood trauma, symptoms of mental disorders—including substance abuse, reasons people join the services, use of mental health services, spirituality, etc. The school's in-person study was described as unique because, where most studies use only paper-and-pencil-administered questionnaires, it sent clinicians to the soldiers' homes or to neutral settings, such as public libraries, in order to interview them and be able to ask more in-depth questions.

In collaboration with five other sites, University Hospital Case Medical Center, Columbia University, University of Michigan/Ann Arbor VA, Abt SRBI, Inc., and Michigan State University, the University of Toledo's second project is a genetic study that also looks at risk and resilience. In May 2010, the school obtained Institutional Review Board permission from all six sites and began to collect DNA from saliva samples. To date, DNA has been collected from more than 940 soldiers. The school obtained funds to collect and store DNA and is working to secure funding to analyze the genetic material. The University of Toledo has just started a third project, which involves neuro-imaging, or using MRI studies to look at soldiers' brains to note any significant differences in brain structure or function specifically in those who suffer PTSD after deployment. Researchers have presented their findings at several national conferences and have had three papers accepted; at least 15 other papers are in various stages of review.

The **University of Pittsburgh** reported extensive collaborations with the VA and DOD. The nearby VAMC is one of the key training sites for its students and residents, who are engaged in experiences with inpatients and outpatients. There is extensive research collaboration on a broad range of fields, and this continues to grow. The university is heavily engaged in research related to military medicine, with a research portfolio in the tens of millions of dollars in recent years. Research areas include work in regenerative medicine, led by the university's McGowan Institute for Regenerative Medicine.

The university is working with the Pittsburgh Tissue Engineering Initiative (PTEI), which is a leader in the field of regenerative medicine. Its success in developing and managing innovative programs resulted in PTEI leading the funding efforts for the Advanced Regenerative Medicine program. PTEI also played an integral role in the establishment of the Armed Forces Institute of Regenerative Medicine for the U.S. Department of Defense. The program's goal is to develop advanced therapies for trauma and casualty treatment. Pittsburgh is one of the two lead universities of the Armed Forces Institute of Regenerative Medicine (AFIRM), Wake Forest-Pittsburgh Consortium. The DOD established the AFIRM in 2008 to develop new products and therapies to treat severely injured U.S. service members: <http://www.afirmwakepitt.org/home.htm>.

In the area of education, the university collaborates with the VA to develop standardized patient (SP) instructional cases on a range of topics related to the care of active military personnel and veterans, including cases on military sexual trauma, urinary incontinence, sexual dysfunction, and sexually transmitted diseases, with communications skills as an overarching theme. It provides SP services to deliver instruction to VA employees in Pittsburgh and beyond. These cases are being prepared for submission for peer review and publication.

The **Florida State University College of Medicine** reported that its new Center for Brain Repair conducts research on TBI in addition to the study of mental health issues that include those brought on by PTSD and military stress. As part of the Military Suicide Research Consortium, the university holds an \$8.5 million grant from the Department of Defense. These research activities also provide opportunities for medical students to participate.

C-STARS (Center for the Sustainment of Trauma and Readiness Skills) – Shock Trauma Center at the University of Maryland is host to the largest C-STARS program in the country, providing real-time training in trauma and critical care for U.S. Air Force physicians, nurses, OR technicians, Special Operations medics and chaplains prior to their deployment to the Middle East. Relationships extend far beyond the classroom to include telemedicine consultations with military personnel in field hospitals in Iraq and Afghanistan and treatment of wounded soldiers upon their return to the United States.

STAR-ORC (Shock, Trauma, and Anesthesiology Research Organized Research Center) – The Shock, Trauma and Anesthesiology Research organized research center (STAR-ORC), with funding from the U.S. Army, is investigating mild traumatic brain injury and long-term patient outcomes. Follow-up tests are administered and analyzed to determine which, if any, baseline measures predict those with persistent physical, cognitive and behavioral problems. Such measures, if identified, may be useful to the Army in field settings where decisions related to post-injury deployment must be made.

Q4b: Does your institution have plans to enhance work with Veterans Affairs, the DOD, or another organization on initiatives related to Joining Forces?

About 80 percent of institutions reported plans to enhance their work with the Veteran’s Affairs, the Department of Defense, or another organization on initiatives related to Joining Forces. The majority of responses cited increased engagement with respect to education (including curriculum enhancement), research, and clinical programs. Specific examples included the following:

Florida State University reported that it is embarking on a Veterans Center initiative with the goal of becoming the most veteran-friendly campus in the United States. The College of Medicine is a key partner in the initiative. The center will seek to assist veterans in the transition from military to campus life and from campus life to civilian employment. The center will provide academic, spiritual, mental, physical, and emotional support toward graduation in addition to assessment and referral for mental/physical counseling support services. Veteran-focused research will involve TBI research being conducted by College of Medicine faculty.

LSU reported that the school has taken steps to prepare for the new dual VA and LSU Health Sciences downtown campus. Cooperative discussions are under way regarding programs that will serve the military VA population. Included are additional appointments of LSU faculty to the VA staff and a contract for the VA Emergency Department with the LSUHSC Emergency Department faculty group.

JHU reported that it established the Johns Hopkins Military and Veterans Health Institute (MVHI) in 2011. MVHI serves as a “front door” to facilitate access to the JHU enterprise in research, education, and clinical care. Because uniformed service members and veterans have specialized needs, the MVHI represents a strategic commitment to assure that the JHU research-education clinical care model is responsive to this important patient population. Today the MVHI includes representation from the JHU Office of the Provost, JHU School of Medicine, Whiting School of Engineering, Bloomberg School of Public Health, the Johns Hopkins Applied Physics Laboratory, and the Johns Hopkins Health System. Representatives from these organizations have established the MVHI to enhance the degree of synergy among their long-standing individual partnerships with the DOD and the VA. Through the relationships noted above, the Military and Veteran Health Institute is fully able to leverage the

clinical, research, and educational assets at JHU to better understand and solve clinical, research, and educational challenges faced by the DOD and the VA.

The **University of Michigan** reported that it is considering the development of standardized patient encounters/exams surrounding the issues of PTSD, depression, and possibly traumatic brain injury. In order to do this, the university plans to engage in collaborative efforts involving its psychiatry clerkship, GME office, VA patients, and faculty. The Ann Arbor VA is also fortunate to have psychiatry faculty with dedicated time in the realm of medical education. The school hopes to use this expertise to enhance direct didactic training of internal medicine residents in the areas of PTSD, depression, and substance abuse. The Ann Arbor VA is continuing to expand its patient-centered medical home. Within this model has been a robust integration of primary care and mental health services. Over the coming years, the school plans to have internal medicine residents spend direct training time with staff and faculty of the integrated mental health clinic to further understand the diagnosis, treatment, and chronic care model needed for patients with PTSD and depression.

Additionally, the University of Michigan Internal Medicine Residency Program is seeking to develop a primary care track within its Categorical Program. If funding is available internally, the residents within this track will have dedicated time for experiential and didactic learning from psychiatry faculty for military personnel in the arenas of PTSD, depression, and possibly TBI.

The **Ohio State University College of Medicine** reported that it has both a statewide Academic Leadership Council with the VA and a local Affiliation Partnership Council. The university has discussed the Joining Forces initiative with the Affiliation Partnership Council and is pursuing ways to work together to enhance the exposure of students and residents to the VA and to veterans.

The **University of Pittsburgh** reported that it is in the process of developing enhanced curriculum content on military medicine topics. The broad agenda includes educational activities that would occur when trainees are at the VA and other instruction that may occur outside the VA setting. One specific example is to develop instruction on incorporating a focused military medicine history into the medical student curriculum. This curriculum development effort is already under way. A valuable source of data that is informing this process is a needs assessment survey that was conducted in February 2012. This survey of third- and fourth-year medical students has shed light on specific needs and on students' receptiveness to learning about these topics. The results of this survey have been submitted for possible presentation at the AAMC Annual Meeting this fall.

Texas Tech University Health Sciences Center (TTUHSC) reported that it is working with the VA to build a joint campus. The plans include building an approximately 80,000-square-foot VA clinic on the Lubbock campus, which will enhance the relationship. On its Amarillo campus, the university intends to increase the CME relationship between the simulation center and the Amarillo VA. It is also exploring opportunities for relationships with surrounding armed forces bases and TTUHSC at its Amarillo simulation center.

The **University of North Carolina at Chapel Hill School of Medicine** reported that its first objective is to build on the ties that have been developed in the state with the military at Fort Bragg, Camp Lejeune, and others. Specifically, the school plans to focus on collaborative educational programs to ensure that students and trainees are familiar with military culture, needs, and expectations—particularly the challenges facing veterans with PTSD and TBI and the unique needs of military families.

The Warren Alpert Medical School of Brown University reported that clinical work with the DOD will primarily occur through the Providence VAMC. Research involving the newly funded Center for Neurorestoration and Neurotechnology at the Providence VAMC may provide an additional framework for more direct collaboration between the university and the DOD.

Identified Needs

Q5a: iCollaborative is an AAMC repository for sharing educational activities and programs that address caring for military personnel, their families, and veterans. Are you aware of this resource?

Q5b: Do you plan to submit programs from your medical school to iCollaborative?

Q5c: Do you plan to disseminate information contained in iCollaborative to your students, residents, and faculty?

Q5d: Are there ways that we can improve iCollaborative to make it more useful to you and your students, residents, faculty, etc.?

About half of the respondents reported that they were already aware of the iCollaborative resource and 40 percent indicated that they plan to submit materials. About 60 percent reported that they plan to disseminate information contained in iCollaborative to students, residents, and faculty. Access to best practices and resources (including online content) were the most frequently cited needs. Other needs included:

- Better understanding of military culture and family life
- Funding for new programs
- Educational materials that can be used for distance learning
- A better set of video lectures on military competency.

Included among the suggestions for making iCollaborative more useful were the following:

- Send e-mail when it is updated with new information and the type of content.
- Highlight wonderful programs that can be easily disseminated
- Develop a newsletter (electronic) “advertising” new additions to the material on iCollaborative
- Organize the entries by subject
- Design curricular-specific sections with content on trauma-informed care, not only for students, residents, and physicians who treat women veterans, but also for those who are practicing in the community.

Medical Schools' Future Plans for Addressing the Joining Forces Commitment

Q6: What are your medical school's future plans for addressing the Joining Forces commitment? Please describe planned new educational programs and specialized clinical services for military personnel, veterans, and their families.

In answer to this question, 80 percent of respondents reported that they plan enhanced collaboration with their affiliated VA to build on shared strengths. Included among specific responses to the question were the following:

At least 20 schools reported that they are conducting needs assessments and investigating ways to incorporate Joining Forces-related topic areas into the UME curriculum as part of their current curricular reform process.

The George Washington University School of Medicine and Health Sciences reported that it is initiating a special military medicine scholarly concentration program for students interested in military medicine research, education, and policy. This is being developed with the assistance of its active-duty and retired corps of military physician graduates.

KU Medical Center reported that it is planning in the spring of 2012 to launch an interactive Joining Forces Web site, which will serve as a resource to students, residents, physicians, military personnel, and the general public on the health issues affecting veterans. It also plans to screen the four-part Joining Forces video curriculum for its students, physicians, and researchers later this year and hopes to post the curriculum on its Joining Forces Web site. The university also hopes to develop a program to reach out to returning veterans who are interested in a health care career—and let them know what resources are available to help them achieve that goal.

The **Tufts University School of Medicine** reported that it plans to enhance its collaboration with the Maine VA system by offering elective rotations at the new VA facility (for Maine students as well as Boston-based students). Tufts will use teaching expertise from the VA to give lectures and seminars on TBI and PTSD as it relates to military service.

Michigan State University College of Human Medicine reported that it is revising its curriculum and intends to incorporate JF initiative activities into the new curriculum. It plans to review materials, particularly from the iCollaborative, and weave them into this new curriculum where they are most relevant and throughout the medical education continuum (i.e., UME, GME, and CME).

The **University of North Dakota School of Medicine and Health Sciences** reported that it is developing a military competency course, bringing in speakers who will offer a military perspective on PTSD and TBI, issues that face North Dakota's National Guard specifically, and ideas of resources available for veterans.

The **Ponce School of Medicine and Health Sciences** reported that it created a multidisciplinary working group to create a catalog of all offerings and projected programs as well as an interagency group to work directly with DOD, VA, and the National Guard.

Q7: What additional resources would assist your organization to better meet the needs of military members and their families?

The majority of responses cited access to best practices and resources, including online content; mechanisms to better understand military culture and family life; funding for new programs; educational materials that can be used for distance learning; and video lectures on military competency. Specific comments included the following:

Best Practices: “Access to best practices at other medical schools. ... Good resource materials. ... A primer on military life and culture is an example of the type of material that is valuable to us. We would benefit from a recommended curriculum to cover the relevant content for addressing the clinical and psychological needs of our military personnel, veterans, and their families. ... Online content that would align competency expectations across institutions. ... A VA tool kit would be helpful. It should include info about veterans as a special population and some of the health concerns related to them specifically. Also, some guidance in management of some of the common health problems for veterans and resources for them. ... Given how packed a medical school curriculum is, we would appreciate availability of educational materials that can be used for distance learning. Students have ‘down time’ that could be used to participate in specific training in military life in general, family stress, combat circumstances, specific injuries with a focus on TBI and PTSD. The use of computer cases and simulations would permit this material to be incorporated into the curriculum without sacrificing any other areas. ... Tool kits and model curricula. ... Also, guidance in the management of the common health problems for veterans and resources for them.”

Cultural competence: “We need more information about the culture of the military. It is different and we need to know more about how families work within that environment, their expectations, and how we can better support their needs when [they are] returning to society or leaving that structured environment. ... The main deficit is an understanding [of] military culture and family life. ... Better communication about what needs military members and their families have, and more outreach to them on the resources we have available.”

Funding: “Efforts to develop new programs, whether educational, clinical, or research, always come at a cost. Funding to support development and pilot initiatives would greatly facilitate and accelerate any efforts in these areas. Students could also benefit from funds-supported training initiatives. For example, if funds were available to support travel and living expenses, students could be more readily encouraged to select immersive clinical rotations at military medical facilities away from our medical school. It could be highly enlightening for a senior student to have intensive clinical contact in those types of settings. ... A source of funding for new programs proposed by [a] matrix of organizations for research, care, and support of military families would allow us to better leverage our linked institutions.”

Q8: Are there specific actions that you think the AAMC could take to help your organization better meet the needs of military members and their families?

Specific actions that the AAMC could take to help support medical schools to better meet the needs of military members and their families seem to fall into a small number of categories:

- (1) Continue to build/support iCollaborative to facilitate sharing of materials.
- (2) Identify additional materials.
- (3) Provide grant support and/or funding sources to develop materials/programs.
- (4) Create an annual award related to a commitment to the goals of the initiative.
- (5) Take steps to help schools better understand the needs of military personnel and their families.
- (6) Organize a national meeting, and/or incorporate issues into an identifiable track at the AAMC Annual Meeting.

Conclusions/Recommendations

Regarding the provision of educational activities related to cultural competence and the identification and treatment of PTSD and TBI for military service members, veterans, and their families:

- (1) Many schools provide training at the undergraduate and graduate medical level. Even then, there appear to be significant opportunities to enhance training. Included among current factors that are a barrier to achieving this is the identification of best practices.
- (2) The responses related to CME-level training suggest the need for a commitment of new resources or refocused efforts to meet the needs of military personnel, veterans, and their families who are being treated outside VA medical centers.
- (3) The responses to questions about steps that schools have taken to support educational activities related to helping family members understand and meet the needs of a relative in the military or a veteran suggest the need for a commitment of new resources and/or refocused efforts at both the UME and GME levels.
- (4) The responses to questions related to steps that schools have taken to provide educational activities for helping students, residents, or physicians treat family members who suffer with illnesses related to the stress of being part of a military family suggest the need for a commitment of new resources and/or refocused efforts.

The AAMC is planning to take several steps to address the needs described above. We plan to initiate a process to work with constituents, the VA, and the DOD to identify a limited set of best practices that will focus on not only identifying and treating PTSD and TBI related to its occurrence in military personnel and veterans, but also working with family members dealing with these tragic illnesses. Included among plans to achieve these steps are enhancements to iCollaborative.

In addition, plans are under way to hold sessions at the 2012 AAMC Annual Meeting in collaboration with partners from the Department of Veterans Affairs and the DOD. Association staff are also planning a week-long program, called Joining Forces Wellness Week (JFWW), that will commence around Veterans Day. The program will offer resources and activities for medical schools to participate in and sponsor for their learners.