ADDRESSING THE INVISIBLE WOUNDS OF WAR

Creating a Collaborative Tomorrow

By Colonel Matthew Amidon, USMCR, and Christopher Lu

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George W. Bush Institute

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Nostalgia - Soldier's Heart - Irritable heart - Shell shock
War neuroses - Combat stress reaction - Battle fatigue - PTSD - TBI

From early military history to the present time, the use of terms such as "shell shock" and "battle fatigue" point to the tremendous toll that combat takes on the physical and mental well-being of military personnel and their families. Choosing to be a member of the armed services, and accepting the attendant risk to one's life as a potential consequence of deployment, is a profound experience that can change the individual in many ways—both positive and negative. The deliberate taking of human life and the other horrors of war all imprint an image on the psyche and human body that extends beyond the time period of the immediate experience. These deleterious effects can accumulate and become persistent; for some, it impairs quality of life, productivity, and stability following the transition home after the Warriors' military service.

Since 2012, *The Military Service Initiative (MSI)* of the *Bush Institute* has honored the service and sacrifice of all post-9/11 veterans—approximately 4 million to date—by fostering their successful transition and reintegration from military to civilian life, along with maximizing their quality of life and leadership potential.[1] Our work is based on the belief that we have a responsibility as a nation to honor our Warriors and their families, and to empower them to continue to serve as national assets. With the support of their families, communities, fellow citizens, and non-profit organizations, our post-service Warriors can continue to lead—and serve—in new and meaningful ways.

Addressing the invisible wounds of war is a core issue for transitioning veterans, their families, and communities. These wounds comprise both physical trauma (e.g., Traumatic Brain Injury [TBI]) and psychological trauma (e.g., Post Traumatic Stress [PTS]), and many veterans experience both forms in tandem. However, for most, this is not a "life sentence". Effective treatments are available. On the other hand, studies have shown that less than half of all military personnel and veterans who experience such trauma—especially in combination—actually receive any care for these invisible wounds.

To address this gap, the Bush Institute is working to connect veterans with effective services for treating TBI, PTS, and other psychological health conditions, as well as to reduce the barriers they pose to a transition to civilian life. These veteran-oriented services include employment, education, and family-focused support. Currently, there are a wide variety of experts in the field doing tremendous work to improve veterans' quality of life; these include researchers who are advancing understanding of invisible wounds, and healthcare practitioners who deliver high-quality, evidence-based treatments, along with a broad array of non-traditional providers. Despite their important work, our own research—conducted through interviews and formal surveys—has shown that no single organization has demonstrated the leadership needed to connect veterans with services across their spectrum of needs, inclusive of the treatment of invisible wounds.

The Bush Institute seeks to remedy this gap. In support of this effort, our wellness objectives are focused on:

- Increasing the number of veterans in effective care;
- Improving the delivery of high quality care;
- Advocating for research that leads to more effective diagnostics and therapeutics;
- Enhancing accurate public awareness, understanding, and acceptance of invisible wounds and their impacts.

To accomplish these four objectives, we propose leveraging existing selected *Centers of Excellence* in care delivery in order to accomplish the following: fostering the sharing of best practices and appropriate scaling of services; partnering with effective peer-to-peer networks as care-seeking influencers (and key connectors) for veterans; and using technology to extend capacity for screening, assessment, treatment, and self-care.

[1] Meyer, Thomas. 2013. Serving Those Who Served. Washington, DC: The Philanthropy Roundtable.

What is Post Traumatic Stress (PTS)?

- Anxiety and emotional response to either sudden, intense and unexpected events (combat engagements, car crashes) and/or after long periods of persistent anxiety-producing situations (combat, domestic abuse)
- Combat Stress is a common and natural response but its effects, if they remain, may become problematic and cause dysfunction
- Post-Traumatic Stress Disorder is the diagnostic term assigned when the symptoms one experiences meet specific criteria based upon their longevity and/or magnitude
- At any given time, as many as 10-20% of the US service members (270,000 – 540,000 individuals) who deployed to Iraq and Afghanistan experience symptoms consistent with a diagnosis of PTSD

What is Traumatic Brain Injury (TBI)?

- A physiological injury to the brain due to external forces which can greatly affect brain function
- It may be transient with full recovery or there may be long lasting, even permanent injury to the brain
- TBI is graded as mild (concussion), moderate or severe. Even mild TBI can lead to significant impairment
- TBI is a physical injury, however, some of its enduring symptoms and impacts can be similar to symptoms of PTS and other mental and psychological health concerns
- More than 339,000 US service members have been diagnosed with TBI since 2001

Why We Have Chosen to Drop the "D"

Post-traumatic stress disorder (PTSD) is an injury that can result from the experience of war. It is treatable and can be effectively managed so that it does not serve as a barrier to a meaningful quality of life - to include employment, education and personal relationships. While the medical profession has defined a set of clinical criteria and terminology for diagnosis and eligibility to care for this injury, we at the Bush Institute dropped the "D" (or "disorder") from our lexicon because we have found the term "disorder" can serve as a barrier to warrior willingness to seek care. We believe the "disorder" may also inappropriately stigmatize their difficulties in readjusting to civilian life with employers and educators. With effective treatment, our warriors will recover from their injuries, and the nation will continue to benefit from their service and leadership. We maintain that terminology should not serve as a barrier to seeking the care necessary for that to happen.

Why is This Issue Important?

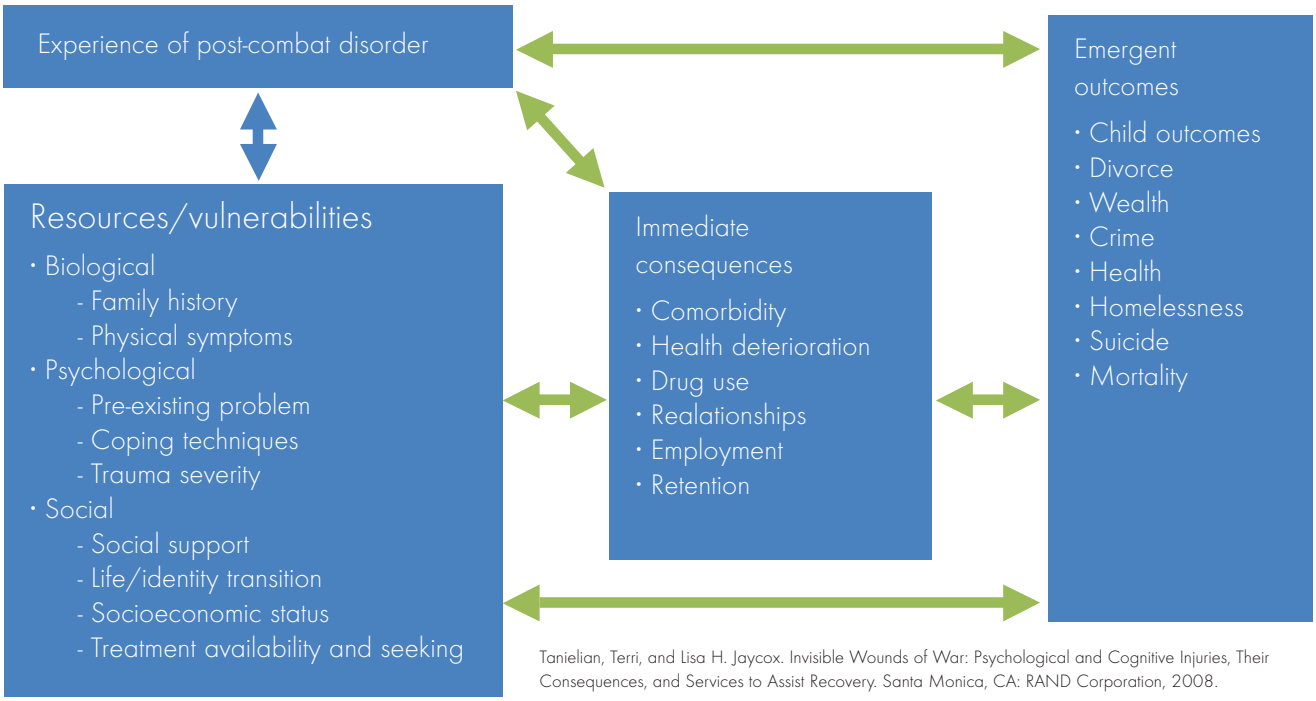
While most servicemen and women return home without any injuries–and/or cope and readjust very successfully–the number of post-9/11 veterans experiencing invisible wounds has been high compared to historical rates. Studies have estimated that, at any one time, approximately 10-20 percent of the service members who had deployed in the post-9/11 conflicts have symptoms commensurate with a diagnosis of PTSD[2]; an unknown additional percentage may experience some other adverse mental health condition (e.g., depression or anxiety disorder). Such psychological disorders may co-exist in some veterans with known cognitive impairment–most notably mild TBI.[3]

As depicted in the Figure below, whether or not an individual develops a post-deployment health condition may depend on a series of factors, including their experience in the theater of war. Also as noted in this Figure, warriors who experience such invisible wounds may experience other immediate and/or long-term consequences related to their injuries, and particularly if left untreated; for some, the manifestations may not be seen for many years. Experiencing these wounds can also exacerbate existent PTSD and TBI symptoms, thus making it imperative to intervene early to prevent a worsening of symptoms and their untoward consequences.

Every veteran should have the right to a long and meaningful life. For those who suffer from invisible wounds in whatever form, these injuries can pose barriers to their overall quality of life. However, with a true recognition and approach to the invisible wound consequences, veterans can access and receive high quality treatment and sustain hope for a better quality of life. In this way, the system of care can work collaboratively to facilitate a better outcome for our warriors.

[2] This paper focuses on the use of PTS as a term, however certain references and citations acknowledge that official clinical diagnosis utilize the threshold of PTSD, meaning that for those suffering for a certain duration of time, at a certain magnitude, may have met the clinical threshold for a "disorder" Therefore the reader will see PTSD periodically throughout where required.

[3] Institute of Medicine of the National Academies. Treatment for Posttraumatic Stress Disorder in Military and Veteran Populations: Final Assessment. Washington, D.C.: The National Academies Press, 2014.



Tanielian, Terri, and Lisa H. Jaycox. Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery. Santa Monica, CA: RAND Corporation, 2008.

Consequences of Invisible Wounds

Studies of other traumatized populations (including previous veterans) have shown that untreated–or inadequately treated–invisible wounds can lead to longer-term negative consequences and lower quality of life (e.g., lost employment, homelessness, domestic violence, family dissolution, substance abuse, and suicide). While it is possible to estimate the direct economic costs associated with these consequences, the human impact in terms of future health risk and potential emotional suffering is incalculable. Moreover, the consequences can ripple outward from the veteran to his or her family, friends, colleagues, community, and our society as a whole.

Consequences for veterans

In the near-term–if untreated or undertreated–invisible wounds place veterans at elevated risk of certain health disorders, mental health problems, and substance abuse. The functional impairment associated with these can also disrupt marriages and family life, diminish productivity at work, and significantly complicate the already challenging task of reintegrating into civilian life. Over the longer term–given that post-9/11 veterans are a relatively young cohort–the harm from untreated invisible wounds is potentially long-lasting not only for the veterans themselves, but for their loved ones. While conditions that fall into the category of invisible wounds can be effectively treated so that permanent disability does not ensue, too few veterans with such invisible wounds are receiving care focused on these conditions.

Consequences for families

Family relationships can suffer tremendously when a spouse or parent is coping with an invisible wound. The mental health disorder experienced by a service member or veteran can negatively affect the entire family. Indeed, the cognitive and emotional deficits associated with PTSD, depression, and TBI are recognized as inhibitory for maintaining intimacy in a relationship. Individuals must be able to experience and express emotional feelings; understand and provide for the needs of loved one(s); act empathetically in response to the needs of another human being, and act in a manner consistent with understanding those needs.

Psychological disorders can interfere with these interpersonal behaviors. Therefore, it is not surprising that major depression (and depressive symptoms) are strongly linked to lower levels of marital satisfaction, as well as higher rates of marital distress and divorce.[4] In particular, PTSD has been linked to difficulty in maintaining an intimate relationship.[5] Furthermore, PTSD, depression, and TBI have the potential to create a substantial caregiving burden on spouses or partners.[6] Notably, approximately 42 percent of separated veterans have reported at least some difficulty getting along with a spouse or partner.[7]

[4] Terri Tanielian et al., Supporting the Mental Health Needs of Veterans in the Detroit Area. RAND Corporation, 2016.
[5] Riggs, David S., Christina A. Byrne, Frank W. Weathers, and Brett T. Litz. 1998. "The Quality of the Intimate Relationships of Male Vietnam Veterans: Problems Associated with Posttraumatic Stress Disorder." Journal of Traumatic Stress 11 (1): 87–101.
[6] Ramchand, Rajeev, Terri Tanielian, Michael P. Fisher, Christine Anne Vaughan, Thomas E. Trail, Caroline Epley, Phoenix Voorhies, Michael William Robbins, Eric Robinson, and Bonnie Ghosh-Dastidar. 2014. Hidden Heroes: America's Military Caregivers. Santa Monica, CA: RAND Corporation.
[7] Committee on the Assessment of Readjustment Needs of Military Personnel, Veterans, and Their Families. Returning Home from Iraq and Afghanistan: Assessment of Readjustment Needs of Veterans, Service Members, and Their Families. The National Academies Press, 2013.

Invisible wounds—and PTSD in particular—can damage parent-child relationships, and thereby harm children's health. Parents suffering from PTSD report less satisfaction with parenting. Meanwhile, children who have a parent with PTSD living in the household experience higher rates of conflict, lower family cohesiveness, and elevated risks of behavioral problems (including PTSD). Numerous studies have highlighted the increased need for mental healthcare for veterans' spouses and children. To the extent that service members' mental disorders negatively affect their intimate relationships/parenting practices, these disorders are likely to have long-term consequences for their offspring. For example, children of veterans with PTSD are more likely to experience academic problems and receive psychiatric treatment for their own mental health problems. Meanwhile, children of depressed parents are at greater risk for behavioral problems, psychiatric diagnoses, and academic disruptions.[8]

How Do We Care for the Invisible Wounds of War?

Multiple systems of care

Within the United States, there are three major healthcare systems through which veterans may seek and receive health care. These are the *Department of Defense's Military Health System (MHS)*, which includes TRICARE; the *Department of Veterans Affairs'* healthcare system; and access to the private healthcare system. Veterans' access to these healthcare systems depends on whether the given individual meets specific eligibility requirements. In order to seek care through the *MHS*, a veteran must be eligible for TRICARE—which acts much like an employer-sponsored health plan, and provides access to both military-owned and operated hospitals and clinics, as well as access to privately-contracted providers in the community. TRICARE covers active-duty personnel along with retirees (including those who were medically-retired).[9]

Once an individual separates from the military, that veteran typically becomes eligible for healthcare services through the *Department of Veterans Affairs (VA)*. Similar to the MHS, access to *VA* healthcare is subject to meeting eligibility requirements that are defined based upon the nature of one's military service, and prioritized based upon the documentation of a service-connected health condition (e.g., PTSD). Through the *VA* healthcare system, a veteran may seek healthcare services through *VA*-owned and operated medical centers and clinics or—if eligible—through *VA*-contracted, community-based providers.

Veterans may also choose to access care through the private healthcare system—deciding to see non-*VA* healthcare providers. If the given veteran has either TRICARE (or qualifies for *VA* community-based care), that individual's care may be eligible for reimbursement by the government. However, some veterans may elect to use their employer-sponsored health insurance for coverage, and financially-secure veterans may even see providers at their own cost. However, those without sufficient financial resources and/or insurance coverage may be dependent upon community-based providers who offer care funded by other public or non-profit means.

Currently, large numbers of U.S. veterans rely upon non-*VA* sources of health care. In 2014—out of approximately 22 million veterans in the US—just over 9 million were enrolled in the *VA* health care system. Out of those veterans so enrolled, around 6 million used *VA* healthcare during that year.[10] This demonstrates that a significant burden for the health of our nation's veterans is shouldered by these private and community providers. However, studies have shown that these non-*VA* providers may not be comprehensively trained in providing effective treatment specific to the needs of the military and veteran populations—and particularly for TBI and psychological health concerns.

As currently configured, the multiple systems of care model in US healthcare delivery is complex and can be difficult to navigate. This is especially the case for veterans, who may not understand the full range of coverage available to them. There is also a lack of healthcare coordination across systems. Shortfalls in the ability to monitor and evaluate performance and quality across systems of care is also problematic. While there have been significant investments in recent years to improve the sharing of information (and coordination of information) between the *Department of Defense (DoD)* and *VA*—as well as between these systems and the community-based providers with whom they contract—gaps still remain in ensuring veterans' access to and receipt of high quality care.

Supplementing the formal systems of healthcare delivery for veterans with invisible wounds is an enormous network of informal caregivers—many of whom are family and/or friends who devote substantial amounts of unpaid time in caring for them. Meanwhile, these caregivers—of which approximately 20 percent or 1.1 million are supporting post-9/11 veterans—may have their own health-related challenges and require care, as well.[11]

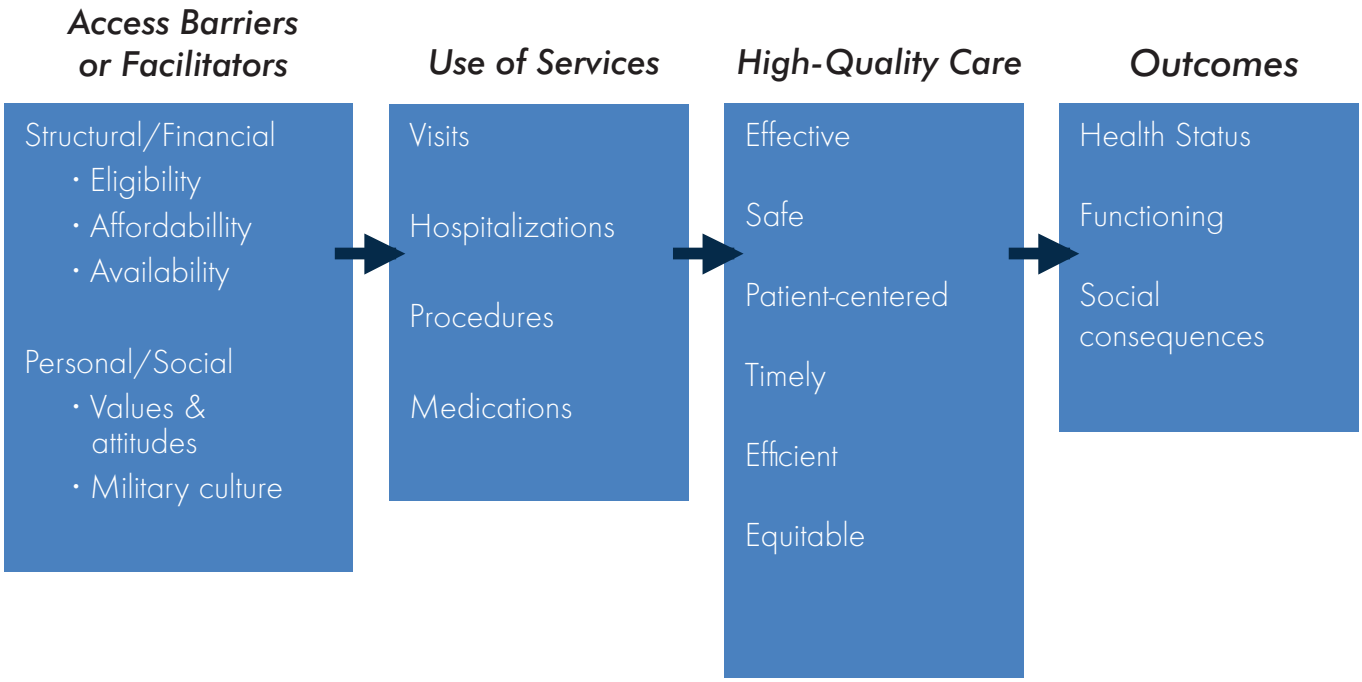
[8] Tanielian, Terri, and Lisa H. Jaycox. Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery. Santa Monica, CA: RAND Corporation, 2008.
[9] Some veterans with significant injuries may also qualify for Medicare through receipt of Social Security Disability Insurance. In these cases, Medicare would become a primary payer with TRICARE serving as the supplemental payer.
[10] Bagalman, Erin. 2014. "The Number of Veterans That Use VA Health Care Services: A Fact Sheet." R43579. Congressional Research Service.
[11] Ramchand, Rajeev, Terri Tanielian, Michael P. Fisher, Christine Anne Vaughan, Thomas E. Trail, Caroline Epley, Phoenix Voorhies, Michael William Robbins, Eric Robinson, and Bonnie Ghosh-Dastidar. 2014. Hidden Heroes: America's Military Caregivers. Santa Monica, CA: RAND Corporation.

Parity in Care

Over the past 15 years, there have been notable federal efforts to address the need for parity in how the healthcare system provides and compensates for mental health and substance abuse services as compared to medical care. The 2008 *Mental Health Parity and Addiction Equity Act*– and the National Research Action Plan of 2012–both attempt to address some of the unique features and inconsistencies of how the invisible wounds and psychological care, in general, are addressed within the US healthcare system. However, gaps in coordination and implementation remain in ensuring that afflicted veterans can access appropriate care for their needs.[12,13]

Too Few Getting Care for Invisible Wounds

Many effective treatments exist for the invisible wounds of war. Yet, studies have shown that not enough of those in need of treatment are either seeking or receiving such care. Among those who do receive care for invisible wounds, too few receive high-quality care. Not only do veterans face military-service resultant issues of TBI, PTS, and/or other psychological health conditions, but they often face them in combination–which makes comprehensive and effective treatment more challenging.[14] A common framework for understanding the links between quality of care and improved patient outcomes was established by the *Institute of Medicine (IOM)*. In that framework, the *IOM* defines high quality care as safe, effective, patient-centered, timely, efficient, and equitable. The *IOM* framework also presents how the use of healthcare services may be facilitated (or impeded) by several factors.[15] Thus, to ensure that high-quality care is rendered, it is imperative that the barriers that limit care-seeking and/or limit the delivery of high-quality care be lowered (as depicted in the Figure below).



Tanielian, Terri, and Lisa H. Jaycox. Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery. Santa Monica, CA: RAND Corporation, 2008.

[12] "The Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA)." 2010. U.S. Department of Labor Employee Benefits Security Administration.
[13] Tuma, Farris. 2014. "The National Research Action Plan (NRAP)." In. Washington, DC: Society for Prevention Research.
[14] Tanielian, Terri, and Lisa H. Jaycox. Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery. Santa Monica, CA: RAND Corporation, 2008.
[15] Institute of Medicine of the National Academies. Treatment for Posttraumatic Stress Disorder in Military and Veteran Populations: Final Assessment. Washington, D.C.: The National Academies Press, 2014.

Reducing Barriers to Care

While we endeavor toward expanding the range of evidence-based treatment options, we must also acknowledge and strive toward reducing barriers that veterans face in seeking and receiving high-quality care. These barriers include structural aspects of the care systems–as well as other organizational and/or cultural elements inherent within the population (see Figure). As MSI works toward crafting solutions, we have identified the following six specific barriers of care:

1. **Navigation.** Whether due to cognitive or behavioral challenges or system complexity, navigating the healthcare system is a significant challenge for warriors and caregivers.
2. **Eligibility and Cost.** Some warriors–and most of their family members–are ineligible for *VA* care. Warriors who choose not to use (or cannot access) federal sources of care have no other option than to seek private-sector or community-based care that they may be unable to afford.
3. **Geography.** The distribution of care providers is such that many warriors may be unable to conveniently acquire access to quality care.
4. **Quality.** Quality of care delivery, plus the cultural competence of medical and psychological providers, is essential to effective care; too often, the level is insufficient in the private and nonprofit sector.
5. **Research.** Critical gaps remain for essential diagnostics and pharmaceuticals, as well as establishing the efficacy of non-traditional care approaches.
6. **Stigma.** Concerns about the potential repercussions of seeking care–and/or about the negative perceptions of others for seeking care–can limit an individual's willingness to seek care.

Results of a recent MSI-conducted survey found that over 80 percent of the surveyed veterans believe that three factors pose significant barriers to veterans seeking care; these are embarrassment (or shame), lack of family understanding, and negative repercussions in the workplace. This same study found that when PTS-treatment was received, 69 percent of respondents reported that the treatment was effective.[16]

"Evidence-Based" Care and Contributions of the "Non-Traditional" Provider

Receiving high-quality treatment not only can promote recovery, but it can lower the burden placed on the individual, their family members, and society as whole in coping with the invisible wounds of war. Currently, there are a number of therapies designed to treat these invisible wounds. Within clinical medicine, "evidence-based" treatments are those therapies that have been shown to be effective in reducing symptoms and promoting recovery through research studies. The level of evidence for these treatments may vary depending on the maturity of the science base; however, it is generally accepted that high-quality care is that type of care widely-recognized as effective in producing the desired outcome. In contrast, care that is not effective can delay an individual's recovery, as well as have potentially negative consequences.

There are several forms of therapy at present that have been shown to be effective through research findings (e.g., prolonged exposure therapy, and trauma-focused Cognitive Behavior Therapy (CBT) for PTSD), but evidence is increasing that shows the benefits of non-traditional approaches (e.g., mindfulness and acupuncture). More studies are needed to similarly document the potential efficacy and effectiveness of other non-traditional therapeutic approaches (e.g., recreational, arts, and the role of animals), as we continue to strive toward creating personalized treatment plans for warriors that are focused on individual outcomes.

What Role Can the Bush Institute Play?

Over the past decade, there has been a proliferation of entities and efforts designed to address the invisible wounds of war. While these efforts are laudable, significant gaps remain with respect to ensuring that all those in need actually obtain care. To address these gaps at a strategic level, we have an opportunity to bring together the many disparate players who are committed to this issue, and to create a combined focus and shared mission. In order to facilitate this effort, the Bush Institute will engage its expertise, services and influence to increase collaboration, dissemination, and coordination across the diverse array of stakeholders.

A Framework for Concerted Action

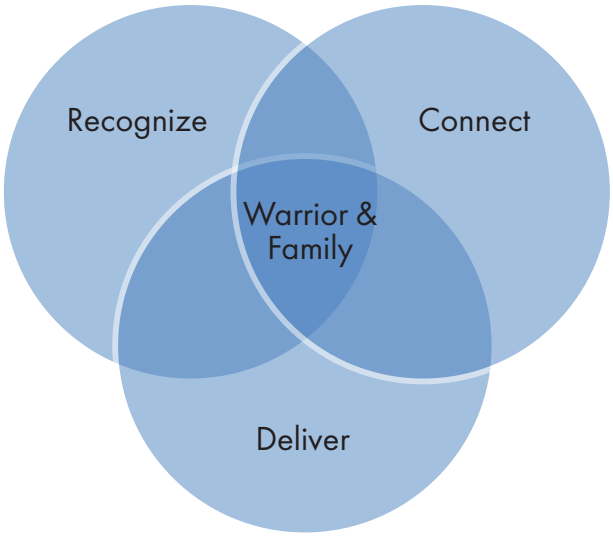
In early 2016, we outlined our three primary pillars for action: **Recognize, Connect, and Deliver**. This framework provides a foundation to develop recommendations that we believe will influence a culture where veterans will seek, receive, and stay in comprehensive, high-quality care for the duration of their treatment. These pillars are not mutually exclusive, but do provide a mechanism for organizing activities toward our specific objectives.

[16] "Confronting the Invisible Wounds of War: Barriers, Misunderstanding, and a Divide." 2016. George W. Bush Institute. http://gwbcenter.imgix.net/Resources/GWBI-invisiblewoundsperceptionssurvey.pdf.

In order to increase awareness and understanding of the invisible wounds, it is important for everyone to be able to **recognize** these wounds and what can be done about them. This problem transcends simple knowledge of the symptoms of TBI, PTS, and other psychological health conditions. Instead, it requires an understanding of how to treat those affected by these wounds with respect and empathy, and empower them to get help.

Barriers to accessing and receiving care are preventing many of our warriors from **connecting** to the treatment that they need. Many treatment options exist for the invisible wounds of war; yet, as noted, less than half of military personnel and veterans who experience them ever receive care. Veterans should make themselves aware of what treatment options are available, and families, employers, and communities should create a supportive environment that encourages those in need to seek and stay in treatment.

Increasing our understanding of invisible wounds, and expanding our capacity to address them through research, is critical. The healthcare provider community as a whole needs better diagnostic tools and methods addressing veterans' invisible wounds, as well as additional assessments of the efficacy of non-traditional care, evaluation of existing evidence-based care, and increased pharmaceutical research. Currently, the research on PTS and TBI is fragmented and competitive. An increased effort at collaboration among all research entities is necessary– including federal, state, private, and non-profit organizations. With increased information exchange, this collaborative environment could facilitate the standardization of data collection and best practices. In turn, this could lead to improved diagnostics and treatment approaches for specific psychological and neurological health conditions. All of these efforts–in concert– may enable the most efficacious **delivery** of treatment options for the individual (as shown in the following Figure).



Recognize the Need for Help	Connect to Care	Deliver High Quality Care
• Know the signs of PTS/TBI • Know that effective care exists • Decrease the stigma associated with IWW • Create supportive, empathetic environments in the communities • Accept those struggling from injuries with unconditional positive regard • Leverage existing resources	• Increase understanding of eligibility of treatment • Improve availability and accessibility of care • Develop better navigation and referral processes • Implement screening for IWW • Expand access to care and expertise by leveraging technology • Improve payment transparency	• Adopt a warrior-centric, outcomes-focused approach • Foster effective transitions between DOD, VA and private sector • Equip and train providers to treat IWW • Develop referral network to include multiple sources of treatment and care • Increase collaboration and information sharing

Recommendations for Removing Barriers, Filling Gaps, and Improving Care

In an effort to address the gaps in the current systems of care and ensure that more veterans with invisible wounds receive timely and high-quality care, outlined below are a series of recommendations that focus on five discrete (but related) objectives across the Recognize, Connect, and Deliver framework. These recommendations are:

1. Improve Connections to Care

Connecting veterans to care will require that existing barriers are removed or reduced. These barriers are varied, and include obstacles associated with care eligibility–as well as availability, accessibility, and affordability of services. Even if care opportunities are available, additional barriers may exist. Below are our recommendations for overcoming barriers across these domains:

Decreasing eligibility and affordability barriers: As previously described, in order to receive care through the *VA* or *DoD*, veterans must meet certain eligibility criteria. Veterans who are not eligible for care in these federal systems may be eligible for care in their community through state-funded community health centers; employer-sponsored health plans; and/or various non-profit providers. In the past decade, there has been a growing recognition of the need to provide care for veterans outside of the *VA*. To this end, there has been an increase in philanthropic support to create and sustain low- or no-cost community-based care, and that is specifically focused on treating PTS and/or TBI among post-9/11 veterans.

Specialized services through programs such as *Warrior Care Network* (Home Base Program, Emory Veterans Program, Road Home Program, and Operation Mend), the *Cohen Veterans Network*, and *Welcome Back Veterans Initiative* are offered to veterans with invisible wounds, regardless of their discharge status. These programs may fill a critical gap for veterans who were discharged with other than honorable status, and who are also recognized as at high risk for adverse health consequences. While these programs offer a unique opportunity to serve veterans with PTS and/or TBI as well as their families, they are reliant primarily upon philanthropic support to sustain their operations.

Improve Availability and Accessibility of Care: At present, we have too few clinical providers with appropriate training to detect, treat, and manage the invisible wounds of war. Largely successful efforts to increase the required workforce within *DoD* and the *VA* have created new challenges for ensuring a robust pipeline and distribution of providers for the entire system of care. Given these capacity constraints, the use of "telehealth" has become increasingly important to delivering care to those who are in remote locations from existing expertise and services.

Diminish Concerns about Stigma: In order to further diminish the fear of potential repercussions and consequences associated with seeking care for invisible wounds, it is important that the environments in which veterans reside and function are supportive and nonjudgmental. As veterans return to employment or educational settings, it is vital to ensure that they have access to appropriate assistance programs, counseling and/or other support programs, and referrals to care settings–and that can enable early intervention in order to reduce the potential for future adverse impacts on the veteran due to invisible wounds.

Improve Navigation and Referral Processes: Accessing appropriate care could remain a challenge, even if all of the aforementioned barriers were eliminated. This is because navigating through the multiple channels and options for care is generally a confusing process notably in conjunction with the growth from only a few program options addressing veterans' needs to the hundreds that have been created over the past decade. Thus, figuring out which types of services are most appropriate (and of high quality) can be difficult for even the most motivated veterans and their caregivers. To simplify and clarify the pathways to high quality care, awareness and access to available programs, benefits, and services for veterans and their families must be improved. This improvement is needed at all public levels (federal, state, local) and across all sectors (government, non-government, non-profit, private), along with information about the impact and/or outcomes associated with the services. This is necessary so that veterans and their families can make the most informed choices among their care options.

Several community-based approaches to creating resource directories and navigation assistance have been initiated over the past decade (e.g., *America Serves, America's Warrior Partnership, Zero8hundred*); however, these approaches and initiatives are often not linked to each other, and also usually do not incorporate an assessment of the impact or outcomes associated with the services. Therefore, efficiencies need to be enhanced through the creation of formal coalitions or alliances among these navigation platforms, and that can serve to create standards of practice and the sharing of lessons learned.

Opportunities exist to leverage the power of peers in helping veterans to navigate and find appropriate care and support. Similarly, providers within primary care settings need to be educated and empowered to aid in the detection and referral of veterans with invisible wounds to the most appropriate care setting for them–and which may even be outside of their existing system.

2. Expand provider capacity to deliver culturally competent, high-quality, integrated care

In order to ensure that veterans receive care designed to promote recovery, efforts are needed to address structural capacity within the systems of care. This includes efforts not only to address any workforce shortage and throughput/productivity limitations, but also to ensure that healthcare providers within the existing care systems have the appropriate skills and motivation to deliver high-quality, culturally-competent, and integrated care. Outlined below are several components for expanding access and improving the quality of care within the private US healthcare system:

Expand Access to Expertise by Leveraging Technology. Technology presents a powerful tool for extending capacity by linking providers to information, resources, and expertise. Technological platforms can also be utilized for screening and assessment, consultation, and actual treatment. Web-based platforms for screening, assessment, and/or self-management may also be helpful to engage individuals who are not yet ready to engage in formal treatment. Telehealth models can be employed to facilitate access to more sophisticated expertise for treatment planning and provision—particularly for individuals who are hard to reach due to geographic and/or logistical constraints. While strides have been made to deploy telehealth for the individual treatment of PTS (as well as for some cognitive therapies for TBI), further effort is needed to further develop and leverage telehealth's full potential for providing interdisciplinary and varied forms of care. To fully optimize the use of technology—and the opportunity that telehealth provides to link those in need to expertise—legal barriers due to licensure restrictions impacting telehealth care across state-lines will need to be addressed.

Equip and Train Existing and Future Healthcare Workforce. There have been many efforts over the past decade to improve the awareness of military-related PTS among the civilian mental health workforce. Whether it be via on-line webinars or in-person training classes, organizations have been promulgating training in military cultural-competence, and also sharing information about evidence-based treatments for PTS and TBI. Despite these organizational efforts, very little is known about whether attending these trainings improves the provision of high-quality care, and whether these trainings are contributing to a new pipeline of future providers. Therefore, efforts are needed to bring together those engaged in training. These efforts need to include creating minimal standards for how to equip and motivate the existing healthcare workforce so that providers will be more likely to recognize invisible wounds' signs/symptoms, and also to refer afflicted veterans to appropriate sources of treatment and care. Efforts are also needed to improve adherence to clinical practice guidelines, evidence-based approaches, and performance based care. This includes developing strategies for educating and training healthcare providers in primary care, along with acute/emergency care settings, plus the specialty care sector. Most of the efforts to date have focused on the traditional specialty care sector, without enough emphasis on ensuring a comprehensive, integrated approach across sectors of care.

Implement Screening for Invisible Wounds of War. Within the *VA* healthcare system, the implementation of standardized screenings for potential TBI—as well as exposure to traumatic events—has increased both the detection of invisible wounds and referrals to care. However, not all veterans with these injuries seek care through the *VA*; thus, an expansion of the implementation of appropriate screening and assessments into the community-based, private healthcare sector is needed. Therefore, working closely with the healthcare community is necessary to improve assessment of military/veteran affiliation, detection of invisible wounds (e.g., PTS and TBI), and facilitation of appropriate referrals for those veterans seeking private sector care. There is also an opportunity to improve primary care providers' understanding and management of TBI as a physical insult to the brain. However, this will require specific initiatives to improve the integration of neurological and other cognitive rehabilitative approaches into providers' existing treatment of TBI and concussion.

3. Improve value, comprehensiveness, and quality of care provided throughout the systems of care

Gaps in high-quality care exist throughout the systems of care as a whole. In order to improve outcomes, it is vital that these systems improve the value, comprehensiveness, and quality of care provided. These improvements begin with a person-centered, outcome-driven approach from every care delivery organization. By adopting a more comprehensive specialty care approach for PTS and TBI, organizations can deliver a better-coordinated and navigable care path, that may include evidence-based and/or non-traditional treatment plans—and also in combination.

As organizations develop their approaches to ensuring comprehensive, high-quality care, they will begin to develop best practices that lead to innovative therapies. The development and sharing of best practices will begin to improve the PTS and TBI treatment standards of care, utilizing both evidence-based medicine and non-traditional treatment methods. These standards will allow for the development and dissemination of evidence-based guidelines, and thereby encourage a stronger integration between these approaches. In turn, this kind of integration can facilitate linkages between stakeholder communities from both evidence-based and non-traditional provider entities. This will promote greater coordination, coverage, and quality across the entire spectrum of care.

An effort to foster and motivate providers within care systems to adopt a more comprehensive, integrated, and person-centered approach will require that incentives are properly-

aligned across payers and accrediting bodies, as well. Thus, engaging third-party payers, public insurers, and accrediting agencies may be vital in designing approaches to improve and reward value across the private sector.

4. Fill remaining gaps in knowledge by investing in research and evaluation

As we continue to expand our understanding of the symptoms and etiology of the invisible wounds of war, we must also continue to advocate for improving diagnostic tools and therapeutic approaches. Therefore, we must promote research to improve diagnostic tools that enhance specificity and sensitivity for detecting PTS and/or TBI. This promotion needs to include harnessing/promoting research funding streams, and facilitating greater connections within the research community.

Sustaining and expanding research to identify and test therapeutic approaches for PTS and TBI—particularly those inclusive of expanding the evidence base for non-traditional approaches—needs to be considered a priority. Thus, in an effort to build on the *National Research Action Plan*, it will be critical to craft and disseminate a strategic research agenda that supports the growth of evidence for effective non-traditional treatment approaches (e.g., the role of animals, arts, and recreation). Furthermore, as the knowledge-base is expanded, a goal of more efficient translation and implementation needs to be targeted.

The implementation of science and health service research must generally remain a priority, as efforts to close gaps in the delivery of high quality care to veterans continues. Additionally, in order to ensure continued focus on meeting the needs of veterans—and to foster a higher overall quality of life for them—we need to commit to longitudinal studies that monitor the health and well-being of post-9/11 veterans over lengthy periods of time. This can help to improve the understanding of invisible wound impact on behavior, and ensure that our nation remains oriented toward promoting warriors' successful civilian transition and reintegration.

5. Empower veterans, caregivers, and other members of society to recognize and address the invisible wounds of war

Promote accurate, empathetic understanding of the invisible wounds of war and decrease stigma. In the past decade, significant efforts have been taken to increase awareness of the invisible wounds of war. Federally-sponsored public education campaigns—such as the *DoD's Real Warrior Campaign and VA Make the Connection*—have been launched to help raise awareness about the signs/symptoms of invisible wounds, and to decrease related stigma. These public education campaigns should be synchronized to continue educating the general public about the nature of invisible wounds, along with correcting misperceptions and the reduction of stigma. Likewise, these campaigns have provided information and resources to help veterans, service providers, and family members to recognize the need for help and locate care in their community; similar efforts within the private sector in local communities have been launched. However, gaps remain in our nation's effort to empower veterans, their caregivers, and other affected persons to address veterans' invisible wounds. At the same time, little is known about how these private campaigns align with appropriate best practices and the latest clinical knowledge.

Increased efforts in empowerment are still needed. Furthering the awareness, empathy, and willingness of communities to take action will require more education, information, and motivation of individuals, organizations, and service providers. This is imperative to addressing the needs of veterans with invisible wounds of war and truly aiding them.

While public education/awareness campaigns are often used to disseminate information through multiple channels, ensuring that the information is utilized and acted upon requires that these campaigns increase a focus on advocacy and action—and initiatives that motivate engagement across key stakeholder groups are required. Furthermore, a key objective of these efforts must be to empower veterans (and their caregivers) to be able to connect to high quality care. In an effort to reach this goal, new partnerships need to be formed to enable collaborations among existing public education campaigns (across public and private sector), and to synergize/synchronize messages. These partnerships need to ensure inclusion of effective techniques that empower individuals and organizations to take action.

Campaigns in general must not only educate veterans and their loved ones about the invisible wounds, but they must include information about the benefits of seeking—and receiving—high-quality care, as well as where to locate it. Incorporation of tools to engage and encourage those struggling with PTS or TBI to take steps toward acquiring care—or to employ strategies for self-management (i.e., the utilization of mindfulness techniques or learning how to identify and avoid triggers) needs to included.

Multiple programs (e.g., gatekeeper approaches and software apps) have been created to educate and/or connect veterans and their caregivers to services. Problematically, these programs are often fragmented and not linked to awareness campaigns or high-quality service provision. Thus, a more coordinated approach to veteran and caregiver empowerment is needed; this evolved approach needs to improve upon existing public education campaigns, better align information supportive of behavior-seeking activities, and provide a range of effective self-help options. Furthermore, these resources can incorporate what is understood about effective self-management techniques, as well as how to

find/engage in high-quality treatment services–either through telehealth or in-person service provision.

Fostering a more empathetic community will also require sustained efforts to educate, inform, and equip members of the public as to the nature of PTS and TBI. While many public education campaigns offer opportunities for the public to learn about symptoms and causes, more effort is needed to ensure that the public at-large is well-informed about the prevalence of these disorders, and also how to help those afflicted. Resources such as *Mental Health First Aid* can help the general public to not only recognize signs of psychological and cognitive distress, but also to improve facilitation skills to assist the distressed person to seek/access needed help. Ensuring that existing campaigns have materials/resources targeting the lay public to understand their capacity to bridge the current military-civilian divide, can aid in dispelling myths associated with PTS and TBI and reduce the stigma experienced by afflicted veterans.

Implementing Recommendations

There are various recommended opportunities to apply solutions that support the **Recognize, Connect, and Deliver** framework, and that address the discussed veterans' issues, in order to achieve specific outcomes. These targeted outcomes are:

1. Increase numbers in effective care, and enhance care-seeking behaviors by formally **connecting selected** *Centers of Excellence* to form a more integrated network of community-based, non-governmental sources of care for veterans' invisible wounds of war;
2. Leverage existing and effective **peer-to-peer networks** as a means to improve the identification and facilitation of care-seeking and adherence in treatment and recovery;
3. Leverage the use of **technology as a more efficient gateway** to screening, assessment, and treatment, as well as self-care, through the improvement/expansion of websites, telehealth, and smartphone apps;
4. Improve the delivery of effective care **through enhanced collaboration, sharing of best practices, and sharing and appropriate scaling of effective services** across the scientific, provider, and payer communities;
5. Enhance **accurate awareness of the invisible wounds of war**, and their impacts, by improving coordination among public and private educational awareness campaigns.

The *George W. Bush Institute* is committed to comprehensively addressing the invisible wounds of war, and–in the coming months–the *Bush Institute* will collaborate with public, private, non-profit, and philanthropic sectors to develop an effective strategy and action plan. Working together, we will consider, highlight, and engage the many diverse stakeholders from effective programs and partnerships. We will do this in order to ensure that care gaps are closed, quality of care is maximized, and the noble endeavor to improve outcomes for veterans with invisible wounds and their families continues.

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For more information on the Military Service Initiative, visit bushcenter.org/militaryservice

Email: militaryservice@bushcenter.org
Phone: (214) 200-4300