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PTSD and Suicide Risk Association: A Look at Data

by

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Abstract

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The United States Surgeon General stated in the 2012 National Strategy for Suicide Prevention "..Between 2001 and 2009 an average of 33,000 suicide deaths occurred each year in the United States..in 2009, more Americans died from suicide than from motor vehicle traffic-related injuries." Within DoD, suicide numbers for 2012 reached a high of 349 among the Active and Reserve Component. Estimates state that PTSD afflicts 27 percent of Veterans who served in Afghanistan and/or Iraq (as well as more than 30 percent of Vietnam Veterans and about 10 percent of Gulf War vets).This study analyzed data from a cohort of Veterans that had a non-fatal suicide attempt between October 1, 2010 and March 31, 2012, reported within the Department of Veterans Affairs' Suicide Prevention Application Network (SPAN) database. Analysis of the data suggests that those diagnosed with PTSD were associated with elevated risk for a non-fatal suicide attempt. The author makes recommendations on how the VA and DoD can minimize stigma, encourage individuals to seek help and reduce potential risk for suicide.

PTSD and Suicide Risk Association: A Look at Data

Suicide and Post-Traumatic Stress Disorder (PTSD) are immense challenges that face the United States today.[1] These challenges are especially daunting for those still serving in the Department of Defense (DoD) and the Veteran population. With this reality, both the DoD and the Department of Veterans Affairs (VA) are committed to curbing the effects of PTSD and reducing the alarming number of suicides in these specific populations. While research efforts, treatment, personnel training and outreach, are all tapped to effect the stark realities associated with PTSD and suicide, both departments have much more to accomplish in the coming years to effect an at risk population. As depicted in this statistical analysis, the presence of PTSD appears to be associated with an increased risk for a suicide attempt. While this paper indicates the scope of the problem is immense, the statistical analysis that follows is valuable in supporting this author's hypothesis that this population is at risk and suggests that there are ways DoD and the VA can mitigate the risk. First there is a specific need to identify and document PTSD, then both departments must focus on and reach out to the at risk population through an aggressive national advertisement campaign while reducing the stigma associated with PTSD. Finally, DoD can make institutional changes in schooling and reporting requirements that can curb the tragic effects of these challenges.

There are three distinct populations that require definition, as they are all affected by PTSD and suicide. For the purpose of this research paper, the "Veteran population" refers to those individuals who have exited the military for civilian life. These individuals may or may not have been deployed in a combat operation. The "DoD population'" refers to those individuals that are still serving in the military in an Active, Guard, or Reserve status. The third population in the statistical analysis focuses on a specific

study group of Veterans that have exited the military and sought treatment with the Veteran Health Administration (VHA).

Scenario: A unit had just returned from a successful tour in Iraq and had been home for approximately two and a half months. Following a demanding physical fitness session the new Battalion Commander relaxed on a beautiful morning in the parking lot of the unit area. As he thought about the coming day's events he was approached by one of the Company Commanders. With tears streaming down her face she informed him that one of her Soldiers had died by suicide in his off-post residence. She had just received a call from the local police. From there the days planned events were forgotten and the unit began the drill; notify the chain of command, assign a Casualty Assistance Officer (CAO), verify the next of kin data, conduct a heart-wrenching inventory of the lost Soldiers' belongings, contact surviving family members, and plan and execute the memorial ceremony. In the hours following the initial notification, a walk-through of the house revealed a state of obvious disrepair and potential alcohol abuse. Ironically, the Soldier had just been notified the night prior that he had received his number one choice for a follow-on assignment and that he would have custody of his two young boys. As so many others that die by suicide, he was reportedly a great Soldier that always accomplished the mission.

Fast forward approximately two years and a few months later: The same unit had just returned from a successful tour in Afghanistan during the Presidential Surge. The unit had excelled in every area and all of the Soldiers made it home safely. Following the detailed reintegration process including family training, suicide awareness and prevention training, talks from Social Workers and chaplains among other topics, the

unit began to take their much deserved post deployment leave. On a particular afternoon, the same Battalion Commander received a call from one of the Company Commanders and was notified that one of his Soldiers had died by suicide while on leave with his family. Again, the unit responded in the way that training and the commitment to the Warrior Ethos demands, to take care of each other and never leave a fallen comrade. As in the first case, the deceased was a model Soldier. Many friends recognized him for the great Soldier that he was and were left to honor him in the only way they knew how, continue the mission while comforting friends and family members.

In both cases, the unit and the Soldiers bonded together to care for those most impacted. They took care of the family, the Company and the friends that remained. Of course, the obvious question we all ask following these tragedies is, “Why did they do it?” Commands across the globe have different systems to analyze why suicides occur in their ranks. Timelines leading up to the events are reviewed, post event interviews with family and friends occur, medical records are reviewed and commands focus on the personal habits of the deceased Soldier, however in many cases the surviving family, friends, and unit are still left wondering why the tragedy occurred. Unfortunately, these stories are becoming all too common in our current environment. In the above true cases, neither Soldier had been diagnosed with PTSD nor had they shown any outward signs that they were contemplating suicide. While there were no indications of PTSD, the recent return from combat operations could lead one to believe that the disorder may have been a factor.

If one transposes either of the above two events over the life of a Veteran who has left the service you will see at least one major difference, in most cases. There is no

unit response following the passing of a Veteran that has transitioned to civilian life, as the Veteran, of course, is no longer part of the unit. Instead, the family of the deceased is left with the same questions without the support of a close, supportive team. It is widely reported that support programs from family and friends and the close bonds that exist among these groups, mitigate potential risk for suicide. For a Veteran that has separated from the service, these mitigating factors are likely diminished through mere distance from a once close-knit family in the unit. As stated by Margaret C. Harrell, Ph.D., the Senior Fellow and Director Joining Forces Initiative Center for a New American Security, “The cohesion and camaraderie of a military unit can induce intense feelings of belonging for many service members. Time away from the unit, however, may result in a reduced or thwarted sense of belonging, as individuals no longer have the daily support of their units and feel separate and different from civilians. This is especially true for Guardsmen, Reservists, and for Veterans.”[2] Therefore, the challenges remain in the Veteran population and may be even more daunting to former service members.

The Scope of the Challenge:

Suicide:

Suicide and suicide prevention efforts have become a national public health concern[3] and as such, the subject has strategic importance. Suicide and the resulting effects span across the National population, the Veteran population, and the DoD population.[4] This has resulted in many different programs and much research aimed at eliminating the practice of suicide in our society. In August of 2012, President Obama signed a Mental Health Executive Order. Among other things, this order directed that

the VA, in conjunction with other Departments, increase the capacity of the Veteran Crisis Line (VCL), improve access, and develop and implement a national suicide prevention campaign on a specific timeline.[5] The United States Surgeon General stated in the 2012 National Strategy for Suicide Prevention: Goals and Objectives for action, "...Between 2001 and 2009 an average of 33,000 suicide deaths occurred each year in the United States. Suicide is among the top five causes of death for adults under age 45 in the United States and in 2009, more Americans died from suicide than from motor vehicle traffic-related injuries."[6]

With the national spotlight on suicide, the VA and DoD have committed countless resources to arrest the rate of suicide. The Veteran Health Administration's (VHA) estimated cost for suicide prevention efforts between 2008 and 2011 have totaled $191,505,000.[7] Between 2012 through 2014 the VHA estimates that it will spend approximately $220,044,000 on suicide prevention programs devoted to decreasing the number of suicides in the Veteran population.[8]

Following the Joshua Omvig Veterans Suicide Prevention Act of 2007, the VA increased suicide prevention education for the staff, instituted a 24 hour toll free crisis line, called the Veterans Crisis Line, that has a direct link to the National Suicide Prevention Lifeline, assigned a Suicide Prevention Coordinator (SPC) at each VA Medical Center, and increased both the research of suicide and outreach programs available to Veterans struggling with suicidal thoughts or tendencies.[9] When our Nation's heroes take their own lives after having served with distinction in some of the most dangerous combat situations, it is understandable that such actions are required. The loss of human life and resulting surviving family trauma is compounded by the loss

of a trained and experienced leader who will no longer have the opportunity to positively contribute to the strength of their family, their friends and our society. Understanding these tragic effects, the resulting emphasis only increases.

The military as well, has devoted countless resources to suicide prevention. In a November 19, 2012, *USA Today* article, the author cites that the military has spent more than $50 million on suicide research and prevention efforts recently.[10] While exact numbers are not available from DoD yet, one of the ongoing efforts of the Defense Suicide Prevention Office is to accurately capture all existing programs and their respective costs, in order to have a baseline understanding of expenses from which to build.[11]

Despite the committed resources, the suicide prevention effort results are not clearly measurable at this time and suicide numbers for DoD in calendar year 2012 reached an all time high, with a total of 349 among active duty and reserve component personnel.[12] Notwithstanding a recent Army-wide “Suicide Prevention Stand-Down” held in September 2012, the October 2012 suicide numbers still increased by five from September’s reported fifteen suicides.[13] While the suicide numbers increased the month following the Army Stand Down, it would be premature to assess the effectiveness or attribute any direct relationship to the Army-wide effort in September 2012, aimed at reducing suicide in the ranks. With time, and accurate reporting, the Army will have an opportunity to assess the effectiveness of this recent effort and make adjustments to improve future “Stand-Downs.”

PTSD:

Like suicide, PTSD has strategic impacts to our Veteran and DoD populations as well. The scrutiny on PTSD in Veterans and members of the military has increased over the last decade, as this disorder is uniquely different than other more commonly recognized wounds caused by combat operations. It is widely understood that PTSD is a unique challenge in that there are generally no visible scars on someone suffering from the disorder. Furthermore, the RAND Corporation published a study entitled "Invisible Wounds of War" recognizing that PTSD, Traumatic Brain Injury (TBI), and major depression, is often invisible to peers, family members and society in general.[14] The media has spotlighted that PTSD afflicts 27 percent of Veterans who served in Afghanistan and/or Iraq (as well as more than 30 percent of Vietnam Veterans and about 10 percent of Gulf War vets).[15] With these numbers, DoD and the VA can expect continued emphasis placed on curbing this affliction. Therefore, researchers and medical professionals continue the effort to develop consistent diagnostic criteria and markers that aid in the diagnosis and treatment of PTSD, although science has not revealed a consistent biomarker to date.[16]

One must merely look at the headlines of our current media to understand the challenges associated with, and the impact of PTSD, today in our society. As an example, the Staff Sergeant Robert Bales case is currently one of the highest profile legal battles in the military justice system. This Soldier may be tried and executed for allegedly massacring 16 civilians in Afghanistan. Recent reporting indicates that defense attorneys may argue that Bales had PTSD, and that military medical professionals did not diagnose PTSD prior to his deployment to Afghanistan, where the

alleged atrocity occurred.[17] While this information is not official or confirmed, it further demonstrates the challenges associated with diagnosing PTSD.

Additionally, a June 2012 Stars and Stripes article details an increase in the number of Vietnam Veterans seeking help for PTSD. The numbers of Veterans receiving PTSD treatments between 2006 and 2011 rose from 272,000 to more than 476,000 and while Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) Veterans are a large part of that increase, more than half come from earlier conflicts.[18] Tom Berger, the Director of the Health Council at Vietnam Veterans of America, said "Now, after being a workaholic for 40 years, they (Vietnam Veterans) suddenly don't have that structure in their life anymore. I expect there will be more and more folks seeking out help for those issues."[19] Existing VA data mirrors the report shown in Stars and Stripes and further details the rise in numbers of those Veterans diagnosed with PTSD since 2002.[20] The article indicates there may be a potential spike in the number of Vietnam Veterans that could require PTSD treatment in the future. Furthermore, if these Veterans had not previously been seen for PTSD, the VA will not only need to be proficient in treating the disorder, but also at diagnosing the disorder. This is an additional challenge, as it may not have been the case with many of the OEF/OIF population where DoD transitioned those already diagnosed with PTSD, to the VA as they exited the service.

Between 2008 and 2011, the VA estimates that it spent $1,339,339,000 on PTSD with respect to cost for care, treatment, and research.[21] Furthermore, estimates for the following three years combined, reach as high as $1,339,020,000 as costs continue to rise.[22] When faced with the reality that each individual reacts differently to the same

conditions, it is understandable that properly diagnosing and treating an invisible disease takes enormous resources, including additional providers, training, and increased access. Seeing a civilian casualty in combat may cause PTSD in one Soldier, but may minimally affect another Soldier. As well, an effective treatment for one Veteran may not work for another. With these difficulties, and the broad range of responses to both the cause and current treatments of the disorder, there have been three primary treatment options developed that include psychotherapy ("talk" therapy), pharmacotherapy (medications), or both.[23]

However, further complicating treatment options are the non-profit action groups that strive to help Veterans, or those afflicted with the disorder. As an example, groups such as *Canines with a Cause* or *Pets for Patriots*, offer alternative treatment in pairing pets, with Veterans that have PTSD with the theory being that the companionship of a therapy dog will help to minimize the effects of the disorder. A brief search on the internet can reveal over ten such organizations that match dogs with Veterans,[24] and while the list is not all inclusive it certainly indicates that this theory has gained at least popular support from the public. Results of these efforts are inconclusive and the VA recognizes the need for more research while acknowledging the potential risks associated with the unconventional treatment method using dogs.[25] But the media reports on these unconventional treatments support the argument that PTSD is far from a simple, "one treatment fits all scenario," and that while experimental treatment options may incur some risk, current events show they are options that some with the disorder may consider.

With all the challenges surrounding PTSD, there have been successes. The joint VA/DoD Clinical Practice Guideline (CPG) is evidence of the two Departments working together to use evidence based practices, that produce results. The Guideline Summary of 2010 clearly depicts algorithms for assessing and diagnosing the disorder as well as tables that break down treatment options resulting in a scale of "Significant benefit" to "No benefit/Potential harm."[26] These tables are depicted in the CPG for both psychotherapy and pharmacotherapy treatments.[27] Some may argue that behavioral health measures of effectiveness in general are not used to their fullest capacity and inappropriately revolve around performance measures as opposed to patient outcomes.[28] An example of such a measure would be rating success of treatment on the time it takes a patient to see a provider or fill a prescription. However, the Department of Defense Task Force on Recovering Wounded, Ill, and Injured Members of the Armed Forces (RWTF) shows better results specifically when focused on PTSD.[29]

In a FY 2012 report by the RWTF entitled "Effectiveness Results: Post Traumatic Stress Disorder (PTSD)" site visits between October 2011 and March 2012 revealed the treatment facilities' measures of effectiveness were outcome focused. Facilities measured their success when dealing with PTSD generally by gauging mission readiness and return to duty, symptom reduction, as well as patient self reports and unit feedback. Results indicated, among other details, a significant decrease in symptoms reported following treatment and that treatment effectiveness was rated at ~80% for those individuals who completed their treatment. Additionally, patients reported high satisfaction in their feedback.[30] These successes suggest that we can effectively treat for PTSD symptoms and improve the health of the patient population. Nevertheless,

critical to getting to this step is first, having the patient present for help and second, diagnosing the disorder.

Stigma:

The stigma associated with individuals seeking help for PTSD is very real and impedes efforts to identify those in need, particularly in DoD. In fact, in a recent article entitled “Pentagon Reworks PTSD Strategy,” the Army announced that PTSD tends to be under-diagnosed and under treated because of the stigma that discourages troops from seeking help for mental health issues.[31] The article further outlines that both the Army and the VA are recommending change to the diagnostic criteria that once centered on the words “fear” and “helplessness,” as these words discourage some military personnel from seeking the help they need. As the drive toward a consistent diagnosis across both the DoD and VA continues, the fact remains that the professionals in both departments are forced to walk a very fine line between accurately diagnosing the presence of PTSD, while not discouraging those who may need help, to seek the treatments that are currently available.

There is no question that most military personnel are brave young men and women willing to serve their country. They are accustomed to a lifestyle that is generally physically demanding. This undertone applies to both male and female service members who operate shoulder to shoulder in some of the most demanding combat environments. With this association, it is understandable that service members may consider themselves as weak if they can’t accomplish their mission due to one ailment or another, further increasing the stigma associated with mental illness.

From the daily and grueling physical fitness sessions, to combat operations where sleep and adequate rest are in many cases scarce, there is little doubt that Soldiers must be in great overall condition to withstand the rigors of their chosen career. Therefore, when a Soldier asks for help or cannot accomplish a physically demanding task, there are likely to be varying levels of negative feedback. The feedback can range from official counseling of an individual from his or her leadership, to unofficial pressure from peers, to meet the standard. This undertone of pressure from peers, subordinates, and leaders alike, exists as many senior military leaders recognize. In a recent discussion, the Chief of Staff of the Army, General Odierno, fully acknowledged the existing stigma and that “Commanders understand... but we still have a cultural problem down to the lowest level where people fear retaliation; they fear, 'what are the impacts on my career' if I come forward and admit I have a problem.”[32] Therefore, DoD is actively trying to minimize the stigma associated with mental health disorders affecting a Soldier. In the current environment, senior leadership within the Pentagon can be heard echoing the same sentiment over and over: if you are in a crisis, we can provide resources that will help you. You can ask for help and it will not affect your career in the military.

Statistical Analysis:

With the many questions surrounding both suicide and PTSD, this paper further analyzes if the presence of a diagnosis of PTSD has a direct relationship to the increased risk of suicidal behavior. Specifically, data was reviewed to discover if a diagnosis of PTSD increases risk for non-fatal suicide attempts in a select Veteran population as defined below.

Study Population: Based on existing VA data, the study was restricted to Veterans engaged with the Veteran Health Administration (VHA). This specific population of Veterans had VHA service usage in the current or previous fiscal year prior to the index suicide attempt. These Veterans may or may not have deployed to combat operations. Within this population there were 12,077 Veteran patients that had a confirmed non-fatal suicide attempt between October 1, 2010 and March 31, 2012 as reported within the Suicide Prevention Application Network (SPAN) database (see Table 1). For this study, a suicide attempt was defined as a non-fatal, self-inflicted, potentially injurious behavior, with any intent to die, as a result of the behavior. Additionally, a control cohort of VHA patients with no reported history of suicidal ideation was randomly selected, with stratification by age and gender, to mirror the suicide attempter cohort. Both cohorts were reviewed to determine if there was an existing PTSD diagnosis, or lack thereof.

Table 1. Number of Non-Fatal Attempters by Gender and Age, Oct. 2010- Mar. 2012

Age	Male	Female
Total	10,478	1,599
18-34	2,329	499
35-64	7,312	1,066
65+	837	34

Study Data Sources, Methodology, and Outcome Measures: Each Veteran Medical Center has a Suicide Prevention Coordinator (SPC) that is responsible for updating suicide attempt data into the on-line application, SPAN. This analysis was based on linking SPAN non-fatal suicide attempts data with inpatient and outpatient records from the National Patient Care Database (NPCD). The NPCD data was used to

calculate measures of VHA mental health service usage and indicators of select psychiatric conditions. A diagnosis on any inpatient bed section diagnostic field or any outpatient encounter diagnosis field during the fiscal year prior to the index suicide attempt up to 30 days following the index attempt served as an indication of the select psychiatric condition. The diagnoses were based on the International Classification of Diseases (ICD), 9th revision, Clinical Modification (World Health Organization, 1995). Medical notes regarding PTSD without a formal diagnosis of PTSD, were excluded from the data collection.

The analysis focused on accounting for age, gender, number of VA mental health inpatient bed days, number of VA mental health outpatient encounters, and the following select substance use disorders and mental health conditions:

- Alcohol Use Disorder
- Other Substance Use Disorder
- Bipolar Disorder
- Major Depression
- Other Depression
- Dysthymia
- Schizophrenia
- Other Psychoses
- Personality Disorder

Both cohorts were reviewed to determine the number of individual diagnoses present in each cohort. The selected psychiatric diagnostic characteristics between the case cohort (suicide attempters) and the control cohort (non-attempters) are dissimilar in

make-up, meaning the percentage differences of diagnosed disorders between both cohorts are relatively high. (see Table 2)

Table 2. Substance Abuse and Mental Health Characteristics

Any Diagnosis	Attempter Cohort n=12,077		Non-Attempter Cohort n=12,077	
	%	n	%	n
Alcohol Substance Use Disorder	54.32	6,560	12.73	1,538
Other Substance Use Disorder	48.65	5,875	8.21	992
Bipolar	26.83	3,240	4.03	487
Major Depression	55.39	6,690	9.32	1,126
Other Depression	30.19	3,646	5.51	665
Dysthymia	13.24	1,599	3.87	467
Post-Traumatic Stress Disorder	48.38	5,843	18.53	2,238
Schizophrenia	11.73	1,417	2.27	274
Other Psychoses	10.76	1,299	1.77	214
Personality Disorder	22.20	2,681	1.81	219

Furthermore, within the above data, 96% of those diagnosed with PTSD in the attempter cohort, had at least one comorbid diagnosis. In the non-attempter cohort, 67% of those diagnosed with PTSD, had at least one comorbid diagnosis.

Analysis: Due to the high percentage differences, the Propensity Score approach was utilized to account for any potential confounding relating to the imbalance in mental service utilization and selected psychiatric conditions. This approach was used to calculate an estimate of the probability that a Veteran had a proximate PTSD diagnosis

given the set of covariates: age, gender, mental health utilization, and select psychiatric conditions. The sample of Veterans was then divided into 25, approximately equal strata, based on similar propensity scores. Previous research using simulation suggests that using 5 -10 strata can be expected to remove about 90% of confounding bias.[33] In this case, given the bimodal distribution present for the propensity scores, a systematic process determined that 25 strata were more appropriate for the analysis. The estimated odds ratios were calculated for each of the 25 strata, using a logistic model with non-fatal attempt indicator as the dependent variable, and the propensity score and PTSD indicator as the independent variables. A weighted average of the odds ratio and associated standard errors, was constructed to provide inference about the association between PTSD and the non-fatal attempt.

Limitations: While the statistical data above relates only to Veterans engaged with the Veteran Health Administration (VHA) the author correlates the recommendations below with all Veterans as well as the DoD population. Further research will be required to track the effectiveness of any recommendations to both VA beneficiaries, and service members still within DoD. Additionally, the statistics only relate to suicide attempts within the specific study population and not suicides that resulted in death. There is a possibility that those suicide attempts that did result in a death could have a different relationship to a diagnosis of PTSD.

Additionally, the SPAN database relies on the SPC at each VA medical facility to enter the suicide attempt data. While increased training has occurred within VA facilities, it is possible that an SPC could vary their classification of who had a “Suicide attempt” and who did not. While this remains a limitation, it is also important to note that

both the VA and DoD have agreed to a standardized definition of a suicide attempt, in order to improve reporting of the events across both departments.

Results: In this analysis, after accounting for age, gender, mental health service utilization, and select psychiatric conditions, those with PTSD were more than two times as likely to have had a non-fatal suicide attempt. The overall **odds ratio was 2.37** (standard error: 0.0387, p-value: <0.001), supporting the hypothesis that PTSD could be an indicator for non-fatal suicide attempts.

Discussion and Recommendations:

The findings in the current analysis indicate more focused research is required. Yet, similar research supports the results of the data analysis found in this paper. A recent study focused on Iraq and Afghanistan Veterans and found an increased risk of suicide in those individuals with evidence of psychiatric conditions.[34] A prior study including both Veterans and the civilian population found that PTSD specifically, was associated with suicidal behavior including suicide attempts, as well as other health problems including cardiovascular and respiratory disease and cancer.[35] Slightly contrary to these two studies, an additional product published in 2009 linked Iraq and Afghanistan Veterans with PTSD and two or more comorbid disorders, to increased risk. In that research a Veteran with two or more comorbid disorders was 5.7 times more likely to have suicidal ideation than a Veteran with PTSD alone.[36] The current data accounts for the comorbity through propensity scoring and still underscores the importance of increased scrutiny of patients that present with PTSD alone.

The data presented in this study is an important beginning towards affecting an at risk population. The results, while focused on this specific study population, may also

likely correlate to both the larger Veteran population and the DoD population. As Senior Leadership has been known to say, “A Soldier is a Soldier for Life.” Even while different populations deal with different circumstances, those that are focused on *preventing* suicide, may be able to narrow their scope of effort when faced with PTSD. When armed with statistical data that supports that those with PTSD are associated with a risk of more than twice as likely to have a suicide attempt, both the VA and DoD can aggressively monitor this particular population. It will be important that the correct balance is found between focus on this population and ensuring there is not an increase in associated stigma. While the data does contribute to answering the question of “Why a service member or Veteran may die by or attempt suicide” leadership should also understand and consider that the majority of those with PTSD will not die by suicide.[37] Therefore the method of engaging the at risk population must be measured, well thought out, and coupled with proven treatment measures in order to mitigate the effects of the disorder.

The study, through design of the Propensity Scoring, accounts for comorbidity and still shows an association with an increased likelihood of suicidal behavior. The data presented in this paper and the data from past research indicates that PTSD alone, as well as PTSD with other comorbid diagnosis’, could be associated with elevated suicidal risk for an individual.

The first step towards mitigating the risk is to know an individual has PTSD. As mentioned earlier, one of the best ways to minimize the risk and corresponding increase to the likelihood of a suicide attempt is to find a biomarker that definitively identifies the presence, or lack thereof, of PTSD in an individual. Ongoing research efforts have

continued along this line of effort however, the “PTSD marker” still evades scientists. A marker will effectively remove any doubt of the presence of the illness in every individual tested. With a potential marker in the future, it is possible that both DoD and the VA will be able to isolate these individuals from the general population of Veterans and service men and women in order to target the disorder precisely and provide treatments more effectively. However, an additional complication to the effort to find a biomarker could present itself in a recent case within the Supreme Court. An article in the Washington Post details a case where the court is considering patents for human genes.[38] In this particular example a private company argues for the continued right to patent their genes and their opposition argues that genes are a product of nature and cannot be patented. The results of the Supreme Court decision could arguably affect the future of genetic research if private companies are denied their ability to patent and therefore diminish their return on investment. But with the above data indicating that this population of Veterans with PTSD was more than twice as likely to attempt suicide, certainly early and proper identification of PTSD would allow medical providers to zero in on this risk and work to avoid the tragedy before it occurs.

Entry examinations within the DoD and VA should clearly document the existence of the disorder when discovered, and medical professionals should share knowledge with leaders and other providers that deliver care. Undoubtedly, the creation of an electronic health record that can be commonly accessed by VHA and DoD providers, and remains with a Soldier for his/her entire life, will assist in this effort. While certain medical information is protected by the Health Insurance Portability and Accountability Act of 1996 (HIPAA),[39] this paper indicates that institutions could

potentially impact suicide with targeted focus on a population associated with elevated risk. Therefore, if the Departments want to ensure they gain momentum in curbing the risk associated with PTSD, they may have compromise in other areas such as reducing the information sharing restrictions designed to protect personal health information (PHI). While legal experts examine and argue about what can be shared (within the provisions of HIPAA) across department lines, provider systems and provider-leader relationships, the departments should err on the side of sharing, as this information is vital to provide the most common picture to individuals in a position that could save a life.

DoD must eliminate the stigma associated with PTSD and other mental health concerns. In order for all to receive required treatment, service members cannot continue to perceive a threat when seeking help for an invisible disorder. However, the question remains, how does the institution minimize the stigma in order to reach the service members and Veterans that ultimately do not want to be known as a weak or damaged person and may not trust the highest level of “Brass,” or the medical experts that work with our Veterans? One potential answer is for both DoD and the VA to establish an aggressive national advertising effort to get the word out to military personnel and Veterans, on both television and radio. While one can view Public Service Announcements (PSA) for the Veteran Crisis Line (VCL) within VA medical centers and in outreach programs, arguably the word is not getting to the entire population. One can also view videos of senior DoD officials carrying the message to reduce stigma through military blogs, social media and websites, however that media is arguably not getting to targeted audience.

A recent example of this recurring trend of falling short on messaging reportedly occurred when the ex-Navy Sea Air Land (SEAL) Special Forces team member responsible for killing Osama Bin Laden did not know that he was eligible for VA medical care, after his departure from active service. According to the recently separated service member "I left SEALs on Friday...My health care for me and my family stopped at midnight Friday night. I asked if there was some transition from my TRICARE to Blue Cross Blue Shield. They said no. You're out of the service, your coverage is over. Thanks for your sixteen years."[40] While this reporting initially suggested that the former SEAL had been abandoned by the military and the VA following his separation, in reality it was a case where the subject claims he did not know the benefits existed. In fact, all Veterans who have served in either Operation Iraqi Freedom or Operation Enduring Freedom do qualify for five years of VA medical care, provided they had either an honorable or a general discharge from the service.[41] Therefore this former Navy SEAL did qualify for benefits. This instance supports the argument that the VA's and DoD's attempt to inform their populations, falls short even in the most high profile examples.

While tremendous effort is spent by the VA, DoD and the Department of Labor (DOL) to team up and transition military personnel to civilian life through a series of programs called the Transition Assistance Program (TAP),[42] information regarding benefits and resources available to Veterans may not be well known, as highlighted in this particular example in the media. The information gap likely applies to suicide prevention efforts such as the VCL and efforts that fight the stigma associated with PTSD, as well. During TAP, transitioning service members attend numerous classes.

The program consists of comprehensive three-day workshops at selected military installations nationwide. Facilitators from the VA, DoD, State Employment Services, military family support services, and DOL contractors discuss topics that are designed to ease transition to civilian life. Service members learn about VA benefits, job searches, career decision-making, current occupational and labor market conditions, resume and cover letter preparation and interviewing techniques, among other things.[43] Despite the fact that this program is mandated by legislation[44] and applies to all transitioning service members, the above example regarding the ex-Navy SEAL indicates that the message may not always reach the intended audience.

An effective and aggressive advertisement campaign that promotes the VCL and fights the stigma associated with PTSD is needed. When was the last time you saw an advertisement on television that spoke to Veterans about the risk of suicide and the help that exists? Furthermore, have you ever seen a successful Soldier on national television discussing his life challenges and the help and treatments that exist, that were beneficial in dealing with these challenges? The answer may very likely be never. The advertisements on television either do not exist or exist as a PSA. Perhaps an effective ad campaign that incorporates senior leadership, peers at the lowest levels and family members discussing the positive message that treatments work and are available, would go a long way in preventing potential suicides. Within this effort, care will be required to ensure we do not further alienate those at risk personnel with suicidal data that could potentially further the stigma. While the PSA efforts for the VCL, are rated in the top 1% of the inventory,[45] the Department does not control when and how often the announcements get media play. Announcements on the radio are scarce as well. For

reasons unknown, these two very powerful media outlets are not exploited to the fullest extent possible by the VA or DoD.

Many people can probably call to mind the clip of the large ship cruising through blue waters with multiple aircraft on the deck, and immediately associate it with the U.S. Navy "A global force for good."[46] As well most people can also associate "The few and the proud," immediately with the Marines. These examples demonstrate the power that an effective ad campaign can carry. Yet DoD's effort to eliminate stigma is somewhat limited to current events articles, military blogs and military training sessions. The VA's effort to publicize the VCL, and thereby maximize the effectiveness of it, is continuing to expand which is indicative of the Department's understanding of the importance of an effecting advertisement campaign. In certain parts of the country such as the National Capital Region the VA has increased the messaging effort to include signage on public transportation platforms and throughout common public areas. However these efforts may very likely be enhanced through the further use of television and radio.

While one may argue that a national advertisement campaign would produce minimal returns on investment, this author simply points to the February 2013 Superbowl. Top corporations and businesses across the U.S. clearly see the value in producing effective, thought provoking advertisements, for targeted populations, spending up to four million dollars for thirty seconds of air time.[47] When this event's commercials are coupled with the media hype both prior to and after the football game the effects are likely exponential. A similar effort within VA and DoD could effectively combat the trend of information over load that so often occurs in classroom settings like TAPs, where transitioning Veterans may be focused on other things such as upcoming

terminal leave, moving their homes and families, and their future livelihood. The campaign could also reach those that endure the often lengthy and mandatory training requirements, including suicide prevention training, that service members work through, yet where the results are not measurable. Instead, engaging and recurring ads on both television and radio, featuring successful leaders in society that have received the help needed for PTSD, may resonate with the target population both still serving and those who have completed the transition to civilian life.

It is important to note that there is an ongoing effort for a collaborative PSA called "Stand by Them" with both the VA and DoD. This effort targets the friends and families of those in crisis, and encourages the use of the VCL. It is set to be released in April of 2013.[48] These actions point to the increased cooperation between the VA and DoD aimed at preventing suicidal behaviors amongst both populations, and have the potential to impact the lack of social support that Veterans face after they separate from their unit. An argument can be made that a family member or friend that takes the time to call the VCL on behalf of their Veteran, is also more likely to offer the support structure needed by someone in crisis, even after separation from the unit. While future research will reveal the level of success for this initiative, a national ad campaign using both television and radio offer an immense capability that may further exploit the momentum gained by the current joint PSA.

Within the Army, the Pre-Command Course (PCC) at Ft. Leavenworth is a perfect venue for training our future Commanders on the challenges associated with both PTSD and suicide. While the existing course presents valuable information from the senior leadership at the strategic level, more can be done to prepare our future

leadership to prevent suicide and stigma associated with mental health disorders. There is little question of the positive value of a Commander personally spearheading these two issues from the top down. While command emphasis is widely understood in the ranks, with the intense OPTEMPO of the last twelve years of combat operations, all too often training for subjects like suicide prevention and eliminating associated stigma, get delegated to chaplains, Military Family Life Consultants (MFLCs), or other medical professionals. This is a missed opportunity for Commanders to personally engage their Soldiers on one of the toughest issues that faces today's military. While chaplains, MFLCs and medical professionals are certainly valuable to the prevention efforts, they do not carry the weight of the Commander. With the expected drawdown in Afghanistan and resulting decrease in OPTEMPO, a module at the PCC that specifically focuses on command emphasis and provides techniques available to the Commander to personally train the unit on suicide prevention, could pay dividends and help to arrest the rising number of suicides within the ranks.

Similarly, the military should further invest in the training of the Non-Commissioned Officer (NCO) Corps. At the Sergeant Major Academies and Senior NCO training courses, students should be informed of the increased risk for suicide attempts associated with PTSD subjects. This recommendation is further supported by the RWTF 2012 Annual Report which recommends further VA integration with the DoD during formal military education to increase the understanding of the challenges both Departments face, and the benefits available to both populations.[49] While the study above is certainly not all inclusive, it can indicate to NCOs that directly deal with these Soldiers on a one-on-one basis, that they can initiate action that may make a difference.

These actions include but are not limited to leadership counseling, escorting Soldiers to medical professionals, increased monitoring at the lowest level and rapid response to any acute situations where the Soldier is experiencing an elevated level of stress. With the NCO Corps fully informed of the potential PTSD linkage to suicide attempts, we could likely see more engaged leadership. Also with statistical analysis that supports the association of increased risk, the NCO Corps can further validate the existence of invisible wounds. This could lead to reduced stigma for mental health conditions and specifically PTSD.

One of the most frustrating aspects of suicide prevention is likely the fact that one rarely knows they have successfully assisted someone and potentially prevented a suicide from happening. Conversely, it is the tragic events that are recorded, tracked, and discussed. Both DoD and the VA are all too aware of the suicides that they could not prevent, and reporting on these events has greatly improved, but there also needs to be a reporting system developed that captures those that were saved either prior to or following suicidal behavior. While the VCL does track calls that result in prevented suicides, other programs do not. A system that captures the suicides that were prevented through other programs such as training sessions, post-deployment reintegration sessions, and individual intervention, has yet to be developed. But logic suggests that it would be a significant incentive for all individuals involved in suicide prevention, to be able to measure their success on a personal basis. While leaders may not know it, the odds are that someone in the at-risk population is hearing the training, accessing the care they need, and developing coping mechanisms that help them deal with their own personal crisis. Leadership needs to take further steps to indentify these

people and find out what worked in their specific case and why. This data needs to be recorded in a standardized manner and units and organizations recognized for outstanding suicide prevention efforts across DoD and the VA.

While PTSD and suicide are immense challenges, the fact that existing VA data indicates that PTSD is associated with an increased risk for suicide attempts, offers an opportunity to exploit. Continued research must succeed in the development of a biomarker for PTSD and both the VA and DoD must document the presence of the disorder. Both departments can then specifically target this specific population through an aggressive national advertisement campaign, attempt to reduce the stigma associated with PTSD through advertisements and leader engagement, and make institutional changes in schooling and reporting that will lead to diminishing the consequences of these challenges. While success stories of suicide prevention engagements will remain hard to measure at the lowest levels, decreasing the number of suicides in Veterans and DoD will have a resounding impact on our society. By winning this battle, both departments will reinforce their commitment to honoring our Nation’s heroes.

Note: The views expressed in this student academic research paper are those of the author alone and do not reflect the official policy or position of the Department of Veterans Affairs.

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