Recommendations for Legislation to Improve Veteran Brain Health from Repeated Blast Exposure.

Blast Exposure Brain Health Improvement Act

1. Executive Summary:

The Mac Parkman Foundation, a leader in the area of Repetitive Blast Trauma provides the following discussion points, information and recommendations for legislation to address the issue of Repetitive Blast Exposure (RBE) and its impact on the brains of our military veterans. Unfortunately, despite billions of dollars and a continued focus on suicide prevention, the rate of suicide amongst our veterans, particularly in combat arms, special operations, armor and artillery, EOD and other Military Occupational Specialties the suicide rate over the years is not subsiding and with an average of 6,000 veterans dying by suicide each year since 2001, some 138,000 veterans have taken their lives since 9/11[1][2] and hundreds of thousands more have demonstrated symptoms of mental illness and are under psychological care, a disturbing and disheartening fact. While Repetitive Blast Exposure is not thought to be responsible for the entire mental health crisis, it is proven, through research and studies, to be of a statistical significance, and this can no longer be ignored.

The reason is that RBE, like its proven contributor to brain damage and mental health in contact sports, Repetitive Head Impacts (RHI) is an inherent part of many military careers. While thought to be harmless for decades, since 9/11 the rate of RBE has expanded exponentially and this has severely impacted the brains and mental health of our veterans. The reason is that our military, the most lethal in the history of this planet, trains and executes combat operations as Americans do, relentlessly. This means that on top of the RBE exposure that occurs in combat, there is additional and continuous exposure that occurs in training, which is exacerbated by the continuous evolution of training and combat deployments, leading to unprecedented levels of exposure and damage.

It has been understood that, for at least the last 3 years, that repetitive brain trauma, in the form of RHI or RBE damages the brain, and that damage produces mental illness. The issue: continuous exposure to any form of brain trauma creates damage that cannot heal due to the relentless impacts on the brain and the lack of rest. Thus, damage to the brain in the form of physiological damage to critical brain structures like myelin, axons and synapses, release of chemicals and neurotransmitters and continued hypervigilance, create an environment of toxic neuroinflammation that over years degrades and damages the brain, leading to mental illness. It

[1] https://www.statista.com/statistics/1440066/number-of-veteran-suicide-deaths-us/
[2] https://allthatsinteresting.com/veteran-suicide

is time to take this new knowledge and act on it to improve our veteran's mental and brain health.

Immediately addressing RBE is critical as the condition, although relatively new in terms of research is known to impact significant portions of the military, particularly those in combat arms. Rapid adoption of the measures outlined in this document can lead to improved awareness of these issues and access to treatments, proven to help improve mental health, by our veteran community. To delay legislation is to deny these veterans access to care they deserve further jeopardizing their lives.

Furthermore, the current situation is untenable and quite frankly disturbing. We have spent billions of dollars on mental health and suicide with no significant impact on veteran mental health and the suicide rate, and it is time to change the way we approach mental health. It is understandable to rely on "proven" methods like pharmaceutical intervention and therapy, but when the 'proven" methods are unproductive it is time to effect change.

This is why The Mac Parkman Foundation is submitting this outline for legislation, in the hope that we can take what we, as a foundation have learned since the death of Mac Parkman and to change the way we diagnose and treat mental illness that is a result of repetitive brain trauma. The changes outlined here will lead to bi-partisan, comprehensive legislation covering all aspects of care: Awareness and Education, Diagnosis, Treatments, Billing Code Recommendations and Insurance Coverage. The Foundation stands ready to commit time and resources to work with Congress to effect this legislation and move rapidly to improve the mental and brain health of our veteran population both past and present and to save lives that are in the balance.

2. Program Overview and Discussion

For years our society has been increasingly perplexed as to why the suicide rate and level of mental illness amongst veterans is so high. While a lot of this has been ascribed to participation in combat or generational issues, the underlying cause is the alarming amount of time these veterans have been exposed to elevated levels of physical and psychological trauma.

Differences between 9-11 Combat Veterans and Other Combat Veterans

The post 9-11 veteran is different from any other combat veteran, due to this issue. There is no doubt that combat is combat, that the psychological and physiological impacts are the same, however, the post 9-11 has been exposed to such impacts at a much higher and prolonged rate than any other war. There are two significant issues that impact this.

Deployment and Op-Tempo: Due to the length of these wars , Afghanistan being the longest in history, and the impact on a military force, veterans were forced into an operational

tempo that was necessary to sustaining the troop levels necessary to conduct military operations. Thus, for the first time, the American military had to fight not one, but two wars simultaneously, severely impacting the force from an operational tempo perspective.

Until 9-11, most combat tours were "one and done" and a return to combat was not required unless requested. The average combat tour was 16 months in WWII[3], 9 -12 months in the Korean war[4] and 13 months in Vietnam (though 24,000 men were "involuntarily sent back in 1968). By the time Iraq 1 and 9-11 happened, the military learned the perils of sending individuals to fight a war on a timeline and units were deployed in full strength in order to improve esprit de corps and to ensure that a unit's ability to fight would not be degraded by the continued rotation of experienced vets for inexperienced recruits.

Thus, conventional military units were deployed for a period of 12-13 months while Special Operations Forces deployed for periods of 6-9 months. While this may seem unfair, SOF personnel also had significant mission profiles and consist of a vastly smaller force, thus fighting two wars ensured a continuous rotation of SOF operators every 6-9 months while the conventional forces had a longer rotation period of around 18 to 24 months before returning. It's not uncommon to see veterans with 3-4 combat tours from the conventional military and 9 or more from SOF veterans. Thus, there is a significantly higher amount of combat exposure than previous wars.

Training: The wars in Iraq and Afghanistan required combat units to deploy with absolutely minimal skills to fight a counterinsurgency. After realizing the gaps necessary to conduct such operations, the military opened the floodgates to training dollars in order to fight the wars. This had a significant impact on the physiological and unknowingly, the psychological state of the veteran.

First, outside of SOF, the conventional military had never fought an insurgency battle since Vietnam and did not have the skills necessary at the time. This required vast investments in training infrastructure, resources and the development of TTP's to win in battle. Combat Units were required to participate in mandatory training at Joint Readiness Training Centers and at their installation to meet the need to be combat ready. Training resources like ammunition, explosives and training aids were unlimited for the first time in the military's history.

Second, the military trains by a "train as you fight" mentality, meaning that you must train as close to the realism of war as possible. This means in all aspects of war as well. Thus, units threw themselves into training realism which meant that soldiers were experiencing the

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[3] https://www.nationalww2museum.org/students-teachers/student-resources/research-starters/research-starters-us-military-numbers

[4] https://thekwe.org/topics/vfw/p_koreas_invisible_veterans.htm

exposure of small and large caliber weapons, explosives and indirect fire and the physical impacts of training repeatedly.

Resulting Impact: The combination of operational tempo and training realism is the single most significant impact on our veteran's brain and mental health due to the relentless exposure of their brain and body to Repeated Blast Exposure and Repeated Head Impacts. The combination of combat and pre-deployment training meant that, from an exposure perspective, the war really never ended for the 9-11 combat veteran. Troops returning from deployments were given 90 days of rest before moving to permission training and supporting training for other units. SOF units don't understand the meaning of down time due to their limited size and massive footprint worldwide and may have had 30 days off after a 6-month deployment before training for their next one.

As a result of this third order effect on the brains of our veterans, the outcomes for mental health were horrendous as their brains were never allowed to sufficiently recover from RBE/RHI exposure. At this level of RBE exposure, the impact on the brain physically and the corresponding levels of neuroinflammation, the primary culprit in the slow degradation of brain matter, stay high for many years impacting critical brain structures known to be associated with mental illness.

3. Problem Statement: The current and historic approach to treat mental illness without an assessment of the physiological assessment of the veteran's brain and consideration of RBE/RHI exposure, has perpetuated and prolonged an epidemic of mental health without considering other modalities that have significant evidentiary claim of improving brain health and alleviate mental illness.

4. Discussion:

The issue of RHI/RBE exposure has been poorly understood for decades, though the outcomes from exposure, mental illness, has long been in the spotlight. Much like Repeated Head Impacts (RHI) from football or other contact sports, the issue is just coming to light and the catastrophic effect it has had on our veteran's mental health is just being understood. While the number of veterans that have been exposed to RBE is incalculable, most of the 3 million veterans that have deployed, or 1.8 million have returned home with a permanent injury[5]. However, it is known RBE from high caliber weapons, indirect fire, mortars, explosives and other occupational requirements are present in many occupational specialties from combat arms, to armor, artillery, EOD and Special Operations. In fact, for all these specialties and more, RBE is part of the job.

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5 https://news.harvard.edu/gazette/story/2023/03/20-years-post-invasion-many-iraq-veterans-havent-found-peace/

However, RBE, like its counterpart RHI, is insidious as it doesn't produce symptoms when it occurs. Many veterans say that they have been exposed to hundreds if not thousands, even tens of thousands of explosions, large caliber rounds or indirect fire weapons with no significant effect. However, the damage does take place as each of those hits produces minor and seemingly insignificant changes to the brain, which over years start to degrade the integrity of the brain through the release of chemicals, neurotransmitters and proteins and impacts like cavitation where the impact of blast pressure bends and stretches key brain signaling structures such as axons and myelin. These responses are compounded by the fact that veterans do not sustain RBE in a day, or just a month, but for years on end. Thus, an environment of neuroinflammation is sustained from repetitive combat deployment and training cycles that eventually damages the brain in ways that are known to produce mental illness. In fact, a recent report highlighted the fact that soldiers in Military Occupational Specialties with high incidences of RBE have statistically higher suicide levels.[6]

What is key to this discussion is that while RBE, like RHI produces no immediate symptoms or damage, we do know that the first indicator that a brain is damaged is the emergence of mental illness. This is important to understand as the link between RBE, brain damage and mental illness is a key indicator that has been overlooked in the treatment of veterans. While we don't have exact data on the number of veterans that have been diagnosed with mental illness, estimates range from 16%[7] to as high as 50% of the deployed population have been affected. However, given the recent urgency present in RBE related research, it is unfortunately safe to say that almost none of them have been evaluated for the impact of RBE on their brain that could be the root cause of their mental illness or suicidal ideation. This has led to the probable misdiagnosis of many veterans' mental illness as PTSD, especially when there has been significant combat exposure or, especially if a TBI is present.

In fact, the focus on TBI, while particularly important, has obfuscated the research and understanding that the impact of RBE on the brains of our veterans. While RBE can be thought of as a mTBI due to the fact that it does have an impact, TBIs are thought of as events, not as a prolonged exposure to an occupational hazard. Thus, while TBIs have been the focus due to their obvious impact on the servicemember, another viable and dynamic threat to them, RBE has continued unaddressed. This is the reason it is becoming an urgent requirement at this time.

In addition to a lack of awareness about RBE/RHI exposure and its impact on the brain and mental health of our troops, there is a lack of education as well. Currently, the impacts of

[6] https://www.nytimes.com/2024/07/31/us/military-suicide-rates-report.html
[7] https://www.ncbi.nlm.nih.gov/books/NBK572092/

RBE exposure are not trained in any military or civilian medical, nursing or psychiatric programs at all. Thus, soldiers that are diagnosed with mental illness are mistreated due to the inability to associate their mental condition with RBE/RHI. Most of the time they are given a diagnosis of PTSD or GAD due to their time in a combat zone or combat related experiences, but the reason for the mental illness may not be a pure psychological one.

This leads to a significant issue where military personnel, who have shown signs of mental illness have been forced to separate from the military due to their actions or inability to work. This has created a significant veteran population, men and women that have served their country, which remain outside the VA or any military treatment systems due to the status of their discharge. These are some of the most impacted of the veteran population as they do not have any access to treatment and often choose to address their mental illness, which could have been caused by their military service, with substance and alcohol abuse leading to violence, homelessness and sometimes death.

There is a larger problem with the treatment options for veterans that run concurrently with the lack of awareness. Due to the inability to correlate mental illness with RBE/RHI exposure, doctors and psychologists are quick to prescribe traditional pharmaceutical medicines and/or therapy to treat the symptoms of the mental illness. This “normal” approach to mental illness without the corresponding assessment of RBE/RHI exposure or the failure of the treatment protocols fails the alleviate the veteran’s mental health and requires doctors to keep prescribing different medicines to try and “cure” the veteran. This has led to what can only be described as tsunami of medication where veterans are prescribed numerous psychotropic mediations, sometimes more than 10, to address the various symptoms of the mental illness and then the effects of those drugs on the veteran. Oftentimes, drugs are prescribed with not consideration on the long-term effect of the veteran or without disclosure of “black box” warnings concerning addiction of suicide. This has led to an enormous distrust of the VA, a distrust that is honestly unearned, but associated with the prevalence of SSRI and other drugs used to combat mental illness.

But there is hope for the veteran and for society to do a better job. In the last 5 to 7 years, there has been an avalanche of new modalities that have shown to have significant and positive impact on the brain and mental health of combat veterans. Most of these modalities are older technologies or medicines that were not known to have a positive impact on brain tissue regeneration or plasticity, while others are newer procedures or medicines. Regardless, these modalities, from brain focused supplementation and diet, to psychedelics to electronic and stimulation therapies and new counseling methods. Some of these like HBOT, Ketamine and natural psychedelics as well as TMS, cold plunge therapy and more have significant studies

and evidence behind them yet most if not all remain out of the reach of the veteran as they are not offered nor covered by Tricare or the VA.

It must be noted that there is no template for the treatment of a damaged brain and expectations for established protocols and exacting treatment plans must be limited. The brain of every combat veteran is unique to the background, combat experience and RBE/RHI exposure of the individual. Therefore, it is impossible to determine which of the many proposed modalities may be the correct in terms of combinations or duration. However, due to the research and science behind many of these, models can be built that would be a good starting point and it is a point of this proposal to use the evidence and reports to better outline combinations of these modalities for future prescriptions.

Although this is a brief discussion of a significant societal issue affecting millions of veterans, it outlines the history and outcomes of an approach to mental illness that is failing or has failed a large number of military veterans and their families. It is time to look 'outside the box" to attempt to address this issue. Innovation and change, something that the U.S. Government and the military are adverse to, need to be embraced if we are to "break the cycle" and offer access to modalities that have sufficient science and a history of safety that can help veterans overcome the damage to their brain and their psyche from combat and training.

5. Proposed Legislation

The proposed language is proposed to address the six identified gaps that exist when it comes to addressing the significant issues raised by RBE exposure. By integrating a series of agendas, a holistic, programmatic approach can be developed that will address each gap, but as part of a larger program designed to address the identification and treatment of affected veterans.

It is recommended that each agenda be supported by requirements and deliverables designed to provide a scalable approach to the issue of RBE. As will be seen, each program builds up on the previous but does not rely on the previous program to be initiated. Due to the development of the recommended processes and modalities, it is possible that the requirements of this bill can be met and initiated in less than 6 to 12 months.

a. Part 1 – Education and Awareness

There is no doubt that there is minimal awareness of the issue of RBE nor the correlation between the condition and mental illness leading to misdiagnosis or lack of treatment. Thus, it is critical that the appropriate agency (VA, CMS, CDC etc.) take up the call to develop educational platforms that will create an informed and educated medical and psychological communities to treat veterans both within established military treatment systems, i.e. Tricare and the VA as well as civilian treatments systems. It is recommended that the VA and

appropriate health care agencies take some of the following steps to educate and inculcate medical and psychiatric/psychological practitioners as well as suicide prevention specialists on the issue of RBE and mental illness.

- Continuing Medical (CMEs): CMEs are a very common pathway to education specialists in new areas of knowledge. A series of CMEs addressing the issues that surround RBE can be developed and deployed to educate the force.
- Mandated Institutional Education – due to its prevalence in the nature of military training and combat, medical, nursing, psychological/psychiatric and other associated programs should be required to include instruction on the issues or RBE to include causality, symptoms, diagnosis and treatment.
- Seminars – RBE is already part of many military health seminars, however, it is a voluntary subject and not mandatory. Including RBE in military or brain health conventions, symposiums, to deploy critical training and knowledge would help permeate medical and psychological communities.
- Broad Agency Announcements/Guidance/Notifications- the military can use established communications pathways to spread awareness of the issue of RBE and its effects on the force.
- Enforcement – attendance on the issue and annual refresher training should be mandated and expectations set to achieve an educated medical and psychological force.

b. Part 2 – Diagnosis

Currently, there is a significant gap in the area of diagnosis of RBE related disorders primarily due to the lack of education about the subject and its relationship to mental illness. In the last several years there has been a remarkable increase in not only the protocols necessary to diagnose RBE related damage but also new tools that can assist with the objective proof that a service member has suffered from exposure. While the military is now looking at RBE as an issue and is establishing baselines and other metrics to track, monitor and evaluate exposure, the linkage to mental illness is important as that is the first indicator that a service member is, or has been suffering from long-term exposure.

It is recommended that a diagnosis be comprised of three components, first an assessment following the Traumatic Encephalopathy Syndrome (TES) protocols approved by the National Institution of Neurological Disorders and Strokes (NINDS), the second a scan of the brain that shows dysfunction, third an assessment of the aggregated blast exposure that a service member may have sustained i.e. GBEV or MBEV.

i. **Traumatic Encephalopathy Syndrome (TES) Assessment:** The TES protocols were proposed by NINDS to diagnose personnel that suffered damage to their brain from mild, repetitive, long term non-concussive exposure such as from hitting the head in combat sports and/or military training or combat as well as repetitive exposure to blasts from training and participation in combat operations. The protocols were developed to be part of an assessment to provide diagnosis and subsequent treatment and focused on 4 basic questions that focus on the impact of long-term exposure and the resulting behavioral, psychological or cognitive outcomes. The protocols are simple, can be used by any medical, psychiatric or suicide prevention practitioner and can provide a snapshot of the possibility of damage from RBE:
    1. Is there an established history of RBE exposure from military training or service?
    2. Does the service member have a mental illness i.e. behavioral, psychological or cognitive disorder?
    3. Is the behavioral, psychological or cognitive disorder progressing?
    4. Is there any predisposition to mental illness i.e. genetic, substance abuse, etc.

ii. **Aggregate Blast Exposure Evaluation**: Ater application of the TES protocols it is also recommended that an evaluation of the aggregate amount of exposure be accomplished. The Generalized Blast Exposure Value (GBEV) or Blast Exposure Threshold Survey (BETS) are both new methods of establishing the amount of low level or repetitive blast exposure and can be used in conjunction with the TES scans to further support a diagnosis of RBE related illnesses.

iii. **Brain Scans:** In order to validate the findings of the TES and blast evaluations it is recommended that a scan is done of the brain to substantiate damage. Over the past few years, there have come to the forefront of the medical market several scans that can be used to show aberrations in the brain that maybe caused by RBE. Many of these scans are quite prevalent in the market, others are rarer, but the point is that any servicemember is in the proximity of both a scan and someone with a neurological background that can read it. However, it is necessary to ensure that someone that can read these scans is also familiar with the issue of RBE to ensure an objective reading and association between the damage and any behavioral disorders. Some of the scans that can be used to identify service members with RBE induced trauma are:
    - QEEG
    - Diffusal Tensor Imaging
    - Functional MRI (fMRI)

- SPEC Scan

By leveraging these three processes, practitioners can evaluate servicemembers with behavioral disorders and mental illness for an association between that mental illness and blasé exposure. This is a critical step in providing an accurate diagnosis of the service members mental illness as without a proven association with blast exposure the service member will receive treatment reserved for patients with non-blast exposure related mental illnesses which will not treat or heal the primary cause of the mental illness, a damaged brain.

Some of the recommendations to improve diagnosis:

- Validate the NINDS TES protocols through research, studies and surveys and allow medical, psychological and suicide prevention specialists to use them in conjunction with other modalities to identify service members with RBE exposure and probable brain damage.
- Provide for education on the application of TES protocols to the active and veteran populations.
- Provide for access and coverage of brain scans for veterans and for the training of doctors and neurologists on the inclusion of these scans when assessing veterans for RBE related damage.
- Provide for expansion and utilization of the GBEV and BATS methods of determining aggregate blast exposure.
- Provide for a treatment plan that includes TES Protocols, brain scans and exposure assessments to validate damage from RBE and support a diagnosis that will lead to treatment plans focused on brain health.

c. Part 3 – Treatment

There needs to be a shift in the treatment of RBE related mental illness away from traditional treatment options to other methods that have a significant track record in improving brain health. We must remember that we are dealing with a complex medical condition that has both a traumatic and a physiological component and both must be addressed.

The purpose of this legislation is to address the latter, the physiological component i.e. damage to the brain. Currently, the methods used by practitioners are comprised of two primary components: pharmacology and therapy. While these have been proven effective in the treatment of mental illness that has been brought on by genetics, traumatic experiences or the side effects of drugs, they are focused on the chemistry of the brain not on the means necessary to heal it.

This is where the expansion of treatments proven to be effective at stimulating brain growth or producing improve brain health should be available to address the requirement for the brain to heal. This is the gap that is necessary to provide service members suffering from the effects of damage to their brain from RBE a path to a healthier brain which, in turn, will diminish the severity of their mental illness.

Currently, there are no recommended or validated modalities that are offered by insurance carriers or the Veterans Administration as RBE is a relatively new condition in the eyes of the medical community. However, due to new research outlining the impacts on the brain from RBE, one can state that this more a new "understanding" vice a new condition.

However, it is described: an understanding, a finding or a medical condition, the outcomes of improper or a lack of treatment are severe. It has been known for years that mental illness has been a priority of the veteran community due to its impact on the lives, families and the veteran community overall. In terms of lives lost, careers shortened, families destroyed, incarcerations and violence, the impact on the veteran community and our nation cannot be calculated. This is why it is necessary to move away from the current recommended treatment options of pharmaceutical drugs and therapies to alternative therapies, supplementation and treatments that have a track record of positive outcomes with hundreds and thousands of veterans.

This issue is, how is the condition of RBE addressed to improve the mental health of our veteran population? It is known that there is a place for pharmaceutical treatments and therapies, but addressing brain health is critical to improving the mental illness of service members with RBE, thus it is recommended that the following treatments be available to veterans to address their condition in conjunction with their psychiatrist or therapist.

When addressing this issue from a treatment perspective it is important to understand that while the brain is a complex organ and that the veteran's safety is a priority, that the proposed treatments have been available for years, in some cases, decades with a very high degree of both safety and positive outcomes for the patient. While some of these treatments, specifically psychedelics have concerns about their "proven" impact or legality, it must be said that they have an extended and impressive track record of improving the mental health of service members.

When it comes to the mental health of our service members, the time to act on the epidemic of mental illness in terms of treatment is now. While there is no doubt about the dedication of our medical community to the mental health of our service members, when it comes to treatment options, it is necessary to change the course of recommended treatment options and expand the recommendation and coverage of alternative modalities to improve their mental health and save lives.

i. **Treatment Alternatives** – the following list of alternatives is provided as a list of options that have a track record of improving the brain health of veterans. The list is to be treated as options for each veteran to select in conjunction with their therapist or medical practitioner in conjunction with pharmaceutical and therapeutic treatment.

ii. Blood Tests and Supplementation: There are multiple supplementation programs available that focus on improving the health of the brain through diet, supplements and nutraceutical supplementation. Through the use of common blood tests, increases or decreases of crucial chemicals, hormones and other biomarkers can indicate the presence of long-term inflammation and damage to critical structures which can be addressed by balancing the chemistry of the brain. These programs have had significant success in improving the brain health and overall mental health of service members.

iii. **Non-Psychedelic Modalities:** For decades there have been a multiple of treatments and modalities that are known to stimulate the brain and provide an improvement in overall mental health. While some of the exact impacts are unknown, each of these recommended modalities has extensive track records and testimonials of hundreds if not thousands of veterans of improved brain and mental health.

1. Hyperbaric Oxygen Therapy
2. Transcranial Magnetic Stimulation
3. Photo Bio Modulation
4. Cold Plunge Therapy
5. Vagal Nerve Stimulation
6. Alpha Stim Device
7. Fisher Wallace Device

ii. Outpatient Surgical Procedures

1. Stellate Ganglion Blocks (SGB)

iii. Psychedelics

1. Ketamine
2. Psilocybin
3. Ayahuasca
4. Ibogaine
5. MDMA

Points for Legislation

- Provide CME credits and education on the availability of alternative treatments and their impact on brain health.

- Promote awareness of alternative treatment options.
- Recommend training of therapists and practitioners on the different types of alternative treatment options and how to integrate them with therapy and pharmaceuticals.
- Provide awareness of these modalities to the VA, TRICARE and promote them through correspondence to the veteran community.
- Mandate that alternative treatments be supported under TBI billing codes.
- Continue to fund research into the combination of modalities that are suited for various diagnoses of damage to the brain.
- Require the VA and CDC to promote RBE awareness alternative modalities to improve brain health.
- Mandate insurers to cover alternative modalities that are recommended under TBI billing codes.
- Require providers to have a track record of care and to submit to periodic inspections and audits of their practices.

d. **Part 4 – Billing Codes:**

A significant gap in the treatment of veterans continues to be the lack of billing codes associated with RBE and the alternative modalities that are necessary to improve brain and mental health. This situation prevents the veteran from receiving care that is addressing the physiological component of their mental illness causing their condition to worsen as it has been misdiagnosed. Even when doctors are knowledgeable of the correlation, they cannot prescribe alternative methods to treat the brain as they are not covered under any billing codes.

To address this, it is simply to address the root cause of the condition and look at billing codes that are currently being used to provide medical care and coverage. As the root cause of RBE related damage to the brain is a mTBI, it makes sense to simply expand the protocols covered under existing TBI protocols to include alternative treatments. This will also expand the care that is available to TBI patients as well as their brain health is also at-risk post injury, and these alternative treatments can assist in recovery.

Recommendations for Legislation

- Expand coverage of care under TBI billing codes to include mTBI and RBE.
- Require insurance carriers to provide care under these billing codes for alternative treatments.

- Provide education and awareness of these changes to the medical and psychiatric communities to expand coverage.
- Promote awareness of increased coverage to include RBE through CDC, AMA, NIH and other partnerships and national health agencies.

e. Part 5 – Insurance Coverage for Treatments:

Due to the lack of approved brain treatments and modalities, the majority of treatments proven to treat the brain remain out of pocket for most veterans. This is exacerbated by the lack of knowledge and awareness in the medical and psychological communities of their value in addressing RBE related damage to the brain and their impact on improving overall brain and mental health.

The lack of coverage for modalities to improve brain health has stymied the progress of veterans to improve brain health as they rely on our medical and psychological practitioners to recommend modalities to improve their symptoms. Often, when symptoms persist or worsen, the only course of action is to recommend other pharmaceutical products that treat the veteran's symptoms, but as stated, not the cause of the mental illness. It is critical that alternative modalities are approved to assist our veterans to increase their options to treat their brains and to improve mental health challenges that arise from RBE.

As part of this legislation, it should be mandated these treatments be covered by veterans who have been through screening and/or have already been under psychiatric care with slight improvement for 12 months or more. Through legislation, insurance providers should be required to expand coverage and offer these treatments to veterans that are in need, or who seek them to improve their brain health.

Recommendations for Legislation

- Mandate that insurance providers expand coverage to include brain supplementation, brain scans, RBE evaluations, technical treatments, surgical procedures and psychedelics from proven providers.
- Provide awareness through seminars, publications, PSAs to the medical, psychological, and veteran affairs communities of these changes.
- Provide awareness through veterans' organizations (VFW, SOF, American Legion, DAV etc.) of these changes.
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6. Conclusion

With over 160,000 suicides and 44 veterans killing themselves every day, it is critical that mental health challenges are addressed through legislation to mandate and enforce the action that is so necessary. We can no longer wait for magical remedies to appear, nor can we continue the current path of pharmaceutical and therapeutic intervention when it is apparent that this approach, in place for 20 years, has done nothing to ameliorate the persistent trend of veteran suicide. In fact, there is substantial evidence that has worked to the contrary when it comes to the issue of veteran mental health and change is needed.

When it comes to the lives of our veterans, we can no longer wait to approve treatments that have hundreds if not thousands of veterans attesting to their value in improving their mental health. Men and women, many who have already tried to take their lives are hanging on by a thread, living in hopelessness and fear, suffering in silence, unaware that there are actually options to improve their brain health. In fact, this legislation should be fast tracked due to its value in reducing suicide and improving brain health in our veteran population. Nothing, not bureaucracy, elections, nor partisanship should stand between these veterans and a better future. Our focus on TBI, while important, has prevented an understanding of the real culprit, RBE, for over 20 years. This, in many cases, has prevented treatment and failed many veterans who are no longer here. It is no longer an option to wait, it is our responsibility to take the research and science that prove that this threat exists and use to finally respond, to create a culture of action, to approve this and disseminate the knowledge, diagnosis and treatments to the stakeholders and providers of treatment to our veteran population while ramming the requirements for coverage under TBI billing codes and mandating coverage for our veterans.

They have served our country, and it is our mandate to serve them. Let's move.

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