

Healing Invisible Wounds: An Action Plan

Research Efforts Improve Our Understanding of Trauma

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Since September 11, 2001, more than 2.5 million service members have deployed to Iraq and Afghanistan. In contrast to previous wars, these recent wars have been fought by an all-volunteer force that has experienced multiple deployments. Many of the service members are in reserve or National Guard units. Many women and parents of young children have served. And many have survived severe injuries that would have almost certainly been fatal in previous wars. Invisible brain injuries like traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD) have been the signature wounds of these wars. The Armed Forces Health Surveillance Center reports more than a quarter million cases of TBI occurring in the military between 2000 and 2012. The prevalence of PTSD and depression in the military has been estimated to surpass 20 percent.¹ The rate of suicide in the military, which traditionally is lower than the civilian rate, has doubled in the Army since 2003 and now exceeds the rate of suicide in civilians matched for age, sex and race.² Since 2009, more soldiers have died from suicide than combat.³

Recognizing these facts, President Obama issued an Executive Order last summer requesting “all hands on deck” to ensure better outcomes for those who have sacrificed for all of us. One of the results of this Executive Order has been the development of the National Research Action Plan (NRAP). The NRAP was the result of months of planning between the Department of Defense, the Department of Veterans Affairs, the National Institutes of Health and the Department of Education. Together, these agencies reviewed the state-of-the-science, the current research portfolios and the opportunities for progress. Together they have committed

to transforming the research landscape to accelerate progress.

Each of the agencies already has a large investment in research on TBI and PTSD. The NRAP calls for a new culture of standardization, integration, and sharing of data across all funding agencies. We recognize TBI and PTSD as brain injuries, but the brain tissue we need to study to understand them is in short supply. The NRAP calls for an increased inventory of tissue, blood and cerebrospinal fluid samples with creation of virtual repositories in the interest of increasing access to these resources for scientific purposes. In contrast to most other neuropsychiatric disorders, TBI and PTSD are the result of injury. Yet, we have no way of knowing after an injury who will recover completely and who will be disabled; even mild symptoms may lead to significant impairment. The NRAP calls for the identification of predictive or diagnostic biomarkers for PTSD and TBI which can be evaluated in clinical trials for their potential to help us better understand treatment response and more effectively match individuals to treatments. Many service members and veterans who develop PTSD respond well to treatment, but too many do not recover. The NRAP will help focus research efforts to improve our understanding of the impact of trauma and ultimately provide better treatments to improve the lives of those who have served as well as the tens of thousands of civilians who are exposed to traumatic events.

We know that service members and veterans with neuropsychiatric disorders are at increased risk for suicide, but we do not have useful tools with which to predict the individuals at highest risk. The Executive Order called for recruitment by the end of 2012 of 100,000 soldiers to assess risk for suicide. NIMH and the Department of the Army, collaborating on the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS), completed recruitment of more than 100,000 soldiers last December and is already defining the major predictors of risk for suicide. The NRAP calls for expanding Army STARRS into a long-term longitudinal study, similar to the Framingham study of heart disease, encompassing not just suicide, but PTSD, TBI and other comorbid conditions.

This is the third time the President has talked about mental health in recent months. In April 2013, he announced the BRAIN initiative, in June the National Conversation on Mental Health, and now the NRAP. Taken together, these three announcements define not only the dimensions of a major national health challenge, but a potential solution based on (a) better tools for studying brain disorders, (b) better public awareness and broader access to mental health care, and (c)

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When we consider the existential nature of our existence as biological creatures who experience our bodies, and our minds through the filter of our physical 'tissue,' a deep juxtaposition exists between the programming of biological reward states and the reinforcement of our experience of reality. A duality surrounding attachment to the illusion of control and the 'artificial' state of intoxication could not be more profound than in the brain of the opioid-addicted person. An essential component of 12-Step recovery embraces the spiritual nature of our existence. It is interesting to see patients working personal programs of recovery informed by the perspective that we are able to question our biological experience, see the truth and the deception of the mind relating to our attachments. It is also relevant to note that the experience of recovery fellowship provides itself a biological-tissue driven, reward relating to physical proximity, emotional intimacy and the experience of compassion and empathy.

A message of hope

I think that the most important message to any person addicted to opiates is for a person must admit their powerlessness over the drug. I have seen people try to rationalize their way into their recovery. Every time I have seen that happen people seem to find a new bottom. Ego and the concept of self-will are deeply reinforced by the emotions of shame and guilt surrounding being addicted. These concepts are ubiquitous in treatment and recovery, but with opioid addicts there is such deep salience for the drug the concept of abstinence is exceptionally difficult for many to embrace. The concept of 'never-again' is very difficult on both a conscious and subconscious level. I have always thought that it is critical for recovering people to ask themselves if they are ready to get the divorce from their drugs.

Recovery treatment must focus on something more than the provision of medication. It is essential to provide a safe context, a safety net for pain recovery which includes working the 12-Steps, which includes: accepting limitations, working with a sponsor and

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better coordination of research between agencies. The NRAP will serve as a strategic plan for reducing the morbidity and mortality of PTSD and TBI.

In his announcement of NRAP, the President told of the remarkable journey of an Army Ranger, Sergeant First Class Cory Remsburg, who was nearly killed by an improvised explosive device in Afghanistan. After months in a coma, dozens of surgeries, and years of rehab, Sergeant Remsburg is now planning for a 42-mile bike race. As the President said, "The war in Afghanistan may be ending, but for Cory and our disabled vets, the work has only just begun. Cory is 30 years old. His recovery — like so many of yours — will last a lifetime. But he won't give up, because you haven't given up. And when it comes to our work, to making sure that our nation is fulfilling its promises to the men and women who served and sacrificed, America cannot give up either."

NIMH was founded in 1948, charged by President Truman to address the problems of soldiers and veterans with "combat neurosis." Now, 65 years later, we have the same charge, to address the same illnesses from a very different war. Fortunately, we have better tools and a better understanding of the problem. But it is important to acknowledge that there is still much we do not know. We can provide better

defining what ever their limitations may be, making a phone call, and working with a group of experts such as physical therapists, physicians, and pain psychologists.

We strive to create a holistic approach to the mind, the body, the spirit of each of our patients. It is important to understand that the essence of 12-Step recovery is essentially a spiritual and/or existential transformational process. It is important to understand the biology of pain and what is going on in the body. An appreciation of the neurochemical dynamics of opioid drugs and pain informs us about how we can help heal the mind of those who are addicted. If we as health providers can create a stable platform using varying modalities enhanced with medications, I believe that we can help patients achieve the existential transformation that becomes the central core of successful treatment and recovery programs.



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access to current diagnostics and current treatments, but for too many people this will not be enough. As the NRAP makes clear, we will need better science if we are to repay the debt owed to the more than two million men and women who have sacrificed for us all.



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