Testimony
Before the Committee on Oversight and Government Reform
United States House of Representatives

Post-Traumatic Stress Disorder Research at the National Institute of Mental Health

Statement of
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Good morning Chairman Waxman and members of the Committee. I am pleased to present a brief review of the research activities in post-traumatic stress disorder research at the National Institutes of Mental Health (NIMH) at the National Institutes of Health, an agency of the Department of Health and Human Services (HHS).

**What is Post-Traumatic Stress Disorder?**

Post-traumatic Stress Disorder (PTSD) is a chronic medical disorder that follows exposure to an overwhelming traumatic event. The main features are intrusive thoughts including flashbacks, avoidance of things that recall the trauma, and hyperarousal (sleeplessness, restlessness, irritability). While some of these symptoms may be common for most people after a traumatic event, the hallmark of PTSD is a failure to recover psychologically from the trauma, with consequent impairment of normal functioning. The majority of those with PTSD meet the diagnostic criteria for several psychiatric disorders, especially depression and substance abuse, and many also attempt suicide. Significant health problems are also more likely to occur in individuals with PTSD than in those without the disorder, particularly hypertension, asthma, and gastrointestinal problems.

As many as 3.5% of Americans meet criteria for PTSD in any given year in the general population. Since World War II we have seen a wave of combat veterans with increased rates of PTSD. Much progress has been made since the Vietnam War, in which 18-20% of veterans were reported to be affected with PTSD. Scientists have developed effective therapies such as cognitive behavioral therapy and medications. We have learned much about the brain’s fear circuitry and are currently developing new medications that will
help influence fear and related responses to highly stressful events. This new information on the brain’s circuitry has led to a focus on prevention of PTSD as a realistic and important goal.

**What is the PTSD Burden for Current Military Service Members?**

Despite the high risk of mental health problems among veterans returning from Iraq and Afghanistan, we do not have a definitive picture of the prevalence of PTSD in this population. A recent study of Operations Iraqi Freedom and Enduring Freedom (OIF/OEF) veterans first seen at Department of Veterans Affairs (VA) health care facilities found that 25% received mental health diagnoses, such as PTSD, depression, anxiety disorders, or substance abuse disorders. More than 50% of these had more than one co-occurring mental health disorder, but the most common mental disorder of all was PTSD, affecting 13% of all veterans, well above the rate of 3.5% found in the general American population.

While these numbers are of great concern, research to date with OIF/OEF veterans indicates that for those identified as having problems, most received their diagnosis within days of their first VA clinic visit – thus, early on, when the opportunity is greatest for providing early evidence-based treatments. However, we also know that the veterans who are experiencing mental health problems have a low rate of actually seeking mental health services, about 23-40% of those who need these services. Thus, as with other groups within the United States, many of those in need of mental health services do not actually obtain care.
Based on earlier research with the veterans of Vietnam, it is likely that the mental health burden for OIF/OEF will increase as time goes on, with new cases becoming evident and untreated problems becoming chronic. About 29% of OIF/OEF returned veterans have already enrolled in VA health care, a figure that exceeds the estimated 10% rate observed after the return of the Vietnam veterans. As the number of OIF/OEF veterans grows, their continued care will remain a national health care concern. It is important to remember that the burden of illness spans beyond symptoms to functional disability and applies not only to those who have served in the military and suffer from deployment-related problems, but also to their families, who may go from feelings of apprehension during deployment to a sense of confusion and helplessness when their loved one returns with PTSD.

**How Does Co-Occurring Illness Add to Risk?**

In the general population, about 75% of people with PTSD will have a co-occurring disorder, with the most common being depression, often complicated with alcohol or substance abuse. There are no comparable statistics yet for OIF/OEF veterans.

The risk of PTSD is increased in those with physical trauma and increases proportionally with the amount of direct exposure to combat-related trauma. More research is essential to determine what features of physical trauma predict the greatest adjustment-related problems. There is also a need to understand how traumatic brain injury (TBI), PTSD, and substance abuse interact, as all are associated with problems in attention, mood regulation, and impulse control, potentially reducing the effectiveness of current treatments for PTSD.
While each condition separately has received extensive study in other populations, there is very little data with respect to the interplay of PTSD and other medical conditions in service members in the initial phase following their return from deployment. There is limited epidemiologic research that examines the adjustment of service members with TBI, alcohol/substance abuse, and/or other mental and medical health conditions and that considers how these factors that might interact with stress exposure and could influence adjustment.

**What Is NIMH Doing About PTSD?**

The psychological consequences of war were an important focus when NIMH was created 60 years ago. In recent years, the NIMH has strengthened its ties to the VA and the Department of Defense (DoD) to coordinate what we know and need to know regarding the magnitude and nature of mental health needs related to deployment and war related trauma, identify determinants of help-seeking and care provision, accelerate the discovery of fundamental knowledge needed to improve treatment, prevent mental disorders, and ensure that all those who might benefit from mental health care receive it. NIMH’s investment in PTSD research overall has gone from $15 million in FY 1997 to approximately $45 million in FY 2006. Of this, approximately $5.2 million in FY 2006 supported research grants specifically focused on PTSD with active duty or veteran populations.

Several recent activities involving NIMH, DoD and VA have helped to identify areas in which each agency might focus its own research agenda, as well as areas of mutual interest where collaboration is needed to improve problem identification, access, use and
effectiveness of services. For example, in September 2005, NIMH, DOD and VA issued a joint Request For Applications to accelerate research on the identification, prevention, and treatment of combat related post-traumatic psychopathology and similar adjustment problems. Together, NIMH and the VA awarded approximately $1.2 million to support six new projects in 2006 targeting mental health needs of Active Duty, Guard and Reserve personnel returning from Iraq or Afghanistan. In addition, NIMH maintains an active Program Announcement (PA-04-075 “Mental Health Consequences of Violence and Trauma”) for DoD, VA, and civilian researchers to enhance scientific understanding about the etiology of psychopathology related to violence and trauma, as well as studies to develop and test effective treatments, services, and prevention strategies in this area.

The following questions guide our research effort:

- Why are some individuals vulnerable and other resistant to PTSD following a traumatic event? How can we predict who will be at greatest risk?

One of the most important goals of current research is identifying risk factors, using powerful new tools such as genomics and neuroimaging. In one such effort, a collaborative study between the NIMH Intramural Program and DoD is studying soldiers who appear highly resilient to stress and trauma. In another study, individuals are followed after a traumatic event to identify biomarkers or risk factors that will predict PTSD.

- What can we do to prevent or preempt PTSD?

New initiatives in FY2008 include projects to advance the prevention of post-deployment mental health problems among members of high-risk occupations who regularly encounter traumatic situations, such as firefighters, police officers, rescue workers, and military personnel. Occupations that involve exposure to trauma at higher-than-average
frequency present unique opportunities to test the effectiveness of preventive interventions that target trauma-related mental disorders. From a public health and national security perspective, attending to the mental health of the men and women who respond to emergencies, defend our national interests, and maintain a civil society can be viewed as strengthening our national infrastructure.

- What are the opportunities for novel treatments or prevention of PTSD?

Several avenues for new treatments are currently being explored. New medications that appear to selectively affect the encoding of traumatic memories are being tested with promising results. While psychological treatments have been shown to be effective, not everyone will or can access these treatments. In partnership with VA, DoD, and civilian researchers, NIMH is actively trying to make effective psychosocial treatments such as cognitive behavioral therapy more widely available, along with Internet-based self-help therapy and telephone assisted therapy. In the last decade, rapid progress in research on the mental and biological foundations of PTSD has led scientists to focus on prevention. For example, NIMH-funded researchers are exploring new and orphan medications thought to target underlying causes of PTSD in an effort to prevent the disorder. Other research is attempting to enhance cognitive, personality, and social protective factors and to minimize risk factors to ward off full-blown PTSD after trauma.

Much has been learned about PTSD since the Vietnam War, when many in the general public doubted whether PTSD was a true disorder. We now understand PTSD as a brain disorder. As imaging technologies and genomic research improve, scientists are likely to be able to pinpoint individual risk, which may then lead to better personalized treatments as well as prevention. Thank you for the opportunity to present the progress we have
made to date and share with you the glimpse of new opportunities afforded by research in understanding and treating this serious illness. I look forward to answering your questions.