DoD/VA WOUNDED, ILL, AND INJURED
SENIOR OVERSIGHT COMMITTEE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301

The Honorable Jim Webb
Chairman, Subcommittee on Personnel
Committee on Armed Services
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

The letter responds to Section 1661 of the National Defense Authorization Act for Fiscal Year 2008 that requires the Secretary of Defense, in consultation with the Secretary of Veterans Affairs, to enter into an agreement with the National Academy of Sciences (NAS) for a two-phase study on the physical and mental health and other readjustment needs of members and former members of the armed forces who deployed in Operation Iraqi Freedom or Operation Enduring Freedom and their families. NAS assigned the study to the Institute of Medicine (IOM). The Phase 1 report, which is enclosed, took longer to coordinate than anticipated, and for this delay we offer our apologies; we are fully committed to delivering the Phase 2 report on time.

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Thank you for your support of the Military and Veterans Health Systems.

Sincerely,

Lynn C. Simpson
Director, Human Capital and Resource Management
Performing the Duties of the Principal Deputy Under Secretary of Defense (Personnel and Readiness)

Raul Perea-Henze, M.D.
Assistant Secretary for Policy and Planning
Department of Veterans Affairs

Enclosures:
As stated

cc:
The Honorable Lindsey O. Graham
Ranking Member

DoD/VA WOUNDED, ILL, AND INJURED
SENIOR OVERSIGHT COMMITTEE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301

The Honorable Ike Skelton
Chairman, Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

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Raul Perea-Henze, M.D.
Assistant Secretary for Policy and Planning
Department of Veterans Affairs

Enclosures:
As stated

cc:
The Honorable Howard P. "Buck" McKeon
Ranking Member

DoD/VA WOUNDED, ILL, AND INJURED
SENIOR OVERSIGHT COMMITTEE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301

The Honorable Susan Davis
Chairwoman, Subcommittee on Military Personnel
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

Dear Madam Chairwoman:

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Raul Perea-Henze, M.D.
Assistant Secretary for Policy and Planning
Department of Veterans Affairs

Enclosures:
As stated

cc:
The Honorable Joe Wilson
Ranking Member

DoD/VA WOUNDED, ILL, AND INJURED
SENIOR OVERSIGHT COMMITTEE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301

The Honorable David R. Obey
Chairman, Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

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Raul Perea-Henze, M.D.
Assistant Secretary for Policy and Planning
Department of Veterans Affairs

Enclosures:
As stated

cc:
The Honorable Jerry Lewis
Ranking Member

DoD/VA WOUNDED, ILL, AND INJURED
SENIOR OVERSIGHT COMMITTEE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301

The Honorable Daniel K. Akaka
Chairman
Committee on Veterans Affairs
United States Senate
Washington, DC 20510

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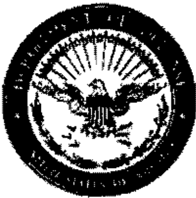
Raul Perea-Henze, M.D.
Assistant Secretary for Policy and Planning
Department of Veterans Affairs

Enclosures:
As stated

cc:
The Honorable Richard Burr
Ranking Member



DoD/VA WOUNDED, ILL, AND INJURED
SENIOR OVERSIGHT COMMITTEE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301

The Honorable Bob Filner
Chairman
Committee on Veterans Affairs
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

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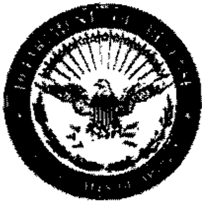
Performing the Duties of the Principal Deputy Under Secretary of Defense (Personnel and Readiness)

Raul Perea-Henze, M.D.
Assistant Secretary for Policy and Planning
Department of Veterans Affairs

Enclosures:
As stated

cc:
The Honorable Steve Buyer
Ranking Member



DoD/VA WOUNDED, ILL, AND INJURED
SENIOR OVERSIGHT COMMITTEE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301

The Honorable Tim Johnson
Chairman, Subcommittee on Military Construction,
Veterans Affairs, and Related Agencies
Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

The letter responds to Section 1661 of the National Defense Authorization Act for Fiscal Year 2008 that requires the Secretary of Defense, in consultation with the Secretary of Veterans Affairs, to enter into an agreement with the National Academy of Sciences (NAS) for a two-phase study on the physical and mental health and other readjustment needs of members and former members of the armed forces who deployed in Operation Iraqi Freedom or Operation Enduring Freedom and their families. NAS assigned the study to the Institute of Medicine (IOM). The Phase 1 report, which is enclosed, took longer to coordinate than anticipated, and for this delay we offer our apologies; we are fully committed to delivering the Phase 2 report on time.

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Performing the Duties of the Principal Deputy Under Secretary of Defense (Personnel and Readiness)

Raul Perea-Henze, M.D.
Assistant Secretary for Policy and Planning
Department of Veterans Affairs

Enclosures: As stated

cc: The Honorable Kay Bailey Hutchinson
Ranking Member

DoD/VA WOUNDED, ILL, AND INJURED
SENIOR OVERSIGHT COMMITTEE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301

The Honorable Chet Edwards
Chairman, Subcommittee on Military Construction,
Veterans Affairs, and Related Agencies
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

Dear Mr Chairman:

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Performing the Duties of the Principal Deputy Under Secretary of Defense (Personnel and Readiness)

Raul Perea-Henze, M.D.
Assistant Secretary for Policy and Planning
Department of Veterans Affairs

Enclosures:
As stated

cc:
The Honorable Zach Wamp
Ranking Member

DoD/VA WOUNDED, ILL, AND INJURED
SENIOR OVERSIGHT COMMITTEE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301

The Honorable Carl Levin
Chairman, Committee on Armed Services
United States Senate
Washington, DC 20510

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Department of Veterans Affairs

Enclosures:
As stated

cc:
The Honorable John McCain
Ranking Member

DoD/VA WOUNDED, ILL, AND INJURED
SENIOR OVERSIGHT COMMITTEE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301

The Honorable Daniel K. Inouye
Chairman, Committee on Appropriations
United States Senate
Washington, DC 20510

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Raul Perea-Henze, M.D.
Assistant Secretary for Policy and Planning
Department of Veterans Affairs

Enclosures:
As stated

cc:
The Honorable Thad Cochran
Ranking Member

Report to Congress Section 1661 of the National Defense Authorization Act for Fiscal Year 2008 Phase 1 Supporting Adjustment and Readjustment of Active Military, Veterans, and Family Members:

IOM's March 31, 2010

Returning Home from Iraq and Afghanistan: Preliminary Assessment of Readjustment Needs of Veterans, Service Members, and Their Families

September 2010

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I. Introduction

To address a 2008 Congressional mandate to study the physical and mental health and other readjustment needs of members and former members of the Armed Forces who deployed in Operation Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF) and their families as a result of such deployment (Public Law 110-181), the Institute of Medicine (IOM) of the National Academy of Sciences published *Returning Home from Iraq and Afghanistan: Preliminary Assessment of Readjustment Needs of Veterans, Service Members and Their Families* on March 31, 2010. This document presents a joint response from the Secretary of Defense and the Secretary of Veterans Affairs in response to the IOM report. This report on the first phase of a two-part study describes data collection methodology, summarizes preliminary findings, and proffers ten recommendations for future research. In general, the Department of Defense (DoD) and the Department of Veterans Affairs (VA) support the majority of IOM's recommendations, and are pleased to report that many of the recommended actions are already well underway, with particular emphasis on OEF and OIF Service members and Veterans.

In the sections that follow, comments are provided for each recommendation that include descriptions of the ongoing and completed studies and programs that address the suggested actions. Lists and brief descriptions of studies and publications are included in appendices A through H.

IOM considered data from numerous sources to include:

- searches of peer-reviewed literature;
- data from DoD and VA;
- reports from the Government Accountability Office;
- reports from the Congressional Budget Office;
- reports from the Congressional Research Service;
- reports in the popular press;
- relevant Congressional testimony;
- IOM reports on PTSD, PTSD treatment, the effects of deployment-related stress, and the long-term outcomes related to TBI: and
- six town hall meetings with active duty personnel, Veterans, family members, health-care providers, and community leaders.

Because information on specific readjustment needs of OEF/OIF Service members, Veterans, and their families is limited, IOM included in its review reports and studies on the Service members and Veterans of the Second World War, Korea, Vietnam, and the Gulf War. The authors make it clear that direct comparisons may not be appropriate because many more Service members now survive wounds they would not have survived in earlier conflicts.

Not surprisingly, much of the data included in IOM's chapter on preliminary findings has been reported elsewhere and complete citations are provided in the text. We have culled IOM's preliminary findings for those that are specific to the OEF/OIF conflicts and have included them as appendix I. As they do in the text, the OEF/OIF-specific findings address six areas of interest to include:

- TBI and related blast injuries;
- polytrauma;
- mental health disorders;
- deployment;
- women and minorities; and
- projecting the lifelong burden of war.

We look forward to Phase 2 of the study, "a comprehensive assessment… of the physical and mental health and other readjustment needs of members and former members of the Armed Forces who deployed in OEF or OIF and their families as a result of such deployment" (P.L. 110-181). Among the minimum requirements for Phase 2 outlined in the legislation, DoD and VA are particularly interested in new information on:

- An assessment of the particular impacts of multiple deployments
- An assessment of the full scope of effects of TBI and the efficacy of current treatment approaches
- An estimate of the long-term costs associated with "undiagnosed" injuries such as PTSD and
- "Recommendations for programs, treatments, or policy remedies targeted at preventing, minimizing, or addressing the impacts, gaps, and needs identified."

II. Response to IOM's Recommendations

In general, the Department of Defense (DoD) and the Department of Veterans Affairs (VA) support the majority of IOM's recommendations, and are pleased to report that many of the recommended actions are already underway, with particular emphasis on OEF and OIF Service members. Comments are provided for each recommendation that include descriptions of the ongoing and completed studies and programs that address the suggested actions.

A. IOM Recommendation 1

The committee recommends that the Department of Defense, the Department of Veterans Affairs, and other federal agencies fund research on readjustment needs of returning OEF and OIF [V]eterans, their families, and their communities that explicitly addresses methodologic and substantive gaps in completed and ongoing research. For example, the support of large-scale, independent studies with longitudinal designs, probability sampling, comprehensive clinical assessment of key outcomes, and more fully specified models that include objective biologic measures should be considered.

1. DoD Response to IOM Recommendation 1

DoD and VA agree with this recommendation and have worked steadily to develop and implement the most rigorous scientific investigations possible. In 2007, representatives from DoD, VA, various NIH (National Institutes of Health) institutes (e.g., National Institute of Mental Health [NIMH], National Institute of Neurological Disorders and Stroke [NINDS]), other federal agencies, and subject matter experts, primarily from academia, met as a working group to identify and prioritize research gaps in post-deployment military readjustment literature. This major effort directly informed the planning and development of the largest targeted research funding opportunity for deployment-related mental health and brain injury conditions in U.S. history. Supplemental Fiscal Year 2007 (FY07) DoD funding provided $150 million for Posttraumatic Stress Disorder (PTSD) research and an additional $150 million for traumatic brain injury (TBI) research. In FY09, Congress provided an additional appropriation of $55 million for psychological health (PH) and TBI research. Currently, DoD is investing more than $20.1 million in longitudinal studies on readjustment needs of Warriors and their families. One such study is described below.

Study to Assess Risk and Resilience in Service Members (Army STARRS)

Funded by the U.S. Army, and conducted by NIMH and an interdisciplinary team from four leading academic research institutions, this is the largest study of suicide and mental health

among military personnel ever undertaken. The research team, from the Uniformed Services University of the Health Sciences (USUHS), Harvard University, the University of Michigan, and Columbia University, is internationally known for its expertise and experience in research on military health, health and behavior surveys, epidemiology, and suicide, including genetic and neurobiological factors involved in suicidal behavior. The study will have both a retrospective and a prospective component.

Investigators will undertake a retrospective case-control study, comparing Soldiers with suicidal behavior (cases) to similar Soldiers without suicidal behavior (controls) in order to identify characteristics, events, experiences, and exposures that may be predictive of Soldiers' suicides. This study design will make it possible to begin generating information on risk and protective factors—and how to determine who is at high risk—very rapidly. Study investigators will produce actionable information that the Army can use to develop and refine interventions to prevent future suicides and address related PH issues.

For the prospective study, investigators will follow a representative sample of approximately 90,000 active duty Soldiers (including mobilized Reserve Component and National Guard Soldiers), from whom they will collect detailed information on psychological and physical health, exposure to adverse events, attitudes, social supports, leadership and unit climate, training and knowledge, employment and economic status, family history, and other potentially relevant domains over the life of the study. Biological specimens (e.g., saliva and/or blood) will be collected for genetic and neurobiological studies. This will provide rich longitudinal information relating Soldiers' characteristics and experiences to subsequent psychological health, suicidal behavior, and other relevant outcomes and will identify high-risk periods in a military career.

Other Ongoing Studies

In its report, the IOM comments that the "committee is aware of the Millennium Cohort study [and] several studies being conducted by RAND" (p. 156). Two of these studies are summarized briefly below.

The Millennium Cohort Study (MCS)

Launched in the summer of 2001, this study follows a random sample of over 150,000 U.S. military personnel from all Services, including both active duty and Reserve/National Guard members, for up to 21 years. Approximately 50 percent of the cohort has been deployed in OEF and OIF. The MCS study is designed to investigate exposures and health outcomes temporally, to detect outcomes with longer latency, and to ascertain symptom and illness duration, resolution, and chronicity. The unique aspect of this study is its ability to link this data to a wealth of DoD and VA electronic data that includes personnel files, birth and infant health, inpatient and outpatient health care use, pharmaceutical use, vaccination history, deployment

experience, exposures, and mortality. Links with other federal databases (e.g., Centers for Disease Control and Prevention [CDC], National Death Index [NDI], and Social Security Administration [SSA]) are being utilized in this ongoing study.

The study is in its eighth year and current areas of research include investigations differentiated by deployment focusing on diabetes; weight change; hearing loss; migraine headaches; unit cohesion; complementary and alternative medicine and health care use; physical activity and PTSD symptoms; professional care provider occupations; PTSD and depressive symptoms; chronic multi-symptom illnesses and associated co-morbidities; motor vehicle accidents; head trauma; back pain; tendonopathies and other injuries; and cause-specific mortality including suicide.

The impact of military service and deployment health on families will be evaluated through a spousal assessment component in the 2010-11 survey cycle. This study will be the first of its kind to use a large cohort to assess the impacts on spouses and co-resident children, and to evaluate the quality of family relationships.[1]

Funded by DoD through the Military Operational Medicine Research Program (MOMRP) and conducted at the Navy Health Research Center (NHRC) with co-investigators from all Services and VA, this large study will assess career-span health outcomes beyond military service and serve as a showcase for DoD and VA cooperation.

RAND Corporation's Deployment Life Study (DLS)

The DLS is a 3-year longitudinal study that began in March 2009 to examine the impact of deployment on the health and well-being of military families. This study will recruit approximately 9,600 Army, Navy, Marine and Air Force families, following them across an OEF/OIF deployment cycle, and assessing a number of outcomes over time. These outcomes include: (i) the emotional and physical health of each family member, (ii) family relationship quality and longevity, (iii) financial well-being and role performance, and (iv) for children, school performance, and social development.

The project will collect longitudinal data from approximately 5,000 (anticipated at follow-up) military families, including the Service member, his or her spouse, and, if one exists, one child 11 years of age or older (with parental consent). The baseline interview will be conducted by phone. Every 4 months after baseline, the respondent will log into a Website to complete an on-line survey. The project will take place over 36 months for nine waves of data collection, spanning a period of 6-12 months pre-deployment, throughout deployment, and post-

[1] The study team estimates that 10,000 spouses will be enrolled in this component, and that about half of these will be the spouses of individuals deployed at least once to OEF and OIF.

deployment. The project will examine specific behaviors as mediators of the deployment effects, such as: accessing health care or social support services, shifts in the division of labor within the family, changes in communication patterns and style, etc. Investigators will also be able to examine how changes in some outcomes (e.g., the marital relationship) account for changes in other outcomes (e.g., child school performance).

The DLS is being conducted within the RAND Center for Military Health Policy Research, a joint research initiative between RAND Health and the RAND Arroyo Center. This project is funded by the offices of the U.S. Army Surgeon General and the Assistant Secretary of Defense for Health Affairs.

Appendix A lists active DoD-funded longitudinal studies on PH and TBI.[2] The list includes studies from the Congressionally Directed Medical Research Programs (CDMRP) FY07 and FY09 rounds as well as other DoD funding entities and mechanisms (e.g., US Army Medical Research and Materiel Command's (USAMRMC), MOMRP, and Telemedicine and Advanced Technology Research Center [TATRC]).

2. VA Response to IOM Recommendation 1

VA notes the following points regarding research-related limitations the Committee highlighted in the Phase I assessment:

- The question of sampling is critical to validity, as the Committee noted. While samples of convenience may limit generalizability, it is more likely the case that this issue could relate to some smaller, single-site studies, although scientific peer review committees also consider generalizability carefully. Larger studies, especially those being conducted by VA's Cooperative Studies Program (CSP), address the ability to generalize as a working principle. In VA's large-scale cohort studies, national samples considered to be representative of the population are the norm (e.g., CSP 575, a study of genetic factors related to PTSD in OEF/OIF, randomly assesses from the entire DoD manpower roster [see Appendix B).

- Brief screening instruments have some utility in clinical assessments as well as in overall surveillance of a population. According to VA Office of Mental Health Services, OEF/OIF Veterans coming to VA for the first time are screened for the presence of symptoms of PTSD, depression, and alcohol abuse. The same screening for these conditions is repeated on an annual basis for new or existing Veterans of any service era. Should the Veteran screen positive for any of these conditions, further evaluation and appropriate treatment are provided. Veterans who screen positive for PTSD or

[2] Some studies may appear in more than one appendix.

depression are also assessed for risk of suicidal behavior. This is important information for clinical purposes and may be legitimately reported at the level of surveillance.

- In VA's research portfolio, a small number of studies have examined the validity of the screening instruments directly. However, in the more definitive large cohort studies and clinical trials, the battery of assessments is quite extensive as a rule and they are not dependent upon brief screening measures. In working group recommendations on PTSD methodology, consideration of reliability, validity, including cultural appropriateness and practicality are recommended for outcome measures. (See "Advancing Research Standards for PTSD Interventions," 2008.)

- Knowledge of VA's research portfolio will be key to further assessment by the Committee and will inform the stated limitations regarding cross sectional vs. longitudinal studies as well as focus in risk/protective factor studies. VA portfolio addresses these concerns by supporting a wide range of efforts. In some cases, specific hypotheses are being tested on a limited set of factors by design; however, in other cases, extensive batteries are used to study risk and protective factors (e.g., CSP 575). See Appendix B.

- VA research program does support cross-sectional approaches in certain cases, but it is also informed by large-scale longitudinal studies. An example of this is CSP 566 (see Appendix B) with multiple post-deployment follow up assessments of an Army cohort with pre-deployment baseline performance prior to service in Iraq.

- VA conducts an appreciable number of studies in the population of Veterans who have served in Iraq and Afghanistan. While some studies may rely on self-report, our Human Subjects Protection Program allows extensive oversight to ensure confidentiality and appreciation of sensitive issues. Examples include: (a) VA's consent process that includes information provided to participants stating that their participation in the research will not affect VA benefits or VA health care, (b) VA clinical researchers are encouraged to obtain a Certificate of Confidentiality, and this information is also conveyed to research participants. VA believes that scientific results from Veterans participating in VA research are not *a priori* tainted by this limitation.

As a general operating principle, VA closely coordinates post-deployment readjustment research efforts with other federal agencies. The coordination ranges from informal phone calls between offices to co-sponsored meetings and joint solicitations. Notably, VA initially led in convening expert work groups to identify research priorities for the Veterans of Iraq and Afghanistan (see "Mapping the Landscape of Deployment Related Adjustment and Mental Disorders," 2006). The recommendations from these work groups led to publication of multiple research solicitations focused on identified gaps.

VA and NIMH have issued a series of joint solicitations on readjustment disorders in OEF/OIF Veterans, including: "Intervention and Practice Research for Combat Related Mental Disorders

and Stress Reactions," "Network(s) for Developing PTSD Risk Assessment Tools," and, "Clinical Pharmacotherapy for PTSD: Single and Collaborative Studies." Both VA and NIMH committed funds for these efforts.

Probably the largest interagency effort in the area of substance use/abuse co-morbidities among active duty Service members and Veterans followed discussions with multiple federal funding agencies in 2008. At a co-sponsored meeting in January 2009, VA and its federal partners set the stage for a Request for Applications (RFA) issued by VA together with the National Institute on Drug Abuse (NIDA), the National Institute of Alcohol Abuse and Alcoholism (NIAAA), and the National Cancer Institute (NCI), with a total of up to $7 million committed by all agencies. Proposals in response to this RFA will be evaluated and approved in FY 2010.

A notable gap identified by the federal research funding agencies was the use of common measures and terminology for studies focused on TBI and PH. One major recent effort has therefore been collaborative work toward defining common data elements for PH and TBI. VA research with NIH's NINDS, the National Institute on Disability and Rehabilitation Research (NIDRR), and the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE), co-sponsored an initiative to adopt common data elements (CDEs). Scientific experts participated in working groups for specific topic-driven CDEs, which were discussed in a workshop, "Advancing Integrated Research in Psychological Health and Traumatic Brain Injury: Common Data Elements," held on March 23-24, 2009, with 137 national and international PH and TBI experts.

The process leading to the workshop and the subsequent recommendations by the working groups led to a series of manuscripts (Overview, Agency Background, TBI Definition, TBI Demographics and Clinical Assessment, Biomarkers, TBI Neuroimaging, TBI Outcomes, PTSD, and Operational Anxiety) expected to be published in the Archives of Physical Medicine and Rehabilitation in 2010. The CDEs themselves appear on a Web site launched April 1, 2010, and hosted by NINDS (http://www.nindscommondataelements.org/). The site contains a mechanism to capture feedback and suggestions for the CDEs from the community of users. Four new working groups met in March 2010 to review and adapt the TBI CDEs for pediatric relevance. Manuscripts with recommendations are in progress.

Other Methodology-Directed Activities

VA has long been considered a leader in the area of PTSD research, and in 2006 co-sponsored a work group with NIMH on the topic of clinical treatment research methodology for PTSD studies ("Advancing Research Standards for PTSD Interventions," 2008; Leon and Davis, 2009). This meeting resulted in recommendations that were disseminated widely to the scientific

community and have been incorporated in the joint solicitations (see above) issued by VA and NIMH.

One notable VA program that has advanced the methodological rigor in clinical research is the CSP. With five coordinating centers and other multiple resource centers, the methodological rigor in CSP studies is developed through a cooperative planning process and scientific peer review in which proponents and methodological/statistical experts meet face-to-face with a review panel to defend the proposal and answer questions about concerns. When a CSP study is approved for funding, it is overseen by multiple bodies including an Executive Committee, Data Monitoring Committee (for safety and data reviews), as well as an Institutional Review Board (IRB). Appendix B lists and briefly describes some of the CSP programs related to the OEF/OIF population.

The CCTA program has made strides to incorporate the methodological rigor of the CSP studies into all clinical trials, irrespective of size. One strong example of this is the CCTA funding mechanism, which pairs the methodological expertise from a CSP coordinating center with a principal investigator to conduct small, early phase interventional work. Although this is a relatively new program, two of the initially approved studies are focused on novel TBI and PTSD treatments for the OEF/OIF population. The goal of the program is to identify treatments that appear to warrant testing at the multi-site CSP level.

VA Deployment Health Research Related to OEF/OIF Veterans

VA has an open solicitation for Deployment Health Services Research to support studies focused on deployment health care needs and services. The solicitation targets three major areas: 1) health delivery system resources, structures, and processes of utilization; 2) population characteristics; and 3) health and satisfaction outcomes. This research also has direct relevance for other Veterans, as well as for civilians experiencing disability due to injury or disease.

B. IOM Recommendation 2

The committee recommends that the Department of Veterans Affairs conduct research to determine the potential efficacy and cost effectiveness of developing protocols for the long-term management of Service members who have polytrauma and traumatic brain injury. The approaches considered should include:

- **Prospective clinical surveillance to allow early detection and intervention for health complications,**
- **Protocols for preventive interventions that target high-incidence or high-risk complications,**

- **Protocols for training in self-management aimed at improving health and well-being,**
- **Access to medical care to treat complications, and**
- **Access to rehabilitation services to optimize functional abilities.**

1. VA Response to IOM Recommendation 2

VA has been and will continue to address the long-term management of Service members and Veterans who require it. VA has an established research program on polytrauma and TBI, and translates research outcomes into improved clinical care and management. For example, the Polytrauma and Blast-Related Injury Quality Enhancement Research Initiative (PT/BRI (QUERI) Coordinating Center works closely with Polytrauma Rehabilitation Centers (PRCs) to identify needs and gaps in care, as well as best practices for TBI with polytrauma and traumatic amputation with polytrauma. In addition, the four PRCs and Defense Veterans Brain Injury Center (DVBIC) have established a joint VA/DoD initiative for ongoing clinical care, research, and service delivery for Veterans and active duty Service members with brain injury.

In June 2009, VA and DVBIC developed a 5-year pilot program to assess the effectiveness of providing Assisted Living (AL) services to Veterans with functional disabilities due to TBI. Veterans placed in private facilities that specialize in rehabilitation services for TBI continue to be monitored by VA care managers, and outcome data are being collected (e.g., demographic and health information, functional status, satisfaction with care, and quality of life). A report of this pilot will be provided to Congress upon the program's conclusion in 2013.

VA is also presently collaborating with NIDRR on the national TBI Model Systems (TBIMS) project to benchmark rehabilitation and longitudinal functional outcomes with those of other TBIMS Centers, and to collaborate on research initiatives. Lastly, VA's Office of Research and Development (ORD) has numerous priorities for TBI/polytrauma-related research, including investigating long-term care and management of Veterans with polytrauma, blast-related injuries, or TBI.

Appendix C summarizes a sampling of the studies in polytrauma and TBI from VA research portfolio. Appendix D provides key associated bibliographic references.

C. IOM Recommendation 3

The committee recommends that the Department of Defense and the Department of Veterans Affairs quantify the number and distribution of mental health

professionals needed to provide treatment to the full population of returning Service members, Veterans, and their families who suffer from mental health disorders, such as PTSD, major depression, and substance abuse, [so] that they can readjust to life outside of theater. The committee also recommends that the Department of Defense and the Department of Veterans Affairs continue to implement programs for the recruitment and retention of mental health professionals, particularly to serve those in hard-to-reach areas.

1. **DoD Response to IOM Recommendation 3**

Significant progress has been made to recruit additional mental health personnel in order to meet the growing demand for services in DoD and VA. Between 2007 and the second quarter of 2009, the number of DoD mental health specialists grew 47 percent from 4,129 to 6,061 in military medical treatment facilities (MTFs) and the number of TRICARE Network providers increased 26 percent from 39,587 to 49,807. A gap analysis performed at the end of the third quarter of 2009 revealed that 93 percent of current Service-determined mental health provider "requirements" or "needs" at MTFs were filled. The substantial increase in the numbers of mental health providers is attributable largely to recruitment efforts.

DoD established a mental health recruiting and retention strategy to help develop new programs to attract and retain uniformed and civilian mental health professionals. A Directive-Type Memorandum (DTM) established the Health Profession Incentive Working Group to adjust incentives and pay annually to maximize recruitment and retention of those with high-needs skill sets. DoD developed another DTM (09-009) for the "Implementation of Special Pay for Health Professions Officers (HPOs)" on July 23, 2009, allowing DoD to offer mental health professionals within DoD special pay and bonuses.

This action is expected to enhance significantly DoD's ability to recruit and retain mental health professionals, particularly psychologists and social workers, through direct accession recruitment. As an additional effort to boost provider availability, DoD entered into a Memorandum of Agreement with the Department of Health and Human Services (HHS) to use uniformed Public Health Service (PHS) mental health providers. More than 70 PHS officers have been hired as a result of this agreement.

Another potential effort on the horizon is the Civilian Health Professions Scholarship Program (CHPS), a recruitment program that would provide health care scholarship funds and related educational expenses to prospective health care professionals in return for a DoD service commitment when the providers have completed their training.

DoD has initiated several joint efforts to improve access to mental health care. These include the following.

- DCoE’s National Center for Telehealth and Technology (T2) has embarked on a program to develop and deliver Web-based telehealth care that will extend the reach of services to underserved military beneficiaries, particularly the Reserve Component and those in historically underserved areas, by leveraging the Services, TRICARE, VA, and civilian provider partnerships;
- DoD provides training to, coordination for, and oversight of a national network of systems delivering psychological health care via technology;
- DoD collaborated with VA's National Center for PTSD in three states–Massachusetts, California, and Hawaii–to create Afterdeployment.org, a Web-based portal focused on post-deployment issues and the PH needs of Service members and their families;
- In coordination with other stakeholders, DoD developed and published common access standards for mental health services;
- To further assist telehealth treatment, a telemental health standard of care was created through the Office of the Chief Medical Officer; and.
- T2 is evaluating a program to deliver PH care through mobile platforms. This program has promise as an effective way to provide needed psychological care to Service members and their families who might not otherwise have access to care. The benefits of the Mobile TeleHealth Unit project include the ability to reach all DoD and VA beneficiaries.

To teach best clinical practices to community-based mental health staff who are addressing the behavioral health needs of military personnel, Veterans, and their families, the Center for Deployment Psychology at the USUHS has established the Military and Veteran Behavioral Health Post-Master's Certificate Program. The program takes from 6 months to 1 year to complete and includes the following required workshops:

- Military Culture, Terminology, and the Deployment Cycle;
- Etiology and Assessment of PTSD and Co-morbid Problems;
- Assessment and Treatment of Sleep Disturbance Associated with Deployment,
- Traumatic Brain Injury Sustained in Combat;
- Assessment and Treatment of Deployment-Related Depression;
- Identification, Prevention, and Treatment of Suicidal Behavior; and
- Evidence-Based Treatment of PTSD: Prolonged Exposure Therapy.

In addition, DoD is developing the Psychological Health Risk-Adjusted Model for Staffing (PHRAMS) for use by medical department personnel within Army, Air Force, Navy, and staff within the Office of Health Affairs to model predicted psychological health staffing requirements. Each Service's medical department and Office of the Assistant Secretary of Defense (Health Affairs) staff provided input for this project.

Using deployment history data from the Defense Manpower Data Center (DMDC) and eligibility, demographic, and medical data from the Military Health System Data Repository (MDR), PHRAMS is able to provide a forecast for the total staffing requirements to meet the annual need for psychological health services by beneficiaries over a 5-year period for each type of specialty provider (e.g., psychiatrists, psychologists, psychiatric nurse practitioners, and clinical social workers) and for others who provide PH services as part of the care they offer (e.g., primary care providers and chaplains).

DoD Health Affairs is working with the Services to determine how Service staffing aligns with the PHRAMS predictions of mental health providers needed for beneficiary psychological services. Currently, a projection of requirements for each mental health specialty has been made for the Services from 2009 through 2014, including mental health specialty providers embedded into operational units and integrated into primary care clinics. The Services will determine the gaps between these requirements and existing providers in order to establish specific hiring and recruitment goals.

2. VA Response to IOM Recommendation 3

VA has increased mental health staff 36 percent in the last 3 years (from 14,208 in FY 2006 to 19,283 in FY 2009) through Mental Health Expansion Initiative (MHEI) funds and has increased the number of Veterans treated for mental health problems by 21 percent in the same time period (from 1,183,819 to 1,428,858). VA is tracking total Core Mental Health Staffing full-time equivalent employee (FTEE) positions funded under annual budget processes and those funded by special purpose and MHEI funds.

Veterans Integrated Service Network (VISN) and facilities are required to maintain a staffing level of greater than 90 percent of the filled and approved mental health staff positions that existed at the end of FY 2009. As of the end of the first quarter of 2010, all VISNs have surpassed this minimum standard, and 20 out of the 21 VISNs have produced a net gain in mental health staffing over that time period.

The Uniform Mental Health Services Handbook delineates the essential components of the mental health program to ensure that all Veterans, wherever they obtain care in the Veteran's Health Administration (VHA), have access to needed services. The Handbook specifies those services that must be provided at each VA Medical Center and Community Based Outpatient Clinic (CBOC). VA actively employs the use of remote clinical videoconferencing technology to improve access, fill gaps in mental health services, and provide remote national expert consultation to Veterans at any VA facility in the country.

A National Telemental Health Center will be operational by the end of FY10. The Office of Telehealth Services (OTS) and Office of Mental Health Services (OMHS) are currently staffing the center and planning delivery of remote expert consultation services. OTS and OMHS have identified opportunities for the delivery of telemental health services into the home for the care of Veterans with substance abuse problems and for the management of depression using interactive voice response (IVR) technology. VA continues to explore opportunities for using telemental health to fill any gaps identified in mental health services.

VA has a number of initiatives in place to ensure that access and continuity of care is facilitated as close to home as possible. Three VISNs are in the process of negotiating contracts with community providers as part of a 3-year pilot program. Results from this effort will provide valuable information on how VA can develop partnerships with community providers to expand access to mental health services for rural-residing Veterans.

An expansion of the Mental Health Intensive Case Management – Rural Access Network for Growth Enhancement (MHICM-RANGE) initiative has been supported by VA's Office of Rural Health. This initiative adds mental health staff to CBOCs, enhances telemental health services, and uses referrals to community mental health services and other providers to increase access to mental health care in rural areas. The expansion of MHICM-RANGE has also led to four research studies on clinical policies or programs that improve access, quality, and outcomes of mental health and substance abuse treatment services for rural and underserved Veterans.

OMHS has partnered with the My Health*e*Vet program office and the Office of Information and Technology (OI&T) to develop online resources designed to complement traditional mental health services, and to expand access to these services to Veterans in rural areas. OMHS is working closely with the Office of Health Information (OHI) and OI&T to develop My Recovery Plan – an online, interactive application designed to support Veteran-centered, evidence-based mental health practices. Sections of My Recovery Plan will be available for self-paced independent work, while other areas will be made available to Veterans in conjunction with work with a provider. Both approaches are expected to facilitate treatment for Veterans in rural areas.

Among the OMHS initiatives in place to assist community and rural health care providers is an Internet Website (www.mentalhealth.va.gov/College/index.asp) with basic information on assessment and treatment of PTSD. The site is designed for college mental health counselors who, like many community providers, may not have knowledge about military service or experience treating combat-related PTSD and other disorders associated with war. Access to services is supported increasingly by Internet-based resources such as VA OEF/OIF Web site (www.oefoif.va.gov) and the National Center for PTSD's Web site (www.ptsd.va.gov), as well as a VA presence on social media sites such as Facebook and Twitter.

A two-part VHA Productivity and Staffing study conducted by OMHS in collaboration with the Office of Productivity, Efficiency, and Staffing (OPES) used electronic workload and provider data from psychiatrists and associated mental health providers (psychologists, social workers, nurse practitioners (NPs), clinical nurse specialists (CNSs), and physician assistants (PAs) working in mental health. The results of the study are being used to establish reasonable productivity and staffing standards, to be completed this year.

To ensure adequate inpatient minimum staffing standards, OMHS established a workgroup to review current utilization of inpatient mental health services across VISNs and Medical Centers, determining the sources of geographic variability in individuals with extended lengths of stay, and evaluating the extent of variability when these individuals are excluded from analyses. Administrative data on utilization and staffing are expected to be translated into staffing guidelines this year.

Vet Centers are community-based counseling centers, within Readjustment Counseling Service (RCS), that provide a wide range of social and psychological services including professional readjustment counseling to Veterans and families, military sexual trauma counseling, and bereavement counseling for families who experience an active duty death. This program also facilitates community outreach and the brokering of services with community agencies that link Veterans with other needed VA and non-VA services. A core value of the Vet Center program is to promote access to care by helping Veterans and families overcome barriers that impede them from using those services.

The Vet Center program has provided services to more than 40 percent (450,162) of all separated OEF/OIF Veterans since the beginning of the wars in Afghanistan and Iraq (cumulative through March 31, 2010). Furthermore, 40 percent of all Vet Center clients do not receive services at any other VA facility. To meet this growing need, the Vet Center program has increased its counseling staff by 103 percent since 2003. In addition, more than 34 percent of Vet Center staff has served in either the Afghanistan or Iraq combat theaters. (See Appendix E for a list of Vet Centers.)

To extend the geographical reach of Vet Center services, RCS has implemented initiatives to ensure that Veterans have access to care. Following the onset of the current hostilities in Afghanistan and Iraq, the Vet Center program hired 100 OEF/OIF Veteran Outreach Specialists to contact their fellow returning Veterans at military demobilization sites, including National Guard and Reserve locations, and in the community. Further, to facilitate access to services for Veterans in hard-to-reach outlying areas, RCS has deployed 50 Mobile Vet Centers (MVCs) across the country. A full time driver/outreach specialist and counselor are attached to each of these vehicles. The placement of the vehicles is designed to cover a national network of designated Veterans Service Areas (VSAs) that collectively cover every county in the continental

United States. The 50 MVCs are used to provide early access to returning combat Veterans via outreach to a variety of military and community events. The vehicles are also extending Vet Center outreach to more rural communities that are isolated from existing VA services.

In FY 2010, the Vet Center program is authorized to employ a total of 1,391 counseling staff in 300 Vet Centers and 50 Mobile Vet Centers. Further, by the end of 2010, RCS will have a qualified family and marriage counselor at every Vet Center. To meet this goal, RCS has partnered with the VHA Healthcare Retention and Recruitment Office to initiate a national recruitment and targeted marketing campaign to find qualified professionals to meet the diverse needs of Veterans, their families, and the community in which they live.

In recent years, RCS and the Vet Center programs have been the subject of program evaluations by several different agencies and organizations. According to the President's Advisory Committee on Gulf War Veterans' Illnesses[3]:

> The Department of Defense and VA should follow the model of field-based outreach demonstrated in the Vet Centers when developing health education and risk communication campaigns for active duty service members, Reserve and Guard personnel, and other Veterans. The prompt response by the Vet Centers to the acute PTSD and other post-war readjustment difficulties, such as family and employment problems, illustrate VA's commitment to early intervention and outreach (p. 1).

Further, the U.S. Medicine Institute for Health Studies, with participants from DoD, Substance Abuse and Mental Health Services Administration (SAMHSHA) and VA, reported "VHA's Vet Centers have proven a 'best practice' model in fostering peer-to-peer relationships for those with combat stress disorders. The best way to overcome concerns about stigmatization is through person-to-person contact with someone who has recovered."[4] The Vet Center program is also the gold standard in both internal and external VA surveys measuring Veteran and employee satisfaction.

D. IOM Recommendation 4

The committee recommends that the Department of Defense actively promote an environment to reduce stigma and encourage treatment for mental health and substance-use disorders in an effort to improve military readiness and ability to serve. The committee

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[3] Persian Gulf Veterans Coordinating Board. (1997, March). *The Final Report of The Presidential Advisory Committee on Gulf War Veterans' Illnesses (PAC).*

[4] U.S. Medicine Institute for Health Studies. (2004, October). *Executive Summary- USMI Roundtable Discussion: The Changing Face of Mental Health Services in the Veteran Health Administration.*

also recommends that the Department of Defense undertake a systematic review of its policies regarding mental health and substance-abuse treatment with regard to issues of confidentiality and the relation between treatment-seeking and military advancement.

1. **DoD and VA Response to IOM Recommendation 4**

Both DoD and VA are working actively to reduce stigma and encourage treatment for mental health and substance use disorders (SUDs). Some of the efforts are outlined below.

Real Warriors Campaign

DCoE launched the "Real Warriors, Real Battles, Real Strength" national public awareness campaign in May 2009, emphasizing that seeking help for psychological concerns is a sign of strength. Supporting initiatives have been implemented across the Services to target their individual cultures. To date, the campaign has produced eight Public Service Announcements (PSAs) that aired more than 4,000 times to 1.3 million Service members in 177 countries on the Armed Forces Radio and Television Service (AFRTS). PSAs have also aired domestically on 144 civilian national, regional, and local television networks and stations. Posters for the campaign have been displayed 254 military installations worldwide, and more than 90 organizations have collaborated with the campaign to further its reach. The campaign has been featured on CNN, NBC's Today Show, USA Today, Associated Press, and LA Times.

The Real Warriors Campaign Website (www.realwarriors.net) includes several unique features that help educate and connect Service members, Veterans, and their families to the resources they need to build resilience and access appropriate care for invisible wounds, including: 40 articles on a wide array of topics related to PH, handling deployments, and TBI; a live online chat feature; and online message boards where individuals can connect with others who have shared similar experiences.

Screening, Brief Intervention, Referral and Treatment

Another strategy to reduce stigma is the utilization of the Screening, Brief Intervention, Referral and Treatment (SBIRT) model to identify depression and PTSD in primary care clinics. If the Service member who is seeking care from his or her primary care clinic is identified via this mechanism, the treating physician would present the Service member to a care coordinator for screening and evaluation within the confines of the primary care venue. Substance use and abuse also may be addressed using the same methodology. The SBIRT model targets those with nondependent substance use and provides effective strategies for intervention prior to the need for more extensive or specialized treatment.

The model involves a system within community and/or medical settings, including physicians' offices, hospitals, educational institutions, and mental health centers. Screening determines the

severity of substance use and identifies the appropriate level of intervention. The system provides for brief intervention or brief treatment within the community setting or motivates and refers those identified as needing more extensive services to a specialist for assessment, diagnosis, and appropriate treatment. Currently, the U.S. Army has 42 primary care clinics assessing and treating depression and PTSD and is in the process of expanding this primary care model. The Air Force and Navy have already integrated mental and primary health care.

Education through Conferences

Recently, the Center for the Study of Traumatic Stress (CSTS) hosted a conference on stigma, bringing together more than 100 national subject matter experts (SMEs) to discuss the current state of knowledge on stigma. SMEs from DoD, VA, and the civilian sector presented on current programs and research, and identified gaps. The conference highlighted stigma because of institutional, external, and internal cultural factors, all of which must be addressed to reduce stigma.

Policy Review

The Office of the Assistant Secretary of Defense (Health Affairs) is currently undertaking a systematic review of policies related to substance use treatment and confidentiality issues mandated by National Defense Authorization Act (NDAA) FY10 Section 596, "Comprehensive Plan on Prevention, Diagnosis, and Treatment of Substance Use Disorders and Disposition of Substance Abuse Offenders in the Armed Forces." Some extant policies have already been reviewed and endorsed by the Services.

There have been some relevant policy memoranda issued over the past several years. For example, a policy memorandum co-issued by the Under Secretaries of Defense for Intelligence and Personnel and Readiness and endorsed by DoD leadership including the Secretary of Defense resulted in the immediate revision of Question 21 of SF 86, "Questionnaire for National Security Positions," regarding prior mental health treatment. The revision explicitly excludes the reporting of counseling that was "strictly marital, family, grief not related to violence by you; or strictly related to adjustments from service in a military combat environment." These two reasons for seeking services address a substantial percentage of the reasons why a Service member might seek deployment-related counseling in the first place.

Perhaps more important than the specific questionnaire revisions was the language in the memorandum that indicated seeking care to mitigate adjustment difficulties was the responsible thing to do, and not doing so was less responsible. Similarly, "Policy Guidance for Deployment-Limiting Psychiatric Conditions and Medication," issued by the Assistant Secretary of Defense for Health Affairs in November 2006, indicates that seeking care is the appropriate/responsible action for a Service member to take. While recognizing that psychological fitness for duty in the

context of deployment is very important and may entail higher levels of mental health status in general, the guidance indicates that deployment and psychiatric treatment (to include treatment with psychotropic medications) are not automatically and mutually exclusive

There have been policy enactments and actions that make available models of counseling that do not entail medical record keeping and are inherently more confidential (e.g., the Military OneSource program). A July 2009 DTM entitled "Command Notification Requirements to Dispel Stigma in Providing Mental Health Care to Military Personnel" (DTM 09-006) specifies those situations for which Command notification is not required. A DoDI will replace this DTM and provide additional guidance.

Leadership Training

The relationship between treatment seeking and military advancement is now an integral aspect of the Services' leadership training developed and implemented over the past several years. This training has a strong anti-stigma objective and theme. Again, an essential message is that seeking care for psychological difficulties is the responsible and courageous thing for Service members to do and should be strongly encouraged by all levels of leadership.

See Appendix F for a sample of VA research that is exploring the effects of stigma in the veteran population.

E. IOM Recommendation 5

The committee recommends that the Department of Defense formally assess whether a "third-location decompression" program would be beneficial for US combat troops. Third-location decompression has the potential to allow troops to have time to begin to readjust before returning home and to family responsibilities.

1. DoD Response to IOM Recommendation 5

Third-Location Decompression (TLD) "refers to a process that is designed to allow Service personnel returning from deployment to adapt to the home environment in a graduated way, with the aim of reducing the potential for maladaptive psychological adjustment."[5] It has been used in multiple settings with varying results and, as noted in the IOM report, no published evidence exists that indicates the TLD process is effective. However, DoD and VA agree that TLD

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[5] Hughes, J., Hacker, G.H., Earnshaw, N.M., Greenberg, N., Eldridge, R, Fear, N.T., French, C., Deahl, M.P., & Wessley, S. (June, 2008). Use of Psychological Decompression in Military Operational Environments, Military Medicine, p. 1. Downloaded 4/8/10 from http://findarticles.com/p/articles/mi_qa3912/is_200806/ai_n27995836/

programs are worthy of further study, to determine whether they do result in benefits for stress-exposed troops (e.g., improved social support, lower rates of PTSD). To this end, DoD will work to ensure analyses of TLD programs and potential benefits are included in research investment strategic plans and future funding opportunities in a way that leverages prior investments and ongoing studies.

F. IOM Recommendations 6, 7, and 8

Recommendation 6: The committee recommends that the Department of Defense, the Department of Veterans Affairs, and other federal agencies fund research on the social and economic effects of deployment and multiple deployments on families. For example, research should examine the effects of multiple deployments on domestic violence and maltreatment of children, as well as on financial well-being.

Recommendation 7: The committee recommends that the Department of Defense, the Department of Veterans Affairs, and other federal agencies fund studies to evaluate the effectiveness of mental health treatments currently being provided to women and to identify potential new treatments designed specifically to address women's unique circumstances and stressors, such as sexual harassment and assault, PTSD, and premilitary trauma.

Recommendation 8: The committee recommends that the Department of Defense, the Department of Veterans Affairs, and other federal agencies fund research on culturally sensitive treatment approaches targeted toward minorities. Research is also needed on utilization patterns of currently available services by minority populations and the efficacy of such services to improve health outcomes.

1. DoD Response to IOM Recommendations 6, 7, and 8

As discussed above, DoD has dedicated substantial resources to PH and TBI research, and recognizes that studies on families, women, and minorities are important components of its research program. Broad Agency Announcements (BAAs) (i.e., requests for proposals) reflect the explicit requirements of legislation and input from not only DoD SMEs, but also SMEs from the NIH, VA, and other federal agencies. Funded studies explore novel areas of research or build upon work done by other researchers.

These published BAAs include the following language, which is intended to ensure adequate consideration of families, women, and minorities in all appropriate research.

> "Priorities include interventions across the deployment lifecycle for warriors, Veterans, families, caregivers, and communities, particularly those at risk for mental disorders and psychosocial problems. Investigators are encouraged to take into account considerations for special populations, such as gender-specific or racial/ethnic groups as a focus. Consideration of Active Duty, Reserve Component, National Guard, and/or Veteran populations is also encouraged."[6]

Currently, more than $48.2 million in DoD funding is invested in 42 active studies focused on families, women, and/or minorities. Specifically

- More than $40.1 million is invested in research on families,
- More than $3.6 million is invested in research on the particular needs of women, and
- More than $2.4 million is invested in research on the needs of minority populations.

The DoD repeatedly re-evaluates the priority focus areas of its research portfolio in light of emerging knowledge, preliminary data from studies in progress, and previous investments, but studies of the specific needs of families, and female and/or minority Service members will remain a priority in future research investments.

A complete list of the studies reviewed appears in Appendix G. Note that some studies are included in more than one appendix.

2. VA Response to IOM Recommendations 6, 7, and 8

VA health care is provided only to Veterans and their families as it relates to the care of the Veteran. By advancing treatment and improving care for the individual Veteran, VA attempts to mitigate the issues faced by spouses and children. The health and well-being of the Veteran's family is, however, of vital concern to VA.

The overall research agenda is richly described in Conference Proceedings from the Trauma Spectrum Disorders Conference, 2009. The conference focused on the impact of military service on families and caregivers, with sponsorship by DCoE, NIH Office of Research on Women's Health, and VA Research.

Over 11 percent of OEF/OIF Veterans are women. VA Research supports a robust portfolio of studies related to women Veteran's health, including studies on diseases prevalent solely or predominantly in women, research focusing on women Veterans, and research addressing the goals of the Women Veterans Health Strategic Health Care Group's (WVHSHG) to develop a

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[6] FY09 PH/TBI Concept Award BAA, pg 2-3; W81XWH-09-PH/TBIRP-CA

comprehensive practice redesign to enhance primary care delivery for women, and redesign of primary care delivery to integrate gender-specific care (Yano, 2009).

The focus of VA-supported research on women Veterans, including those who served in the National Guard and Reserves as well as the regular military in past conflicts and OEF/OIF ranges widely, and includes

- Research aimed at improving the organization and quality of health care for women Veterans;
- Women-specific prevalence and treatment of PTSD;
- The impacts of deployment and military service on physical and mental health of women Veterans;
- Comorbid conditions such as substance use and PTSD among women Veterans;
- Access to mental health care and predictors of mental health care use by women Veterans;
- Special concerns of reintegration for women Veterans;
- Intimate partner violence among women Veterans; and
- The implementation and sustainability of VA's women's mental health clinics.

A brief description of many of these studies appears in Appendix H.

VA Research has been laying the groundwork for improved health care services to women Veterans and the development of effective programs and treatments to address the mental health needs and readjustment and reintegration issues related to service in Iraq and Afghanistan. Armed with a growing and comprehensive body of research, VA is prepared to take the next steps in transforming VA health care to women Veterans through a research program focused on intervention, implementation, and dissemination of best practices, especially regarding mental health care. Some of these studies have already been implemented and some completed. The current initiative includes

- An update of the systematic review of women Veterans' health literature, initially conducted in 2004, with a focus on post-deployment health and mental health issues (expected to be available in summer 2010);
- Another systematic review that focuses solely on mental health issues and treatments, including gender differences. This accumulated evidence will facilitate design of a treatment and outcome pilot and multi-center trial studies;;
- A Long Term Health Outcomes of Women's Service during the Vietnam Era, a comprehensive 3-year study of an anticipated 10,000 women to assess the prevalence of PTSD and other mental and physical health conditions for women Vietnam Veterans, and explore the relationships between PTSD and other conditions and the Vietnam

deployment experience. The study will include both VA users and women Vietnam Veterans who do not use VA for their health care, and will include both self-report, extensive survey, and medical record data. This large-scale study will help to explain relationships between stressful and traumatic experiences and mental and physical health outcomes in women Vietnam Veterans, and older women in general. It will also look at the relationship of these outcomes to disability and functioning. Knowledge from this study will help VA organize and offer its services, not only for these aging women Veterans, but for future generations of women Veterans as well;

- The first national survey of women Veterans since 1985, already fielded, is now providing VA with comprehensive data on health care needs and VA experiences, differences among cohorts of women Veterans by military era, and women Veterans' preferences and perceptions about access and quality. Approximately a third of the almost 3,500 survey respondents are OEF/OIF Veterans and their survey data indicates a higher need for mental health services, as well as higher utilization of services. The survey will provide important information to guide future efforts to improve outreach, access, and care of women Veteran;
- A field-based conference planned for July 2010 on "Building the Evidence Base to Improve Health Care and Outcomes for Women Veterans." One of the goals of the meeting is to foster methodological and other research advances in support of improving the quality and quantity of VA women's health research in high priority areas, with special emphasis on accelerating movement to interventions and implementation research. Post-deployment mental health is one of the areas of emphasis;
- A women Veterans' practice-based research network (PBRN) will provide a laboratory for examining new treatments, quality performance and quality improvements, models of care (e.g., integrated mental health and primary care), and provider education and training innovations. One of the initial planned studies will survey a representative sample of women Veterans, including OEF/OIF Veterans, to identify socioeconomic and health status and determine preferences for mental health interventions in primary care settings; and
- VA continues to work with DCoE, as well as various NIH offices (including the Office of Research on Women's Health) to explore and document the impact of trauma in the military on those who have served, as well as their families and caregivers, by sponsoring annual conferences addressing various issues related to trauma, evaluating the current evidence, and determining research gaps.

VA has devoted significant resources toward the reduction and elimination of health disparities in quality of care and health outcomes in VA, sponsoring special equity research solicitations since the late 1990s. As the largest national health care system, VA offers a unique opportunity to understand and analyze the complex reasons for disparities among different racial, ethnic, and minority populations. VA also offers the ideal setting in which to evaluate and implement

patient-centered and culturally sensitive approaches to care that will meet the needs of diverse populations of Veterans and provide equitable access to quality health care.

VA has an extensive portfolio of research on disparities, and devotes significant resources and infrastructure to this area. VA funds a Center of Excellence for Health Equity Research and Promotion, which has a mission to reduce disparities and promote equity in health and health care among vulnerable groups of Veterans and other populations. VA also funds a Targeted Research Enhancement Program to understand racial and ethnic variations in health outcomes for chronic diseases (e.g., diabetes and hypertension), focusing on patient trust, patient preferences for care, and the incremental effect of patient-level factors on disparities in health outcomes.

A recent solicitation calls for the development and evaluation of interventional studies to reduce ethnic minority health care disparities, including interventions that address provider and patient beliefs and attitudes, patient preferences and knowledge that impact medical decision-making and access to or use of health services, patient-provider relationships, and system-wide or facility-specific policies and characteristics that can reduce variations in treatment or outcomes. VA also supports implementation research through VA QUERI, which works collaboratively with VA's Office of Quality and Performance (OQP), to translate the findings of disparities research into changes in clinical practice in VA's health care system.

In order to guide future VA research, deliver high-quality care in an equitable manner, and eliminate racial and ethnic disparities in health care, VA directed an Evidence-Based Synthesis Project (ESP) on racial and ethnic disparities in health care within VA to determine 1) the clinical areas in which racial and ethnic disparities are prevalent; 2) what is known about the sources of those disparities; and 3) synthesize that knowledge to determine the most promising areas for future research aimed at improving quality in VA health care.

The synthesis suggests that the reasons for disparities are complex and that variability in study settings and populations, clinical topics and services, data collection methods, and measures sometimes makes it difficult to generate unifying theories that are generalizable across settings and services. However, the review suggested a number of promising areas for future research, including: decision aids and information tools; patient activation interventions; patient-centered communication training; determining sources of variation in clinician judgment by patient race; interventions to promote evidence-based decision-making by providers; and adherence-support interventions (Saha, Freeman, Toure et al., 2008). VA continues to work with other federal agencies to advance research on disparities and minority health, including through the Federal Collaboration on Health Disparities Research, and also as part of ongoing efforts with the DCoE and NIH to improve treatment to OEF/OIF Service members, Veterans, and their families and caregivers.

G. IOM Recommendation 9

The committee recommends that Congress appropriate funds and direct the Department of Veterans Affairs to expand the role of its actuary to produce annual long-term forecasts of costs associated with all health and disability benefits that are consistent with the practices of Social Security and Medicare.

1. VA Response to IOM Recommendation 9

VA's Office of the Actuary (OACT) provides long term projections of veteran population. The veteran population projection is used for VA's strategic planning (e.g., healthcare) and benefits valuations (e.g., disability). OACT is expanding its projections and advanced modeling activities to support VA strategic planning and policy improvement. All the actuarial projections follow actuarial standards of practice and are consistent with SSA, HHS and other government agency practices.

OACT maintains a model of future benefits for the compensation, pension and burial programs administered by the Veterans Benefits Administration (VBA). The model projects future cash flows, including the effect of Cost of Living Adjustments (COLA), for any future period up to a hundred years. The model covers current VA beneficiaries, as well as Veterans who will become beneficiaries in the future and those who have yet to separate from the military. The model is currently used for financial reporting. The model and the data inputs used for that purpose were audited in 2009 by the external accounting firm of Deloitte and Touche.

Since 1999, VHA has partnered with Milliman, Inc., a premier global actuarial and consulting firm, to develop and support a health care actuarial model to project demand for VA health care. VA's Enrollee Health Care Projection Model (Model) produces annual, 20-year projections of the number of Veterans expected to be enrolled in VA health care, their utilization of VA's health care services, and the expenditures associated with those services. The model methodology is consistent with actuarial principles and practices and accounts for the unique demographics of the Veteran enrollee population and VA health care delivery system.

Each year, VA assesses the expected demand for inpatient and ambulatory medical services based on its most recent experience for both VA and fee-based care provided to enrolled Veterans. Projections are updated to reflect the changing demographics of the enrolled Veteran population including factors such as aging, priority transition, and geographic migration. The methodology and assumptions used in the Model also are reviewed to ensure that the Model is projecting Veteran demand as accurately as possible. In addition, VA conducts a rigorous review to understand health care trends in VA, which may also affect the number of services and

the expected cost of providing these services to enrolled Veterans. Some services, such as long-term care, are not included in the Model, which currently projects approximately 84 percent of VA medical care budget. Actions are underway to include non-modeled services, including long-term care.

VA has successfully collaborated with internal and external stakeholders to enhance the Model. For example, the annual Model update is done in active collaboration with myriad program offices to ensure the Model reflects VA's current health care delivery system, specific program initiatives to improve service delivery and access, and reflects VA's vision for its health care system in the future. VA currently has approximately 9.2 FTEE working on the Model and VA's consulting health actuary, Milliman, dedicates an estimated 8 FTEE to support the Model.

Since 2007, VHA's model estimates that portion of the Veteran population that represents the number of new OEF/OIF Veterans each year. Through discussion and collaboration with the Congressional Budget Office (CBO) and monitoring recent policy decisions by the administration, VA has revised its model to reflect the current deployment levels and strategy in support of OEF and OIF. This year's Model uses the same methodology to project OEF/OIF enrollment as the previous Model but reflects an updated OEF/OIF Veteran separation model. Experience supports an increase in the assumed number of Service members required to support a given deployment level. As a result, a given deployment level causes more Service members to be given OEF/OIF status than in the previous model and this leads to more unique OEF/OIF Veterans. In comparison with the 2009 model, the updated model projects more OEF/OIF Veterans.

VA's Enrollee Health Care Projection Model projects OEF/OIF Veteran enrollment and utilization apart from non-OEF/OIF Veterans and the Model is updated annually to reflect VA's most recent experience in terms of enrollment and utilization.

H. IOM Recommendation 10

The committee recommends that the Department of Defense and the Department of Veterans Affairs oversee coordination and communication of the multitude of programs that have been created in response to the needs of Operation Enduring Freedom and Operation Iraqi Freedom Service members, [V]eterans, and their family members in an effort to maximize their reach and effectiveness. The committee also recommends that there be independent evaluation of these programs with standardized evaluation designs and assessment of outcomes.

1. DoD Response to IOM Recommendation 10

DoD and VA continue to work together and with other federal, state, local, academic, and not-for-profit institutions to oversee the coordination and communication of the multitude of programs that have been created in response to OEF and OIF.

One ongoing effort is participation in the Federal Partners Priority Working Groups led by SAMHSA to leverage a wide range of professionals from federal partners in building an optimal model of programs and best practices dissemination strategy.

In a second effort, the agencies are harnessing technology and social media tools. The use of technology provides Service members and their families access to resources even in the most extreme and remote circumstances while maximizing reach and effectiveness.

The National Leadership Summit on Military Families provides a third example of collaboration, coordination, and communication. A partnership between the Military Community and Family Policy within the Office of the Secretary of Defense (OSD), the Department of Agriculture (USDA), [7] and the University of Maryland, the summit took place on November 9-10, 2009. Summit participants included senior military family policymakers, family program leaders and their staff, military family researchers, representatives from DoD, VA, all military Service components, and other non-governmental partners. Summit participants identified the following priorities

- Categorize and evaluate programs to enhance effectiveness, consistency, and return on investment,
- Develop and implement a strategic communications strategy that reaches Service members, Veterans, and their families with what they need to know, and connects them with those who have the capacity and resources to provide support, and
- Strengthen the ability of DoD and VA to provide for the psychological well-being of military personnel and their families.

DoD is addressing the coordinated outreach of programs through several other mechanisms. The Army and Marine Corps have established outreach and case management programs as well as Warrior Transition Units. The Office of the Assistant Secretary of Defense (Health Affairs) monitors and evaluates these programs to assess their applicability to other services and to ensure the continuum of care for Service members, Veterans, and their families as they navigate the system of care. In a similar effort, VA hired the Federal Recovery Coordinators to work in MTFs and other selected sites in the United States. The goal is to assist in the recovery, rehabilitation, and reintegration into the community of severely injured Service members who are unlikely to return to active duty.

[7] USDA's Cooperative Extension Service is a key education partner for military families.

Recovery care coordinators are part of the Services' wounded Warrior programs and also assist the Service members and their families as they navigate the continuum of care. The overall goal of transition and coordination of care is to improve quality of care, including rapid and effective information sharing to support the continuity of care. In order to synchronize department-wide transition efforts for our Service members, DoD stood up the Office of Transition Policy and Care Coordination (now called Wounded Warrior Care and Transition Policy) in October 2008. The goals for this office include ensuring equitable, consistent, and high-quality care coordination and transition support for members of the Armed Forces, including wounded Warriors and their families through appropriate interagency collaboration, responsive policy, and effective program oversight.

Clearly, there is a need for collaborative program evaluations that capture PH and TBI project and program effectiveness information and provide practical evidence to support collaboration and knowledge-sharing across the Services, DoD, and VA. Such evaluation will enable the Military Health System (MHS) to leverage project performance information to enhance care delivery for our Service members, Veterans, and their families. However, the challenge to date has been determining how to take advantage of the Services', DoD's, and VA's respective PH-TBI program portfolio evaluations in order to leverage existing data and reduce duplication. A second challenge is how to pursue a strategic analysis of the full DoD/VA portfolio in order to identify gaps in programs and services, and to collect and disseminate information on evidence-based practices and lessons learned.

As program evaluations can be initiated at different points in a project's lifecycle, it is important to gather additional information from stakeholders to identify what may drive an evaluation. For example, while still in its formative stages, DCoE proposed the development of an annual plan that systematically identifies innovative and necessary programs. This plan prioritizes how best to obligate finite staff and other resources, further evaluating those programs, and identifying important lessons learned across the Services. Furthermore, planning requires gathering sufficient information in order to gain an initial understanding of the projects, their current and planned focus, how they are organized, and where they are located. Finally, there may be specific stakeholder considerations that will further define the information gathering activities.

As these relevant programs are identified and begin to be evaluated, common metrics must be created. Desirable measures have three attributes: 1) importance (i.e., relevance to stakeholders, health importance, applicable to measuring equitable distribution of care, and potential for improvement), 2) scientific soundness (i.e., explicitness and strength of the evidence, reliability, and validity), and 3) feasibility (i.e., explicit definitions and count specifications for its components, and the availability of the data).

2. VA Response to IOM Recommendation 10

Over the past 3 years, DoD and VA have made a significant investment to improve the level of coordination and collaboration between the departments to meet the needs of OEF/OIF Service members, Veterans, and their families. The Departments established the Senior Oversight Committee (SOC), co-chaired by the Deputy Secretaries of both departments, to provide oversight of the many programs and policies established to assist wounded, ill, and injured Service members and Veterans. The SOC meets monthly to address issues related to improving the delivery of benefits and services. As an example, the SOC is currently providing oversight for the expansion of the DoD/VA Disability Evaluation System (DES) Pilot that was established to create a seamless, transparent, and joint disability evaluation system.

To support the efforts of the SOC within VA, the department created the Collaboration Service in October 2008. The mission of the Collaboration Service is to facilitate the development and oversight of joint policies and programs. DoD has created its own organizational structure as well through the Office of Wounded Warrior Care and Transition Policy and the Executive Secretariat under the Under Secretary of Defense (Personnel and Readiness). The level of oversight provided by this new infrastructure has improved the level of coordination between the departments and consequently improved the reach and effectiveness of programs and services created in response to the needs of returning Service members.

VA meets its statutory mandate to evaluate its programs using standardized evaluation designs to collect and analyze data in the assessment of outcomes. VA program evaluations are conducted by independent third parties and follow systematic research designs to ensure that final outcome data are valid and reliable.

VA is currently conducting a 4-year multi-million dollar program evaluation study on mental health services and outcomes in the VHA for Veterans with PTSD, schizophrenia, major depression, bipolar disorder, and substance use disorder, with a particular emphasis on OEF/OIF Veterans. This program evaluation specifically addresses the number and distribution of mental health professionals needed to provide treatment to Veterans returning with PTSD, major depression and substance use disorder through a survey of all VA facilities conducted in May 2007 and again in late 2009. The use of evidence-based treatments, particularly for PTSD, is a focus of the Mental Health study. The evaluation has identified 114,000 OEF/OIF Veterans who received care for the five study diagnoses during FY 04-08. Their utilization of care, outcomes, and costs are being evaluated.

Coordination of care and communication between DoD and VA is essential when transitioning severely ill and injured Service members from DoD to VA's system of care. VA Liaisons for Health Care, strategically placed in MTFs with concentrations of recovering Service members returning from Afghanistan and Iraq, are critical to this process. VA has 33 social worker or

nurse VA Liaisons stationed at 18 MTFs to facilitate the transfer of Service members and Veterans from the MTF to a VA health care facility closest to the Veteran's home or most appropriate for the specialized services required. These Liaisons have greatly improved the communication between VA and DoD and enhanced the coordination of care as Service members transition from active duty to Veteran status.

VA Liaisons are co-located with DoD Case Managers at MTFs for onsite consultation and collaboration regarding VA resources and treatment options. VA Liaisons educate Service members and their families about VA's system of care, coordinate the Service member's initial registration with VA, and secure outpatient appointments or inpatient transfer to a VA health care facility as appropriate. VA Liaisons make early connections with Service members and families to promote a positive relationship with VA.

In addition, each VA Medical Center has an OEF/OIF Care Management team in place to coordinate patient care activities and ensure that Service members and Veterans are receiving patient-centered, integrated care and benefits. Members of the OEF/OIF Care Management Program team include: a program manager, clinical case managers, a VBA Veterans service representative, and a transition patient advocate. The program manager, who is either a nurse or social worker, has overall administrative and clinical responsibility for the team and ensures that Service members and Veterans receive case management services if needed. Clinical case managers, also either nurses or social workers, coordinate patient care activities and ensure that all clinicians providing care to the patient are doing so in a cohesive and integrated manner. VBA team members assist Veterans by educating them about VA benefits and assisting with the benefit application process. The transition patient advocate assists the Veteran and family in navigating VA's system of care.

All severely ill and injured OEF/OIF Service members and Veterans receiving care at VA are provided a case manager. All others are screened for case management needs and, based upon the assessment; a case manager is assigned as indicated. The patient and family serve as integral partners in the assessment and treatment care plan. Since many of the returning OEF/OIF Veterans connect to more than one specialty care system, VA introduced a new concept of a "lead" case manager. The lead case manager now serves as a central communication point for the patient and family. Case managers maintain regular contact with Veterans and their families to provide support and assistance to address any health care and psychosocial needs that may arise. To improve communication and coordination internally, a multi-disciplinary Care Management Review Team oversees coordination of patient care activities and integration of services.

III. Conclusion

The Secretary of Defense and the Secretary of Veterans Affairs agree with most of the recommendations of the IOM report and, as noted, have many projects underway to address the issues raised. We look forward to the phase 2 study, a comprehensive assessment of the physical and mental health and other adjustment needs of Service members and former members who deployed in OEF/OIF and the families of these Service members as a result of such deployment (P.L. 110-181). Among the minimum requirements for the Phase 2 requirement outlined in the legislation, DoD and VA are particularly interested in new information on

- An assessment of the particular impacts of multiple deployments;
- An assessment of the full scope of effects of TBI and the efficacy of current treatment approaches;
- An estimate of the long-term costs associated with "undiagnosed" injuries such as PTSD and mild traumatic brain injury (mTBI); and
- "Recommendations for programs, treatments, or policy remedies targeted at preventing, minimizing, or addressing the impacts, gaps, and needs identified."

IV. Appendices

Appendix A (IOM Recommendation 1): Rigorous DoD Studies on Readjustment Needs

Title	Amount	Synopsis
Understanding Resilience in Wounded Warriors and Their Families	$264,778	Examine the natural course of wounded Warrior family functioning. Determine major stressors, family resiliency factors, risk factors related to decreased family functioning, and the impact of clinical intervention to improve family functioning of wounded Warriors. Develop and validate a needs assessment screening tool for supportive services referral.
Addressing the Needs of Children and Families of Combat Injured	$497,584	Identify immediate and progressive impact of parental combat injury on child, parent and family functioning. Evaluate post-traumatic combat injury impact in five major clinical categories of child and family function: 1) acute child and parent traumatic stress symptoms; 2) levels of parental efficacy (e.g., emotional availability, disciplinary style); 3) parent-child communication; 4) alterations to family schedule and structure; and 5) long-term impact of injury on child, parent, and family function.
National Warfighter Health and Sustainment Study: Implement Family Member Assessment Component in the Millennium Cohort Study (Family Cohort Study)	$10,000,000	Examine association between deployment stressors and adverse behavioral and related health outcomes for spouses and children of deployed service members. Add a 2010 family impact component to the Millennium Cohort Study. Assess spouse perceptions of deployment stressors, current mental health status, spouse's perception of mental health and related symptoms of their children and quality of family relationships.
Family Maltreatment, Substance Problems, and Suicidality: Prevalence Surveillance and Ecological Risk/Protective Factors Models	$952,491	Derive and validate an innovative public health surveillance Air Force (AF) wide system for family maltreatment, suicidality, and problematic alcohol/drug use. A biennial survey of individual, family, workplace, and community functioning along with a supplement specifically designed to assess secretive problems will be given to AF members and spouses worldwide. Develop complex statistical algorithms to estimate secretive problems from data sets.
A Longitudinal Study of the Impact of Combat Deployments on Military Personnel and Their Families	$900,189	Examine the role of family adjustment and support in promoting resilience among military personnel following combat deployments; model the longitudinal course of adjustment over the course of the deployment cycle using state-of-the-art data analytic techniques. Evaluations will begin about 1 month prior to deployment and continue approximately every 4 months following. Approximately 500 deploying military service members and their spouses will participate.

Appendix A (IOM Recommendation 1): Rigorous DoD Studies on Readjustment Needs CONTINUED

Title	Amount	Synopsis
Case for Support: Children of Military Fathers with PTSD	$1,700,000	Compare the wellbeing of military children who have fathers with PTSD with children whose fathers do not have PTSD to examine the relationship between parental PTSD and anxiety disorders and depression in children. A two-group comparison study, nested within a large randomly selected United Kingdom (UK) military cohort of the children's wellbeing as measured by the Strengths and Difficulties Questionnaire (SDQ). The two groups are children with fathers with PTSD and children with fathers without PTSD.
Land Combat Study	$1,015,000	Determine the effects of combat operations in Iraq and Afghanistan on mental health and physical functioning of Soldiers and families. Continue work to 1) determine the risk factors for mental health problems (e.g., combat, deployment length and frequency, and operational stressors) and determine predictors of resetting; 2) identify factors that improve mental health and well-being (e.g., good leadership, unit cohesion, social support, and individual background); 3) identify ways to reduce mental health stigma and barriers which hinder access to care; and 4) identify relationship between mild TBI, PTSD, and physical health problems post-deployment. Survey active and reserve component Soldiers from Brigade Combat Teams (BCTs) in a repeated cross-sectional and longitudinal design.
Family-Based Intervention with Traumatized Service Members and Their Young Children	$1,583,843	Describe the interplay between returning service member PTSD symptoms and reintegration, including the parent-child relationship and parenting role. Develop and pilot an evidence-based family intervention addressing trauma impact on the parent-child relationship for families in which the returning member parent has PTSD and a child less than 5 years. Conduct an RCT with pre-, post-, and 6-month follow up assessments.

Appendix A (IOM Recommendation 1): Rigorous DoD Studies on Readjustment Needs CONTINUED

Title	Amount	Synopsis
Parental Stress, PTSD, and Infant Health Outcomes in U.S. Military Families	$202,990	Study to 1) Identify the prevalence of adverse reproductive health outcomes among infants born to parents who are participants in the Millennium Cohort Study (MCS); 2) evaluate the occurrence of these adverse reproductive health outcomes in relation to parental PTSD symptoms and diagnosis; and 3) identify how temporal differences in parental stress, in particular PTSD, and pregnancy onset impact reproductive health outcomes. The primary study population will include all infants born to service members who are participants in the MCS. Self-reported data from the MCS, including occupational exposures, and demographic and behavioral characteristics are supplemented with objective data on occupation, deployments, and healthcare utilization. These data will be linked to birth and infant health information obtained from the DoD Birth and Infant Health Registry, a database that captures all inpatient and outpatient healthcare data on all infants born to military families, and has been validated to define birth defects and preterm births. A complementary analysis will evaluate infant health among women exposed to the acute stress of 11 September 2001 during pregnancy.
Development of a PTSD Population Registry	$954,935	Develop and implement registry of combat-exposed men and women with PTSD to identify clinical characteristics, risk factors, and co-morbidities of PTSD, including disparities by gender, race/ethnicity, and socioeconomic status; evaluate neuropsychological and psychosocial outcomes; and evaluate treatment trajectories and outcomes in a sample of combat-exposed Veterans
Understanding Psychological Recovery through Resilience Army National Guard Veterans	$429,114	Investigate psychosocial resiliency and recovery processes in Army National Guard Soldiers returning from OEF and OIF. The study aims to reduce the occurrence of combat-related PTSD and other psychological disorders, such as depression and substance abuse. The study will examine psychologically well-adjusted soldiers to identify psychosocial factors that contribute to successful redeployment adjustment and reintegration into their communities. Through both qualitative and quantitative methods, the study will attempt to identify factors in soldiers' individual positive coping strategies, military leadership, and family and community support systems.

Appendix A (IOM Recommendation 1): Rigorous DoD Studies on Readjustment Needs CONTINUED

Title	Amount	Synopsis
Epidemiological Study of Mild Traumatic Brain Injury Sequelae Caused by Blast Exposure During Operations Iraqi Freedom and Enduring Freedom	$1,604,313	Identify proportion of service members experiencing blast events that develop persisting symptoms. Identify multiple predictive factors for developing post-concussion syndrome (PCS) after blast-related mTBI (presence of retrograde and/or anterograde amnesia). Describe blast-induced mTBI objective cognitive and neurophysical impairments on various measures. Examine whether Service members with PCS after blast-induced mTBI show symptom improvement over time with current standard of care treatment, but have significant long-term disability.
Reintegrating Troops with Mild Traumatic Brain Injury (mTBI) into Their Communities: Understanding the Scope and Timeline of Post-Deployment Driving Problems	$208,463	Determine extent to which combat driving behaviors are carried over into post-deployment driving on American roads by Troops with and without mTBI; separate driving behaviors associated with military service from those associated with mTBI or deployment to OEF/OIF; and establish military respondents' self-recognition of driving behaviors relative to an informed third party report.
Longitudinal Risk and Resilience Factors Predicting Psychiatric Disruption, Mental Health Service Utilization, and Military Retention in OIF National Guard	$787,176	Identify prospective psychosocial predictors of military retention and attrition by assessing pre-deployment, deployment, and post-deployment levels of mental health disruptions, mental health service utilization, and important individual and organizational risk and resiliency factors.

Appendix B (IOM Recommendation 1): Rigorous VA Studies on Readjustment Needs

Title	Synopsis
CSP #256, "Contribution of Emotionally Traumatic Events and Inheritance to the Report of Current Physical Health Problems in 4042 Vietnam Era Veteran Twin Pairs"	The Vietnam Era Twin Registry consists of over 7,000 male twin pairs born between 1939 and 1957 with both brothers having served in the United States military during the Vietnam War. This study was designed to determine the contributions of psychological trauma (exposure to combat during the Vietnam War), genetic factors, childhood experiences shared by twin siblings, and unmeasured experiences not shared by twin siblings to the reporting of current physical health problems a mean of 19 years after military service
CSP #470, "A Randomized, Multi-Center, Controlled Trial of Multi-Modal Therapy in Veterans With Gulf War Illnesses"	Determine if multi-modal therapy will significantly improve clinical outcomes in Veterans with Gulf War illnesses. The primary endpoint is the proportion of patients improved at one year relative to baseline on the Physical Component Summary (PCS) scale of the Veterans Short Form 36 (SF-36V) questionnaire.
CSP #475, "Persian Gulf - Antibiotic Treatment Trial of Gulf War Veterans' Illnesses"	Randomized placebo-controlled trial to determine whether a 1-year course of doxycycline treatment in deployed Gulf War Veterans with illnesses (GWVI) and testing as Mycoplasma species positive will improve their overall functional status as measured by the PCS of the SF-36V questionnaire.
CSP #494, "A Randomized Clinical Trial of Cognitive-Behavioral Treatment for PTSD in Women"	This completed study found a psychotherapeutic approach to be advantageous in women Veterans suffering from PTSD, and was specifically cited by the IOM as fulfilling the requirement for methodological rigor in trials (IOM Report on PTSD Treatment Effectiveness).
CSP #500, "An Epidemiological Investigation Into the Occurrence of Amyotrophic Lateral Sclerosis (ALS) Among Gulf War Veterans"	Epidemiologic investigation into the occurrence of ALS among Veterans of the Gulf War This study will further define the epidemiology of this neurological disease among younger individuals while determining whether there is a higher than expected occurrence.
CSP #500A, "National Registry of Veterans With Amyotrophic Lateral Sclerosis"	In response to concern about the development of ALS among Veterans of the U.S. armed forces, particularly Gulf War Veterans, the Department of Veterans Affairs established a national registry of Veterans with ALS. This Registry will identify living Veterans with ALS, track the progression of their disease, and serve as a vehicle to facilitate study of epidemiological risk factors for ALS in a military context.
CSP #504, "Risperidone Treatment for Military Service Related Chronic Post-Traumatic Stress Disorder"	Examine the effects of antipsychotics on PTSD, after other treatments for PTSD have failed. This study is large, with multi-site trials

Appendix B (IOM Recommendation 1): Rigorous VA Studies on Readjustment Needs CONTINUED

Title	Synopsis
CSP #519, "Integrating Practice Guidelines for Smoking Cessation Into Mental Health Care for PTSD"	Study the complexities of integrated care for smoking cessation and PTSD. Subject follow-up has been completed and the study is now in the data analysis phase. The primary study objective is to conduct a prospective, randomized controlled clinical trial that compares the effectiveness of two approaches for delivering smoking cessation treatment for Veterans with PTSD. An approach in which smoking cessation treatment is integrated into mental health care for PTSD and delivered by mental health providers (experimental condition) will be compared to specialized smoking cessation clinic referrals (VA's usual standard of care). Results are anticipated late in 2010.
CSP #535, "Anabolic Steroid Therapy on Pressure Ulcer Healing in Persons With Spinal Cord Injury"	Test whether the use of oxandralone, an anabolic steroid, can heal pressure ulcers in persons with spinal cord injury. Following a feasibility study, all sites will participate in a blind randomized treatment study. A total of 400 patients will be enrolled over a 4-year period.
CSP #556, "[Repetitive transcranial magnetic stimulation (rTMS)] in Depression"	Evaluate the efficacy, safety, durability of benefits and cost-effectiveness of repetitive transcranial magnetic stimulation in the resolution of treatment-resistant major depression (TRMD) with emphasis on the unique VA population of depressed patients that are commonly co-morbid for substance abuse and/or PTSD.
CSP #563, "Prazosin and Combat Trauma PTSD (PACT)"	Currently enrolling participants, the primary objective is to demonstrate in a large multi-site placebo-controlled trial in Veterans with war zone trauma-induced PTSD that prazosin is efficacious for PTSD trauma nightmares, sleep disturbance, and global clinical status. A secondary objective is to demonstrate prazosin's effectiveness for these outcome measures during clinically meaningful long-term (26-week) maintenance treatment of PTSD.
CSP #566, "Neuropsychological and Mental Outcomes of Operation Iraqi Freedom (OIF): A Longitudinal Cohort Study"	Considered a landmark longitudinal effort, this study is directed to the population of OIF Veterans. This study was the first to use a prospective longitudinal design for assessing neurocognitive performance prior to deployment to Iraq. The incorporation of a prospective pre-, post-deployment design provides a powerful tool that will help explicate changes related to military service. This study has just initiated another long-term follow up phase. Since the successful launch of CSP #566, other non-CSP studies have also begun to use the repeated assessment approach in different cohorts. One of these, VA's Marine Resiliency Study, adds the unique contribution of including physiological measures, which may define some objective biological markers.

Appendix B (IOM Recommendation 1): Rigorous VA Studies on Readjustment Needs CONTINUED

Title	Synopsis
CSP #569, "Twin Study of the Course and Consequences of PTSD in Vietnam Era Veterans"	Study to: 1) estimate the longitudinal course and current prevalence of PTSD; 2) identify the relationships between the longitudinal course of PTSD and Veterans' current mental and physical health conditions e.g., cardiovascular disease, diabetes, depression, and substance use disorders); and 3) identify the relationships between PTSD and Veterans' current functional status and disability.
CSP #575, "PTSD [Genome-wide Association Studies (GWAS)] of OEF/OIF Deployed Military Personnel: Phase 1"	Study genetic factors related to PTSD in OEF/OIF Veterans randomly selected from the entire DoD manpower roster.
CSP #579, "Long Term Health Outcomes of Women's Service During the Vietnam Era"	Determine the current physical and mental health status of Vietnam women Veterans. Information gleaned from this effort is expected to inform our understanding of contemporary generations.
CSP #585, "Gulf War Illness GWAS" - Planned	Study genetic factors related to Gulf War Illness.
CSP #717B, "Prospective Cohort Study of Respiratory Function and Illness in Chronic [Spinal Cord Injury (SCI)]"	Prospective cohort study of respiratory function and illness in spinal cord injury.
CSP #723D, "Olfactory Functioning in Gulf War Veterans"	Assess possible neurotoxic sequelae of Gulf War participation, olfactory identification performance, neurocognitive functioning, health perceptions, and emotional distress in 72 Veterans.

Appendix C (IOM Recommendation 2): VA Long-term Management Studies

Title	Synopsis
TBI Screening and Evaluation	All eligible OEF/OIF Veterans who receive medical care within the Veterans Health Administration (VHA) are screened for possible TBI. Those whose screening suggests they may have sustained a TBI are offered further evaluation and treatment by clinicians with expertise in TBI. This study will determine the clinical validity and reliability of VA's TBI Clinical Reminder and Comprehensive TBI Evaluation.
Clinical Tracking Form (CTF) Study	VA is collaborating with the DVBIC on this study of individuals who have been diagnosed with TBI while in the military service. The study evaluates enrolled subjects at both DoD and VA sites at 6 months, 12 months, and annually, up to 10 years after enrollment. VA and DVBIC will also collaborate on a more extensive 15-year follow-up study.
Neurorehabilitation: Neurons to Networks" Center of Excellence at the Houston VA Medical Center (VAMC)	Study to: 1) improve the diagnosis of mild to moderate TBI using structural and functional neuroimaging; and 2) measure the process and outcome of state-of-the art rehabilitation techniques with validated assessment tools.
Translational Research Center for TBI and Stress Disorders" at the Boston VAMC	Center focused on research leading to innovations in the diagnosis and treatment of Veterans with mTBI and stress-related emotional disorders such as PTSD. This includes systematic study of the impact of TBI on the efficacy of exposure-based cognitive therapies for PTSD.
VA Rehabilitation Research and Development Service (VA RR&D) studies using advanced technology	Innovative studies using advanced technology aimed at improving the diagnosis and treatment of TBI-related deficits. This includes the development and application of improved methods for both structural and functional imaging of the brain using magnetic resonance imaging (MRI) and diffusion tensor imaging (DTI). This research to better "map" the brain changes associated with TBI is leading to a better understanding of the biology of long-term TBI-related deficits and development of more effective evidence-based rehabilitation strategies. VA researchers in San Francisco have developed a computer-assisted intervention to improve selective attention among Veterans with TBI. They are using Functional MRI to track actual improvements in brain function associated with the intervention.
Blast-Related Health Problem Identification and Polytrauma Taxonomy at the Polytrauma Center at the Tampa VAMC	Investigate the epidemiology of the less visible complications of polytrauma blast injury (e.g., ear trauma and resultant hearing loss, concussion and resultant cognitive and vestibular deficits, and PTSD).

Appendix C (IOM Recommendation 2): VA Long-term Management Studies CONTINUED

Title	Synopsis
	Inform policy and practice involving the instrument used to screen all OEF/OIF Veterans, the processes used for clinical follow-up, clinical co-morbidity (particularly psychiatric), clinical outcomes, health care utilization, and costs. VA's Health Services Research and Development Service PT/BRI QUERI initiative focuses on filling gaps and implementing research to improve health outcomes for two high priority and prevalent blast-related injuries that occur in the context of other combat injuries: TBI and traumatic amputation.
Co-morbidity studies for possible links to TBI.	High-risk/high incidence complications include TBI-induced visual dysfunction and psychological health related to TBI. This study seeks to determine if visual dysfunctions are associated with mTBI, PTSD, or both.
Prevalence of psychological health issues and mTBI in the National Guard population.	Investigate the effects mTBI and PTSD co-morbidities on post-deployment outcomes. The primary objectives of this study were to describe the scope of mTBI/PTSD co-morbidity among returning National Guard OIF Veterans and to identify the extent to which these problems affected Veterans' psychosocial functioning, physical health, and quality of life over time.
Studies to determine the effectiveness of goal management training (GMT) in Veterans who have been diagnosed with mTBI.	Those with mTBI typically are employed and need the freedom in their therapy sessions that GMT offers. To meet the current needs of VA's treatment team and the mTBI population, these interventions could be administered via telemedicine and/or group sessions.
Developing a program of tinnitus management for Veterans	Components include: 1) online tinnitus training for VA audiologists; 2) a patient education book that provides detailed instructions for Veterans on self-managing tinnitus; 3) specialized presentations for group education sessions; 4) a patient counseling guide for use by clinicians; and 5) all supporting materials to conduct this program. A randomized clinical trial will evaluate the efficacy of this program compared to "usual care."
Health Care Use and Costs of Veterans with Neurotrauma	Determine the proportion of Veterans with neurotrauma who utilize VA health care services who are Medicare users, Medicaid users, and VA-only users; to describe characteristics of VA-only users and users of two or more systems; and to describe health care utilization, setting, and cost of VA, Medicare, and Medicaid services for eligible VA users. The secondary objective is to compare the patterns of health care use and costs of Veterans with neurotrauma who obtained their injuries during OEF/OIF with those of other Veterans with neurotrauma.

Appendix C (IOM Recommendation 2): VA Long-term Management Studies CONTINUED

Title	Synopsis
Gainesville VAMC study of access to rehabilitation services for returning OEF/OIF Veterans with traumatic injury.	Explore access to rehabilitation in the VHA Polytrauma System of Care and identified areas in which returning Veterans with traumatic injury were outside of reasonable drive time.
James Haley VAMC Telerehabilitiation study	Assess the utility of services provided to Veterans discharged from the Level 1 Polytrauma/Blast Related Injury Center at the Tampa VAMC with a diagnosis of mild and moderate TBI incurred in combat theaters. The program is rendered with assistive technology and home environmental modifications, together with providing needed medical care via telehealth.
	A 5-year pilot program to assess the effectiveness of providing assisted living (AL) services to eligible Veterans with moderate to severe functional disabilities due to TBI Outcome data on Veteran health status, quality of life, patient and family satisfaction with care, and the related impact and cost of providing AL services to eligible Veterans with TBI will be collected over the period of the pilot which is scheduled to run through June 30, 2013
Neurobiology of Suicide Risk in Traumatic Brain Injury and Substance Abuse	Building on existing neurobiologic models of frontal function, study will extend our understanding of TBI related brain changes by applying functional MRI and diffusion tensor imaging techniques. Accordingly, we will examine blood oxygen level dependent signal changes within the cingulate and dorsolateral prefrontal cortices as well as the amygdala in TBI subjects, with and without a history of substance abuse, to characterize the nature of these patterns of signal change (higher/lower) in relation to healthy control subjects.
Rehabilitation Strategies to Reduce Violence and Anger in TBI and PTSD	Protocol to: 1) identify risk and protective factors empirically related to violent behavior among Veterans who have returned from Iraq and Afghanistan; 2) examine the link between specific factors related to violence among Veterans from previous conflicts and post-deployment violence risk among Iraq and Afghanistan Veterans, especially work status, PTSD, substance use disorder, and TBI; and 3) develop an evidence-based risk assessment instrument to administer to Iraq and Afghanistan Veterans in order to identify those most in need of services.
Understanding and Meeting the Needs of Informal Caregivers to Improve Outcomes for Traumatic Brain Injury Patients with Polytrauma	Pilot to inform participant recruitment strategies and aid in questionnaire development for the main survey study.

Appendix D (IOM Recommendation 2): VA Conference Presentations and Publications

Reference
Goodrich, G.L., Arditi, A., Rubin, G., Keeffe, J., & Legge, G. The low vision timeline: An interactive history. Paper presented at: International Society for Low Vision Research and Rehabilitation Annual Conference; 2008 Jul 9; Montréal, Canada.
Brahm, K., Shen, M., Goodrich, G., Katsaros, J., Kirby, J., & Wilgenburg, H. Low vision eccentric viewing training: Computer vs. CCTV model. Paper presented at: International Society for Low Vision Research and Rehabilitation Annual Conference; 2008 Jul 7; Montréal, Canada.
Goodrich, G.L. Blasts, Brain Injury, and Vision. Paper presented at: International Society for Low Vision Research and Rehabilitation Annual Conference; 2008 Jul 7; Montréal, Canada.
Goodrich, G.L. Low vision services: Evolution in a time of revolution? Paper presented at: International Society for Low Vision Research and Rehabilitation Annual Conference; 2008 Jul 7; Montréal, Canada.
Wilgenburg, H.M., Goodrich, G., Brahm, K., Kirby, J., & Ingalla, S. Visual findings associated with traumatic brain injury in military personnel. Paper presented at: International Society for Low Vision Research and Rehabilitation Annual Conference; 2008 Jul 7; Montréal, Canada.
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Carter-Visscher, R., Polusny, M.A., Murdoch, M., Thuras, P., Erbes, C.R., & Kehle, S.M. Predeployment gender differences in stressors and mental health among U.S. National Guard troops poised for OIF deployment. J Trauma Stress. 2010 Feb; 23 (1):78-85. PubMed PMID: 20135681.
Cowper Ripley, D.C., Reker, D.M., Vogel, W.B., Hayes, J.M., Beyth, R.J., Litt, E., Dewald, L., Wang, X., & Wu, S.S. Geographic Access to VHA Rehabilitation Services by OEF/OIF Veterans. Paper presented at: VA HSR&D National Meeting; 2008 Feb 15; Baltimore, MD.

Appendix E (IOM Recommendation 3): Vet Center and Mobile Vet Center Locations

State/Territory	Location
Alaska	Anchorage; Fairbanks; Kenai; Wasilla
Alabama	Birmingham; Huntsville; Mobile; Montgomery
American Samoa	Pago Pago
Arkansas	Fayetteville*; Little Rock
Arizona	Chinle**; Mesa; Mohave County; Phoenix; Prescott*; Tucson; Yuma;
	Antelope Valley; Bakersfield; Chico; Chula Vista; Citrus Heights; Concord; Corona*; East Los Angeles; Eureka; Fresno*; High Desert; Los Angeles; Modesto; North Orange County; Northbay; Oakland; Peninsula; Redwoods**; Sacramento; San Bernardino; San Diego; San Francisco; San Jose; San Luis Obispo; San Marcos; Santa Cruz County*; Sepulveda; South Orange County; Temecula; Ventura; West Los Angeles
Colorado	Boulder; Colorado Springs*; Denver; Grand Junction; Pueblo
Connecticut	Fairfield; Hartford; New Haven; Norwich
District of Columbia	Washington
Delaware	Sussex County; Wilmington
Florida	Bay County; Broward County; Clearwater; Collier; Daytona Beach; Fort Lauderdale; Fort Myers; Gainesville; Jacksonville; Jupiter; Lake County; Marion County; Melbourne; Miami; Okaloosa; Orlando*; Palm Beach; Pasco County; Pensacola*; Polk County; Sarasota; St. Petersburg; Tallahassee*; Tampa
Georgia	Atlanta; Lawrenceville; Macon*; Marietta; Muskogee County; Richmond County; Savannah
Guam	Hagatna
	Hilo; Honolulu; Kailua-Kona; Kauai; Maui; Western Oahu; **Iowa;** Cedar Rapids; Des Moines; Sioux City
Idaho	Boise*; Pocatello
	Aurora; Chicago; Chicago Heights; East St. Louis; Evanston; Oak Park; Orland Park; Peoria; Quad Cities; Springfield*
Indiana	Evansville; Fort Wayne; Gary Area; Indianapolis; St. Joseph County
Kansas	Manhattan; Wichita*
*** = Vet Center and Mobile Vet Center site; ** = Mobile Vet Center site**	

Appendix E (IOM Recommendation 3): Vet Center and Mobile Vet Center Locations CONTINUED

State/Territory	Location
Kentucky	Lexington*; Louisville
Louisiana	Baton Rouge; New Orleans*; Rapides; Shreveport
Massachusetts	Boston; Brockton; Hyannis; Lowell; New Bedford; Springfield*; Worcester
	Annapolis; Baltimore; Baltimore County; Cambridge; Elkton; Prince Georges County; Silver Spring
Maine	Bangor; Caribou*; Lewiston*; Portland; Sanford
Michigan	Dearborn; Detroit; Escanaba*; Grand Rapids; Macomb County; Pontiac; Saginaw; Traverse County
	Minneapolis/ Brooklyn Park**; Brooklyn Park; Duluth; St. Paul Vet Center
Missouri	Boone County; Kansas City; Springfield; St. Louis
Mississippi	Biloxi; Jackson
Montana	Billings*; Cascade County; Flathead County; Missoula*
	Charlotte; Fayetteville; Greensboro; Greenville*; Onslow County; Raleigh
North Dakota	Fargo*; Minot*
Nebraska	Lincoln*; Omaha
New Hampshire	Berlin; Manchester
New Jersey	Bloomfield; Toms River; Secaucus; Trenton; Ventnor
New Mexico	Albuquerque; Farmington; Las Cruces*; Santa Fe*
New York	Albany; Babylon; Binghamton; Bronx; Brooklyn; Buffalo; Harlem; Hicksville; Manhattan; Middletown; Queens; Rochester; Staten Island; Syracuse; Watertown*; White Plains
Nevada	Henderson; Las Vegas; Reno
Ohio	Cincinnati; Cleveland; Columbus; Dayton*; Parma; Starks County; Toledo
Oklahoma	Lawton Red River; Oklahoma City; Tulsa
Oregon	Eugene; Deshutes County; Grants Pass; Portland; Salem*
Pennsylvania	Bucks County; DuBois; Erie*; Harrisburg; Lancaster; McKeesport; Montgomery County; Philadelphia; Philadelphia (NE); Pittsburgh; Scranton*; Williamsport
*** = Vet Center and Mobile Vet Center site; ** = Mobile Vet Center site**	

Appendix E (IOM Recommendation 3): Vet Center and Mobile Vet Center Locations CONTINUED

State/Territory	Location
Puerto Rico	Arecibo; Ponce; San Juan
Rhode Island	Providence
South Carolina	Charleston; Columbia*; Greenville; Horry County
South Dakota	Rapid City*; Sioux Falls
Tennessee	Chattanooga; Johnson City*; Knoxville; Memphis*; Nashville
Texas	Amarillo*; Arlington; Austin; Corpus Christi; Dallas; El Paso; Ft. Worth; Harris County; Houston; Jefferson County; Killeen Heights; Laredo; Lubbock; McAllen; Mesquite; Midland; Midland/ Abilene**; San Antonio**; San Antonio NE; San Antonio NW; Taylor County;
U.S. Virgin Islands	St. Croix; St. Thomas
Utah	Provo; Salt Lake*; Washington County
Virginia	Alexandria; Norfolk; Richmond*; Roanoke; Virginia Beach
Vermont	South Burlington; White River Junction*
Washington	Bellingham; Everett; King County; Seattle; Spokane*; Tacoma*; Walla Walla County; Yakima Valley
Wisconsin	Green Bay; Madison; Milwaukee
West Virginia	Beckley*; Charleston; Huntington; Lacrosse County; Martinsburg; Morgantown*; Princeton; Wheeling
Wyoming	Casper*; Cheyenne
*** = Vet Center and Mobile Vet Center site; ** = Mobile Vet Center site**	

Appendix F (IOM Recommendation 4): VA Studies - Stigmatization

Title	Amount	Synopsis
Stigm Other Barriers to VHA Use for OEF Veterans	$520,900	Examine individual, institutional, and, most importantly, stigma-related barriers to VA health care. Focus groups with OEF/OIF Veterans will explore the relevance of proposed stigma-related barrier categories, uncover any additional factors that are not addressed within the proposed framework, and use this information to inform the measurement of barriers to care. The study will administer measures of barriers to care and assess health-care use within a national sample of OEF/OIF Veterans and use these data to address study hypotheses.
	$362,117	Compare barriers and facilitators to treatment initiation for PTSD among OEF/OIF Veterans to those among Veterans from the Vietnam era. Study will develop a conceptual framework for future research and interventions on PTSD treatment initiation.
	$1,948,399	Evaluate a telemedicine intervention to improve PTSD outcomes in CBOCs without on-site psychiatrists. The specific aims are to estimate diect costs and compare processes and outcomes of care delivered to CBOC patients with PTSD symptoms randomized to either the TOP intervention or to usual care.

Appendix F (IOM Recommendation 4): VA Research – Stigmatization CONTINUED)

Title	Amount	Synopsis
Web Intervention for OEF/OIF Veterans with Mental Health Problems	$755,298	Project to a) develop an innovative, Web-based intervention for OEF/OIF Veterans that addresses mental health, barriers-to-care, and treatment participation issues to facilitate healthy recovery; b) develop video illustrations to facilitate learning of educational material; c) develop thorough evaluation mechanisms to assess knowledge change relevant to common symptoms, healthy coping strategies, and access-to-care issues; d) conduct a series of focus groups to guide development and refinement of intervention content; and e) conduct a preliminary evaluation of the intervention using thematic semi-structured interviews with a small sample of OEF/OIF Veterans recruited via mental health specialty clinics within the Ralph H. Johnson VA Medical Center and affiliated CBOCs.
	$627,500	Evaluate the benefits of using the internet, accessed from participants' homes, to provide education and support to caregivers of persons with schizophrenia and schizoaffective disorder. Participation in family psychoeducational programs for schizophrenia has been found to reduce patient relapse rates and decrease relative stress. Nevertheless, participation rates are often low, reflecting both family impediments to attendance (e.g., transportation difficulties, time constraints, sensitivity to stigma) and limited availability. This study will investigate whether using newer technologies can improve accessibility to family educational programs.
Understanding Providers' Stigmatization of Serious Mental Illness (SMI) Among Veterans	$561,757	This study examines the effect of provider specialty (primary care or psychiatry) and type (physician or nurse) on stigmatizing perceptions, beliefs, attitudes and practice behaviors towards persons with SMI. Explores the relationship of provider characteristics (demographics and personality traits) and the amount and nature of contact with SMI to provider stigmatizing attitudes and referral behaviors.

Appendix G (IOM Recommendations 6, 7, and 8): Related DoD Studies CONTINUED

Title	Amount	Synopsis
Case for Support: Children of Military Fathers with PTSD	$1,700,000	Compare the wellbeing of military children who have fathers with PTSD with children whose fathers do not have PTSD to examine the relationship between parental PTSD and anxiety disorders and depression in children. A two-group comparison study, nested within a large randomly selected UK military cohort of children, will use the SDQ to measure wellbeing.
Land Combat Study	$1,015,000	Determine the effects of combat operations in Iraq and Afghanistan on mental health and physical functioning of Soldiers and families. Continue work to 1) determine the risk factors for mental health problems, such as combat, deployment length and frequency, and operational stressors and determine predictors of resetting, 2) identify factors that improve mental health and well-being, such as good leadership, unit cohesion, social support, and individual background, 3) identify ways to reduce mental health stigma and barriers which hinder access to care, and 4) identify relationship between mild TBI, PTSD, and physical health problems post-deployment. Survey active and reserve component Soldiers from BCTs in a repeated cross-sectional and longitudinal design.
Family-Based Intervention with Traumatized Service Members and Their Young Children	$1,583,843	Describe the interplay between returning service member PTSD symptoms and reintegration, including the parent-child relationship and parenting role. Develop and pilot an evidence-based family intervention addressing trauma impact on the parent-child relationship for families in which the returning member parent has PTSD and a child less than 5 years. Randomized control trial with pre-, post- and 6-month follow up assessments.

Appendix G (IOM Recommendations 6, 7, and 8): Related DoD Studies CONTINUED

Title	Amount	Synopsis
Parental Stress, PTSD, and Infant Health Outcomes in U.S. Military Families	$202,990	Study to: 1) identify the prevalence of adverse reproductive health outcomes among infants born to parents who are participants in the Millennium Cohort Study, 2) evaluate the occurrence of these adverse reproductive health outcomes in relation to parental PTSD symptoms and diagnosis, and 3) identify how temporal differences in parental stress, in particular PTSD, and pregnancy onset impact reproductive health outcomes. Study Design: The primary study population will include all infants born to service members who are participants in the Millennium Cohort Study (MCS). Self-reported data from the MCS, including occupational exposures, and demographic and behavioral characteristics are supplemented with objective data on occupation, deployments, and healthcare utilization. These data will be linked to birth and infant health information obtained from the DoD Birth and Infant Health Registry, a database that captures all inpatient and outpatient healthcare data on all infants born to military families, and has been validated to define birth defects and preterm births. A complementary analysis will evaluate infant health among women exposed to the acute stress of 11 September 2001 during pregnancy.
Deployment Family Stress: Child Neglect and Maltreatment in U.S. Army Families	$680,937	Study and describe the phenomenology of Army child neglect using a 3-pronged methodology. Identify child, parent, and family risk and protective factors that contribute to child neglect, to include deployment. Identify military and civilian community contributions to child neglect as well as protective factors in the current military context of frequent multiple combat deployments.
Child Adjustment to Parental Combat Deployment: Risk and Resilience Models	$215,141	Examine the role of caregiver behavior in risk associated with parental deployment in the prediction of child adaptation. 400 parents (of children between 3-7 years) with a spouse/partner deployed will complete anonymous questionnaires at a single time point about parent responses to child stress and child achievement of stage-salient tasks. 8 groups of parents will be recruited to compare adaptation (toddlers vs. school aged, boy vs. girl, and mother vs. father deployed).

Appendix G (IOM Recommendations 6, 7, and 8): Related DoD Studies CONTINUED

Title	Amount	Synopsis
FOCUS-CI: A Preventative Intervention with Children and Families	$6,475,828	Study implementation and acute and long-term efficacy of a new preventive evidence based intervention strategy to address parent and child distress, individual and family functioning and injury communication in military families as they face significant transitions and recovery adaptations resulting from combat injury. Families Overcoming Under Stress-Combat Injury (FOCUS-CI) will be FOCUS adapted for combat injured Families and combined with the Early Combined Collaborative Care (ECCC) model.
Deployment-related Family Psychological Resilience	$416,000	Determine the effects of combat deployment on spouse well-being; Develop and assess spouse Resilience Training; Assess efficacy of cognitive disclosure through emotionally expressive writing as a military couple early intervention technique. Using repeated cross-sectional methods, compare similar units in different phases of the deployment cycle. Couples will be randomly assigned to a writing condition (neither, one, or both members of the couple write about either readjusting to post-deployment or about a neutral topic).
The Role of Spouse Telephone Resilience Training	$760,462	Develop therapeutic components of Spouse Telephone Resilience Training and a manual for later clinical translation. Evaluate intervention effectiveness and user-acceptability. Over 1 year, 60 OEF/OIF spouses will complete 15, 1-hr structured telephone groups focused on education, Cognitive Behavioral Therapy, and support. Telephone data will be collected at baseline, 6-, and 12-months. Primary outcome variables will include depression, general well-being, and family functioning.
Reintegration: The Role of Spouse Telephone Resilience Training, a RCT	$1,073,000	A RCT to compare Spouse Telephone BATTLEMIND training to usual care in terms of participant satisfaction, participant adherence to therapeutic recommendations, and changes in spouse mental health. Half of 180 OEF/OIF spouses will be randomly assigned to one each intervention (15 groups of 6 participants and one group leader). Groups will meet 14 times over 7 months. Depression, anxiety, family functioning, and participant satisfaction will be collected at baseline, 7, and 12 months post training.

Appendix G (IOM Recommendations 6, 7, and 8): Related DoD Studies CONTINUED

Title	Amount	Synopsis
Combat Stress Intervention Program	$3,291,630	Identify and remove barriers to mental health services for Guard and Reservists returning from OEF/OIF; increase level of awareness and capability of mental health and primary care providers, family and community members in southwestern PA via surveys, evaluations, and educational interventions.
Improving Work Outcomes for Veterans with Traumatic Brain Injury	$415,500	Investigate efficacy of a supported employment cognitive training augmentation to improve cognitive performance and work outcomes in OEF/OIF Veterans with mild to moderate TBI. Compared to those receiving enhanced supported employment, participants receiving supported employment plus cognitive symptom management and rehabilitation therapy will demonstrate significant improvement in cognition, PCS, work outcomes, and quality of life.
Identification of At-Risk Interventions for Predeployment Psychophysiologic Predictors of Postdeployment Mental Health Outcomes	$2,095,025	Develop and test early post-deployment objective predictors (physiologic reactivity and cognitive bias at 3-months post-deployment) of 12-month post-deployment PTSD outcomes. Adapt and test two pre-deployment combat resiliency training interventions: a) VR-SIT with biofeedback and b) cognitive bias modification training compared to a no intervention control group in a randomized trial. The longitudinal study design involves 500 National Guard members and includes a pre-deployment objective risk factor component and a randomized primary prevention intervention component. Physiologic reactivity, cognitive bias, and mental health outcome data will be collected 3- and 12-months post-deployment.
Soldier to Civilian: RCT of an intervention to promote postdeployment reintegration	$1,163,567	Determine whether internet based-expressive writing (IB-EW), a brief, low-cost, easily disseminated, and resource-efficient intervention, can reduce psychological symptoms, including PTSD, and improve functioning among Veterans returning from hazardous deployments.

Appendix G (IOM Recommendations 6, 7, and 8): Related DoD Studies CONTINUED

Title	Amount	Synopsis
Enhanced Resilience Training (formerly BATTLEMIND) through cognitive disclosure	$325,000	A randomized controlled trial to assess the efficacy of cognitive disclosure through emotionally expressive writing as an early intervention technique with Soldiers recently returned from combat. The goal is to enhance the demonstrated impact of Post-Deployment Health Re-Assessment Resilience Training on psychological symptoms associated with exposure to combat events. Soldiers returning from combat will be assigned to one of three conditions: expressive writing, neutral writing, and survey only. Efficacy will be assessed using a follow-up survey at three months post-intervention and health care utilization data 12 months post-intervention.
Mortuary affairs Soldiers: Early intervention and altering barriers to care for traumatic stress and PTSD	$425,852	Implement and assess the feasibility of TEAM: Troop Education for Army Morale: Units and Individuals Working Together, a unique intervention designed to meet the specific needs of Mortuary Affairs (MA) Soldiers for early and follow-up intervention to speed recovery, return to work, and limit barriers to care through individual training, active engagement in problem-solving and accessing care, enhanced buddy care, and spouse support. Assess short and longer-term outcome of TEAM effectiveness in MA Soldiers on barriers to care, disorder, health risk behaviors, work function, and marital conflict.
The Impact of Supported Employment Versus Standard Vocational Rehabilitation in Veterans With PTSD	$1,680,208	Determine if: 1) participants assigned to supported employment group have a higher maintained employment rate for the 12-month observation period than standard vocational rehabilitation program (VRP) counterparts (obtained + maintained employment); 2) those who obtain competitive employment have significantly reduced symptoms of PTSD from baseline to endpoint compared to those who do not obtain competitive employment; and 3) compared to VRP participants, those assigned to individual placement and support (IPS) will have greater work intensity (number of weeks, days, and hours), higher total earnings, and greater improvement in quality of life outcomes. Exploratory outcomes include PTSD symptoms, other psychiatric symptoms, substance use, risk factors for early treatment drop-out, quality of life, and health care costs (follow up 12 months).

Appendix G (IOM Recommendations 6, 7, and 8): Related DoD Studies CONTINUED

Title	Amount	Synopsis
Behavioral Health Family Readiness System Research Study	$849,732	Develop and test an interactive website that will provide educational content directed expressly toward military Families. Three geographically diverse focus groups with 8-12 military family members to assess current knowledge and perceived needs. Modify web and survey content based on focus group feedback. Pilot study of 100 family member site users, web and survey content will be modified. Conduct a study up to 1000 family members who use the website to evaluate effectiveness of the website to improve PTSD knowledge and related disorders and seek care.
Development and Pilot of an Intervention for Military Personnel and Their Families	$248,250	Project to: 1) better understand the mental health needs of young adult Reservists and National Guard personnel and their families of origin throughout deployment cycles, 2) understand the relationship between family criticism and PTSD, and 3) help develop a mental health treatment for young adult military personnel. The mental health treatment will be based on Project FOCUS, a family counseling program for returning military personnel and their families. Project FOCUS helps individuals and families cope with difficult emotions, learn problem solving, and improve communication between family members so they can support each other. Project staff will meet with groups of young soldiers and their families so that we may better understand their stresses and modify Project FOCUS to help them. Military personnel and families will then experience the new counseling program and give feedback on their satisfaction with it, and we will try to understand how the program may have helped them. It is expected that this project will provide useful information for future research on counseling programs that help families re-unite after deployment.

Appendix G (IOM Recommendations 6, 7, and 8): Related DoD Studies CONTINUED

Title	Amount	Synopsis
PTSD-Focused Cognitive Behavioral Therapy for Partner Violent OIF/OEF Veterans	$1,536,334	Proposed project to further develop, standardize, and test an intervention for recently separated combat Veterans with PTSD who engage in intimate partner violence (IPV). This intervention will incorporate components of interventions for PTSD and IPV and will target mechanisms implicated in the PTSD-IPV association. The development of this type of integrated treatment is critical because of high rates of PTSD-IPV co-occurrence and the pressing need to efficiently address both problems among military Veterans. Objectives: 1) to develop and standardize PFCBT for recently separated male combat Veterans with PTSD. The outcome of this phase will involve the development of a clinician-friendly treatment manual detailing PFCBT and treatment adherence measures; 2) to test the efficacy of PFCBT for partner violent Veterans by conducting a randomized controlled trial (RCT) comparing those who receive 16 sessions of PFCBT with those placed on a waiting list to receive the treatment; and. 3) to empirically examine mechanisms of change involved in the PFCBT.
Development of a PTSD Population Registry	$954,935	Develop and implement registry of combat-exposed men and women with PTSD to identify clinical characteristics, risk factors and comorbidities of PTSD, including disparities by gender, race/ethnicity, and socioeconomic status; evaluate neuropsychological and psychosocial outcomes, and evaluate treatment trajectories and outcomes in a sample of combat-exposed Veterans

Appendix G (IOM Recommendations 6, 7, and 8): Related DoD Studies CONTINUED

Title	Amount	Synopsis
Innovative Service Delivery for Secondary Prevention of PTSD in At-Risk OIF-OEF Service Men and Women	$1,445,214	The study's two primary objectives are to: 1)develop, implement, and evaluate the Behavioral Activation and Therapeutic Exposure (BATE) treatment program for OEF/OIF Veterans with subclinical PTSD; and 2) determine whether this program delivered via telephone will be as effective as in-person treatment. Secondary objectives include determining: 1) which treatment modality is more effective in terms of process variables (e.g., treatment satisfaction, session attendance); 2) which treatment modality is more cost-effective; and 3) whether treatment effects differ across race and gender. Study participants will be randomized to two treatment conditions, BATE delivered via telephone (BATE-T) and BATE delivered in-person (BATE-IP).
Effectiveness of cognitive exposure and skills group manualized treatments in OIF/OEF female Veterans	$884,466	Effectiveness study using manualized exposure, cognitive, and skills (assertiveness /relaxation) group therapy across 16-sessions in a sample of OEF/OIF female Veterans with PTSD.
Using Propranolol to Block Memory Reconsolidation in Female Veterans with PTSD	$388,461	Investigate a novel method of reducing the hyper-arousal associated with combat memories in female OEF and OIF Veterans with PTSD. Based on a reconsolidation model of memory, we believe that a beta-adrenergic receptor blocker (propranolol) can drastically diminish the association between a combat memory and the physical reactions it generates. The model requires that two doses of propranolol be administered immediately following a strong recollection of the combat memory. Our proposal would compare female Veterans who take propranolol after a combat memory to both female Veterans who take a non-active placebo pill after a combat memory and those who take propranolol after a non-combat memory (to make sure that propranolol does not have a general effect on physical reactions). All participants in our study would be tested during the early follicular phase of the menstrual cycle, a time in which levels of estrogen are low.

Appendix G (IOM Recommendations 6, 7, and 8): Related DoD Studies CONTINUED

Title	Amount	Synopsis
Evaluating PTSD on Reproductive Outcomes: Women Deployed in Iraq and Afghanistan	$214,357	Retrospective study examining the relationship between PTSD and adverse reproductive outcomes and AFHS data on Iraq and Afghanistan deployment between 2001 and 2006; study will occur over 18 months; Study will compare women diagnosed with PTSD to those nondeployed and those deployed to the same region with a different mental disorder and without a mental disorder
PTSD, Comorbid Disorders, and Service Utilization in Women Veterans	$232,500	Using existing data, the study will determine prevalence and annual incidence of PTSD and MST in female Veterans, as compared to male Veterans; Determine prevalence rates of depression, alcohol/drug use disorders, adjustment disorders, and other anxiety disorders in women with and without PTSD, with and without MST; will also determine prevalence of visits to VA primary care and emergency clinics in women and men with and without PTSD
Post-Traumatic Stress Disorder and Pain Comorbidity in Veterans	$198,959	Analyze existing data to determine whether the presence of pain affects diagnosis and treatment of PTSD among female OEF/OIF VA patients with PTSD and pain comorbidity on use of mental health, primary care, and pain-related health services.
Hormonal Regulation of Extinction: Implications for Gender Differences in the Mechanisms of PTSD	$223,419	Examine whether estrogen "predisposes" females to increased fear learning and/or an inability to extinguish that fear
Combat, Sexual Assault, and Post-Traumatic Stress in OIF/OEF Military Women	$519,608	Identify and describe organizational, situational, and individual risk factors for physical and sexual assault in women who served or are currently serving in the Regular Military in OEF/OIF by deployment status

Appendix G (IOM Recommendations 6, 7, and 8): Related DoD Studies CONTINUED

Title	Amount	Synopsis
Using Propranolol to Block Memory Reconsolidation in Female Veterans with PTSD	$388,461	Investigate a novel method of reducing the hyper-arousal associated with combat memories in female OEF/OIF Veterans with PTSD. Based on a reconsolidation model of memory, we believe that a beta-adrenergic receptor blocker (propranolol) can drastically diminish the association between a combat memory and the physical reactions it generates. The model requires that two doses of propranolol be administered immediately following a strong recollection of the combat memory. Our proposal would compare female Veterans who take propranolol after a combat memory to both female Veterans who take a non-active placebo pill after a combat memory and those who take propranolol after a non-combat memory (to make sure that propranolol does not have a general effect on physical reactions). All participants in our study would be tested during the early follicular phase of the menstrual cycle, a time in which levels of estrogen are low.

Appendix H (IOM Recommendations 6, 7, and 8): Related VA Studies

Title	Amount	Synopsis
Predicting Post-Deployment Mental Health Substance Abuse and Services Needs	$758,021	Identify risk and resilience factors that predict development of a psychiatric or substance abuse disorder and associated mental health and/or substance abuse service use within and outside the VHA. Specific objectives are: 1) examine the mental health and substance abuse status, functioning, and service use of post-deployed OEF/OIF military personnel in the two years' post-deployment, 2) identify risk and resilience factors that predict mental health status, functioning, and service use two years after their initial assessment, and 3) identify targets for interventions to promote readjustment and reintegration of post-deployed Veterans.
Re-Engineering Systems for the Primary Care Treatment of PTSD	$1,223,812	Proposed randomized clinical trial of collaborative care for PTSD in Veterans who are treated in primary care settings to facilitate the management of PTSD and evaluate the effects of the intervention on patient outcomes, provider behavior, and costs. The long-term objectives are to generate information to support implementation research collaborative care for PTSD, and ultimately, implement the collaborative care for PTSD across VHA.
Relationships and PTSD Study: Detection of Intimate Partner Violence (IPV)	$897,799	Research to provide foundational knowledge about the detection of IPV in a PTSD treatment-seeking sample by examining the documentation of the existence or non-existence of IPV in the clinical record; and to provide additional knowledge about what distinguishes IPV perpetrators common perpetrators in a cohort of men with military related PTSD.

Appendix H (IOM Recommendations 6, 7, and 8): Related VA Studies CONTINUED

Title	Amount	Synopsis
Evaluating VA's Assessment of Military Sexual Trauma in Veterans	$367,584	Study of Veterans' understanding of the two unstudied MST screening questions, their understanding of Congressional and VA definitions of sexual harassment and assault, and how being provided these definitions change their understanding of the screening questions (or not), and their understanding of other sexual harassment/assault assessment approaches that are more comprehensive and whether they find these approaches improve their ability to describe their own definitions of MST.
Physical and Sexual Assault in Deployed Women: Risks, Outcomes and Services	$783,607	Proposed cross-sectional study of Reserve and National Guard [R/NG]) women (both active duty and Veterans) serving in OEF/OIF. The health outcomes of interest include current physical and emotional health, health behaviors, and health services use. These outcomes will be studied in relation to deployment status, organizational, situational, and individual risk factors, as well as victimization during Reserve and National Guard (R/NG) service (which is our primary independent variable).
Combat, Sexual Assault, and Post-Traumatic Stress in OIF/OEF Military Women	$298,800	Proposed study addresses the radically changing DoD and DVA health care delivery needs of two priority populations: women exposed to combat, and women sexually assaulted during military service. The objectives are to: 1) identify and describe organizational, situational, and individual risk factors for physical and sexual assault (i.e., victimization) in women who have served or are currently serving in OEF/OIF by deployment status; 2) determine associations between PTSD, TBI, and physical and sexual assault during OEF/OIF with current physical and mental health status and health risk behaviors by deployment status; 3) identify current internal and external barriers to DoD, DVA, and civilian health services in relationship to women's deployment and victimization status and the association between PTSD and TBI; and 4) identify and describe differences between Regular Military (RM) and R/NG populations for each of these objectives.

Appendix H (IOM Recommendations 6, 7, and 8): Related VA Studies CONTINUED

Title	Amount	Synopsis
Military Sexual Trauma (MST) Effects on PTSD and Health Behavior: A Longitudinal Study of Marines	$ 762,065	Building on a previously conducted prospective longitudinal study of Marine recruits, we will examine the relationship between MST and respondents' functioning approximately 8 years after they joined the Marines. We will focus on health behaviors, with an understanding that there are risk and resilience factors that may influence trajectories following MST. This study has three main objectives: 1) determine what behaviors and areas of functioning are adversely affected by MST; 2) uncover the risk and resilience factors for poor outcomes following MST; and 3) determine if there are gender differences in the effects of MST and its moderators of poor outcomes.
Evaluation of Family Outreach Mental Health Programs for OEF/OIF Veterans	$210,640	The primary objectives are to: 1) examine facilitators and barriers to participation in family-outreach programs among family members of returning OEF/OIF service members; 2) characterize the ways that Reserve and National Guard (R/NG) Veterans learn about and decide whether to use VHA services; and 3) formatively evaluate how the Iowa City VAMC mental health family-outreach efforts meet the mental health and readjustment needs of Veterans.
Perspectives on Enhancing Family Involvement in Treatment for PTSD	$329,503	The proposed research will address gaps in the evidence-base for family involvement in PTSD treatment for the OEF/OIF population. Specific aims are to: 1) identify and describe the elements of the family-psychoeducation model that effectively meet the needs, and are consistent with the preferences of Veterans with PTSD and their families.;2) describe the needs and preferences of OEF/OIF service-era Veterans with PTSD and their families relevant to family involvement in care, and compare them to those of other Veterans with PTSD and their families; and 3) identify and describe major facilitators and barriers to the implementation and sustainability of a REACH-model program in VA settings.
Family-Supported Smoking Cessation for Chronically Ill Veterans	$1,034,362	Randomized trial of a family-supported intervention compared to a standard Veteran-focused intervention to promote smoking cessation among cancer and heart disease patients.

Appendix H (IOM Recommendations 6, 7, and 8): Related VA Studies CONTINUED

Title	Amount	Synopsis
Neuroimaging in the Oklahoma Family Health Patterns Project		At present there are no functional neuroimaging studies of persons having standard risk factors for alcoholism. This study is a hypothesis-based approach to functional and structural neuroimaging in such persons that may provide new information on the neural mechanisms associated with risk for this disorder.
Understanding Race and Culture in Living Donor Kidney Transplantation	$939,800	Examines factors related to the fact that African Americans are four times as likely as whites to have end stage renal disease, but only half as likely to receive kidney transplants.
Presence and Correlates of Racial Disparities in Pain Management	$383,349	Examines whether patient verbal and nonverbal behaviors that are likely to co-vary with race/ethnicity in the clinical encounter mediate and/or moderate the expected effect of race/ethnicity on provider decision-making about pain treatment.
Identifying Mechanisms Linking Perceived Discrimination and Health	$640,591	Study to examine the association between perceived discrimination in health care and utilization of preventive health services.
Comparing Quality and Equity of Care in VA's and Medicare Managed Care	$969,445	Project to assess clinical performance trends in the areas of diabetes, cardiovascular, depression and cancer screening care in the Veterans Affairs Health Care System and Medicare managed care program from 1997-2005. The study will compare both overall performance and the magnitude of racial disparity in quality measures within these two systems of care.
VA Facility Determinants of Racial-Ethnic Variations in Quality of Care	$411,100	Proposed research to: 1) Identify modifiable VA facility-level characteristics associated with quality of care for specific racial-ethnic minority groups, and do so within the context in which VA facilities deliver care; and 2) Identify modifiable VA facility-level characteristics associated with racial-ethnic disparities in VA quality of care, also doing so within the local area and fixed facility contexts, and describe the characteristics of high disparity facilities.

Appendix H (IOM Recommendations 6, 7, and 8): Related VA Studies CONTINUED

Title	Amount	Synopsis
Telemental Health and Cognitive Processing Therapy for Rural Combat Veterans with PTSD	$280,976	Project to evaluate the clinical effectiveness of a telemental health modality (video-teleconferencing) for providing an evidence-based group intervention to rural OEF/OIF Reservists, National Guardsmen, and Veterans with PTSD. The long-term objective of this project is to develop an empirically sound telemental health protocol that will facilitate the extension of a manual-guided evidence-based PTSD treatment intervention to remote VA and DoD sites through video-teleconferencing.
Impact of a Plain Language Prostate Cancer Decision Aid on Decision Making	$894,356	Tests the impact of a decision aid (designed to have a low reading level) on prostate cancer patients' decision-making experience and in their interactions with their physician and VA's health system. This pilot study will inform a larger, already approved study, "Impact of a plain language prostate cancer decision aid on decision making."
Proactive Tobacco Treatment for Diverse Veteran Smokers	$903,681	The primary objectives of this study are to: 1) assess the effect of a proactive care intervention (PRO) on population-level smoking abstinence rates and on utilization of tobacco treatment compared to reactive/usual care (UC) among a diverse population of Veteran smokers (greater than 40 percent ethnic minority);2) compare the effect of PRO on population-level smoking abstinence rates and utilization of tobacco treatments between African American and White smokers; and 3) determine the cost-effectiveness of the proactive care intervention.
Video to Encourage Active Patient Participation		Proposed evaluation of the acceptability and feasibility of using video to encourage patients to use active participatory communication behaviors in medical interactions and to conduct a pilot test of the video among patients with poorly controlled type-2 diabetes.
Pilot Study of Reintegration and Service Needs for Women Veteran Mothers	$69,100	Pilot study to deepen understanding of the concerns and stressors that accompany reintegration into civilian life for OEF/OIF Reserve and Guard woman Veterans who are or are not mothers of dependent children. To also understand the potential barriers to utilizing available support services for these same women and determine what services would provide a better fit for their needs.

Appendix H (IOM Recommendations 6, 7, and 8): Related VA Studies CONTINUED

Title	Amount	Synopsis
Further Development and Validation of the DRRI	$139,500	Study to examine the relevance of content domains within existing Deployment Risk and Resilience Inventory (DRRI) scales and generate information that can be used to refine DRRI scales, as needed. The long-term goal of this project is to provide a suite of scales that will be optimally useful to researchers and clinicians.
Gender and Medical Needs of OIF/OEF Veterans with PTSD	$28,700	In response to recent attention to the high rates of PTSD in returning OEF/OIF Veterans, there have been considerable efforts to characterize their mental health services needs. However, the general medical care needs of OEF/OIF Veterans with PTSD have not been characterized. The objectives of this project are to identify medical conditions associated with PTSD in women (and men) OEF/OIF returnees, stratified by age, and, among those with PTSD, identify medical conditions associated with war-zone exposure and military sexual trauma.
Gender and Medical Needs of OEF/OIF Veterans with PTSDII	$41,400	In response to recent attention to the high rates of PTSD in OEF/OIF Veterans, there have been considerable efforts to characterize their mental health services needs. Core analyses have been completed documenting higher rates of a range of medical conditions in women and men Veterans with PTSD. Supplemental funds have enabled additional examination of whether this effect is even more pronounced for those with a dual diagnosis of PTSD plus a substance use disorder.
Examining the Diagnostic and Clinical Utility of the PTSD Checklist (PCL)	$35,500	Project to examine the impact of these variables on the diagnostic and clinical utility of the PCL. Funding for this project will expedite the completion of our analyses and our subsequent reports. The findings will help VHA clinicians and researchers in their interpretation of PCL scores and subsequent clinical care decisions.

Appendix H (IOM Recommendations 6, 7, and 8): Related VA Studies CONTINUED

Title	Amount	Synopsis
Telemental Health and Cognitive Processing Therapy for Rural Combat Veterans with PTSD	$280,976	Evaluation of the clinical effectiveness of a telemental health modality (video-teleconferencing) for providing an evidence-based group intervention to rural OEF/OIF Reservists, National Guardsmen, and Veterans with PTSD. The long-term objective of this project is to develop an empirically sound telemental health protocol that will facilitate the extension of a manual-guided evidence-based PTSD treatment intervention to remote VA and DoD sites through video-teleconferencing.
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Proactive Tobacco Treatment for Diverse Veteran Smokers	$903,681	Study to: 1) assess the effect of a proactive care intervention (PRO) on population-level smoking abstinence rates and on utilization of tobacco treatment compared to reactive/usual care (UC) among a diverse population of Veteran smokers (greater than 40 percent ethnic minority); 2) compare the effect of PRO on population-level smoking abstinence rates and utilization of tobacco treatments between African American and White smokers; and 3) determine the cost-effectiveness of the proactive care intervention.
Video to Encourage Active Patient Participation		Evaluation of the acceptability and feasibility of using video to encourage patients to use active participatory communication behaviors in medical interactions and to conduct a pilot test of the video among patients with poorly controlled type-2 diabetes.
Pilot Study of Reintegration and Service Needs for Women Veteran Mothers	$69,100	Pilot study deepen understanding of the concerns and stressors that accompany reintegration into civilian life for OEF/OIF Reserve and Guard woman Veterans who are or are not mothers of dependent children. To also understand the potential barriers to utilizing available support services for these same women and determine what services would provide a better fit for their needs.

Appendix H (IOM Recommendations 6, 7, and 8): Related VA Studies CONTINUED

Title	Amount	Synopsis
Barriers and Facilitators to PTSD Treatment Seeking	$362,117	Study to: 1) identify barriers to and facilitators of treatment-seeking for PTSD and determine whether there are variations by gender and period of service; 2) describe Veterans' beliefs about PTSD treatment; 3) identify targets for interventions to promote appropriate treatment-seeking for PTSD; and 4) confirm and expand upon a conceptual model of PTSD treatment-seeking.
A Pilot of PTSD-Focused Cognitive Behavior Therapy (PFCBT) for Partner Violence	$92,673	Proposed study to: 1) develop and standardize a group intervention for intimate partner violence (IPV) perpetration for recently separated male combat Veterans with PTSD; 2) test the efficacy of PFCBT for partner violent Veterans by conducting a small-scale randomized trial comparing 24 sessions of PFCBT with 24 sessions of supportive therapy; and 3) explore differences in participant treatment compliance and process factors across conditions.
Sexual Violence and Women Veterans' Gynecologic Health	$786,901	Study to: 1) determine if the odds of current gynecologic disorders are significantly greater for sexually assaulted Veterans in comparison to non-assaulted peers; 2) identify if the presence and frequency of cofactors known to be associated with cervical cytologic abnormalities is greater in sexually assaulted Veterans when compared to non-assaulted peers; 3) determine the frequency and types of gynecologic services used by sexually assaulted women Veterans in comparison to that of non-assaulted peers; and 4) identify and compare type and frequency of gynecologic health risk behaviors in sexually assaulted Veterans with that of their non-assaulted peers.
Evaluation of Military Sexual Trauma Screening and Treatment	$385,700	Project to determine: 1) patient-level and facility-level factors associated with variation in rates of MST screening, detection, and treatment; 2) modifiable practices associated with MST screening and detection; and 3) modifiable practices, patient factors and facility factors associated with utilization of MST-related treatment.

Appendix H (IOM Recommendations 6, 7, and 8): Related VA Studies CONTINUED

Title	Amount	Synopsis
PTSD, Anger, Cognition, and Partner Violence Among Combat Veterans	$435,740	Proposed study to investigate: 1) the relationship between PTSD symptom severity and the components and manifestations of anger among combat Veterans; 2) the association between PTSD symptom severity and a number of cognitive deficits and biases; 3) How PTSD, anger dysregulation, and cognitive factors are associated with more partner violence perpetration among combat Veterans; and 4) the hypothesis that acute exposure to trauma-related cues will potentiate associations between PTSD symptom severity and various aspects of the anger response.
The Impact of Health Literacy on Racial Differences in Cancer Stage at Presentation	$965,736	Study to determine if racial differences in the rate of advanced stage presentation for prostate, colorectal, and lung cancer can be explained by differences in health literacy, use of screening tests, or both.
Assessing and Addressing Patient Colorectal Cancer (CRC) Screening Barriers	$816,578	Study to: 1) estimate the relative effect of patient cognitive, environmental, and background factors on CRC screening behavior; 2) identify factors that contribute to any disparities in CRC screening behavior by race/ethnicity or other patient characteristics; and 3) identify from these analyses priority population subgroups to target in future interventions.
Dissemination Evaluation of Educational Materials for Puerto Rican OIF/OEF Veterans and Families	$50,000	Project to adapt existing education materials to help Puerto Rican (PR) OEF/OIF Veterans and their families readjust to life after returning home. This project is the critical, first step in accomplishing our long-range goal to improve the quality of life of PR OEF/OIF Veterans/families through education interventions.
Printed and Web-Based OEF/OIF Culturally-Relevant Family Education	$100,000	Our long-term goal is to improve community reintegration of OEF/OIF Veterans throughout VA by creating and disseminating culturally relevant and low-literate, printed and web-based family education materials. To accomplish this long-term goal, we plan to extend our previous work in which we developed family health information for Puerto Ricans in VA's Caribbean Healthcare System.

Appendix H (IOM Recommendations 6, 7, and 8): Related VA Studies CONTINUED

Title	Amount	Synopsis
Translation and Cultural Adaptation of a PTSD Therapy for Hispanics	$120,300	Project to translate therapist and client manuals of an established theoretically-based exposure therapy for PTSD and to evaluate the cultural compatibility of the translated manualized intervention and culturally adapt the theoretically-based, exposure therapy intervention manuals.
Telemedicine and Anger Management Groups for PTSD Veterans in the Hawaiian Island	$840,751	Proposed study to expand upon previous pilot findings by evaluating the clinical effectiveness of providing mental health services via VTC modality as compared to the traditional in-person modality for Veterans with PTSD who reside in remote locations.
Impact of a Plain Language Prostate Cancer Decision Aid on Decision Making	$894,356	Study testing the impact of a plain language decision aid (i.e., a low reading level) on prostate cancer patient's decision making experience as well as in their interactions with their physician and VA's health system. This study will also test if there are differences in receipt of active treatment between men with low vs. high literacy skills and between African American and White men. We will also test whether the decision aid is effective both for low and high literacy patients and for African American and White men.
A Culturally Sensitive Values-Guided Aid for End of Life Decision-Making	$861,762	Given that the medical-technical orientation of care at the end-of-life has been severely criticized and is considered as 'poor' quality of care by some, these observed disparities may reflect yet another example of 'worse' care for minorities. Alternatively, it could represent true cultural, ethnic, or racial differences in decision-making for end-of-life care. Our study will identify these values and gain further insight into the decision-making process at the end-of-life.
Improving Self-Management through Facilitated Patient-Physician Communication	$51,675	Study to: 1) test the feasibility of assessing and enrolling Veterans with poor health literacy and multiple co-morbid conditions, and physicians with poor communication skills to participate in the study; 2) test the feasibility of a one-on-one consultation between Veterans with low health literacy and a health educator focusing on communicating about self-management.; 3) simultaneously test the feasibility of a physician-based communication enhancement intervention., and 4) use the pilot data to develop an investigator-initiated research (IIR) that will test the effectiveness of the interventions in a randomized clinical trial.

Appendix I. OEF/OIF-Specific Data[8]

TBI and Related Blast Injuries

- Estimates of the percentage of OEF/OIF Service members returning with TBI range from 10 percent to 33 percent.
- Some long-term outcomes are apparent at or soon after the time of injury but TBIs that have no physical signs may cause serious long-term effects that can go undetected until the Service member returns home and cannot function as before

Polytrauma

- Frequent co-occurring problems with TBI include
  - Amputation
  - Chronic pain
  - Mental health disorders (e.g., PTSD, Depression)
  - Polytrauma (i.e., multiple injuries, head injury or cognitive disability, and lower-limb injuries)

Mental Health Disorders

- Major depression
  - Estimates of self-reported major depression in OEF/OIF active-duty service members range from 5 percent to 37 percent
- Post traumatic stress disorder
  - OEF/OIF Service members who experience combat exposure and those who are wounded are at higher risk than others
  - One 2006 government study estimated 17 percent of soldiers and 14 percent of Marines met PTSD screening criteria while deployed (other estimates vary)
  - Service members not identified during deployment may be identified 3-4 months (or many years) after their return Afghanistan and Iraq
  - MHS has spent more than $63.8 million in care and $13.1 million in prescription drugs for those with PTSD
  - Self-report screening, different outcome measurement, and the use of convenience samples in the extant post-deployment studies may underestimate the prevalence of PTSD and depression
  - Among 199 OEF/OIF Veterans referred to military behavioral health clinicians, those with PTSD or depression were five times as likely to report

[888] [8] Complete citations or attributions are included in the IOM chapter on Preliminary Findings.

problems with family readjustment as those who did not and almost one third of the Veterans reported that their partners were afraid of them.
    - There is a shortage of mental health professionals
    - Services available to OEF/OIF service members and veterans are poorly distributed.
- Substance abuse disorder
    - A recent study of three Army and one Marine Corps units reported that OEF/OIF deployment was associated with higher prevalence of alcohol misuse compared to pre-deployment prevalence.
    - A study of reserve and National Guard reported that personnel deployed to OEF/OIF were at increased risk for new-onset heavy weekly drinking, binge drinking, and other alcohol-related outcomes.
    - Military deployment was associated with smoking initiation and more strongly with smoking recidivism
    - No data were available on drug abuse among OEF/OIF Service members

Deployment

- In a survey of OEF/OIF Army spouses conducted in 2004,
    - 78 percent reported loneliness
    - Over 51 percent reported anxiety
    - Over 48 percent cited a problem with the military because of the lack of accurate information around the timing of the deployment
    - Over 42 percent reported depression
    - 41 percent reported difficult in communication with the deployed member
    - 29 percent reported difficulties in household maintenance
    - Over 23 percent reported fears about personal safety
    - 21 percent reported problems with overall health
    - 18 percent reported effects on jobs
    - 16 percent reported problems with child care
    - 12 percent reported financial problems
    - Almost 10 percent reported problems with their marriages
- Few studies focus on the normative course of reintegration
- One longitudinal study of reintegration during OIF reported that couples in a sample of reservists were preoccupied with relational communication and expectation, especially regarding independence, roles, and responsibilities.
- Since 2003, family separation has consistently been among the top concerns of Service members stationed in Iraq and Afghanistan and is more strongly related than any other concern to mental health problems
- Length of deployment appears to be positively correlated and pay grade appears to be negatively correlated with a plan for divorce on return (so far, there is little evidence that these plans are realized)

- Two small studies of OEF/OIF families suggest that symptoms of combat-related trauma are related to marital distress for both partners
- No data were found on the effects of deployments on unmarried partners or the parents and other family members of Service members
- The effects of OEF/OIF deployments on children who have parents deployed are consistent with those of earlier research, with studies on the current conflict reporting
    - Depression
    - Anxiety
    - More reactions to stress and resource losses
    - Academic difficulties
    - An increase in the use of mental health-care services
- Effects on child maltreatment and intimate-partner violence are not yet known
- Studies suggests that the unemployment rate of OEF/OIF Veterans may be higher than that of other Veterans
- DoD's unemployment compensation costs increased 75 percent from 2002 to 2004, suggesting that OEF/OIF Veterans are having difficulty transitioning to the civilian labor market. 58 percent of the increase from 2002 to 2004 is attributed to the Army reserve components
- OEF/OIF deployment reduced spousal labor-force participation almost 3 percent overall, with higher rates negatively correlated with the ages of the children.
- The relationship between deployment and earnings among reservists is not clear.

Women and Minorities

- Although 11 percent of all personnel deployed to Iraq and Afghanistan are women, there is little research specific to that population. Among military women in general:
    - Over 72 percent of women in one study reported having experienced sexual harassment during their military service
    - 63 percent reported experiences of physical and sexual harassment during military service
    - 43 percent reported rape or attempted rape during military service
    - Rates of pre-military trauma are higher in women than in men; one study reported 58 percent in women versus 35 percent in men
    - Among civilians, women have higher rates of depression and anxiety disorders than men. Studies of military populations posted at permanent bases have yielded similar findings.
- The distribution of U.S. casualties in Iraq for the first 12 months of conflict show racial equity for minorities
- In the military population overall, findings of differences in service delivery or outcomes associated with race or ethnicity are inconclusive.

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Projecting the Lifelong Burden of War

- Historically, the number of Veterans receiving disability and pension benefits peak several decades after the war.
- As of 2008, 230,000 OEF/OIF Veterans had filed disability claims.
- The majority of claims have not yet been submitted. One study suggests that 791,000 OEF/OIF Veterans will eventually seek disability benefits.
- Unique aspects of OEF/OIF may result in significant deviations from historical trends (e.g., survivors of very severe injuries need more intensive care then the most severely wounded from prior wars).

Appendix J: Acronyms

AF	Air Force
AFRTS	Armed Forces Radio and Television Service
AL	Assisted Living
ALS	Amyotrophic Lateral Sclerosis
BAA	Broad Agency Announcements
BATE	Behavioral Activation and Therapeutic Exposure
BCT	Brigade Combat Teams
CBO	Congressional Budget Office
CBOC	Community Based Outpatient Clinic
CCTA	Collaborative Clinical Trial Award
CDC	Centers for Disease Control and Prevention
CDE	Common data element
CDMRP	Congressionally Directed Medical Research Programs
CHPS	Civilian Health Professions Scholarship program
CNS	Clinical nurse specialist
COLA	Cost of Living Adjustments
CRC	Colorectal cancer
CSP	VA Cooperative Studies Program
CSTS	Center for the Study of Traumatic Stress
CTF	Clinical Tracking Form
DCoE	Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury
DES	Disability Evaluation System
HHS	Department of Health and Human Services
DLS	Deployment Life Study
DMDC	Defense Manpower Data Center
DoD	Department of Defense
DoDI	Department of Defense Instruction
DRRI	Deployment Risk and Resilience Inventory
DTI	Diffusion tensor imaging
DTM	Directive-Type Memorandum
DVBIC	Defense Veterans Brain Injury Center
ECCC	Early Combined Collaborative Care
ESP	Evidence-Based Synthesis Project
FOCUS-CI	Families Over Coming Under Stress-Combat Injury
FTEE	Full-time equivalent employee
FY	Fiscal year

Appendix J: Acronyms (CONTINUED)

GMT	Goal management training
GWVI	Gulf War Veterans with illnesses
GWAS	Genome-wide Association Study
HPO	Health professions officers
HSR&D	Health Services Research and Development Service (VA)
IAMPS	International Applied Military Psychology Seminar
IIR	Investigator-Initiated Research
IB-EW	Internet based-expressive writing
IOM	Institute of Medicine of the National Academy of Sciences
IPS	Individual placement and support
IPV	Intimate partner violence
IRB	Institutional Review Board
IVR	Interactive voice response
MA	Mortuary affairs
MCS	Millennium Cohort Study
MDR	Military Health System Data Repository
MHEI	Mental Health Expansion Initiative
MHICM-RANGE	Mental Health Intensive Case Management – Rural Access Network for Growth Enhancement
MHS	Military Health System
MOMRP	Military Operational Medicine Research Program
MRI	Magnetic residence imagining
MST	Military sexual trauma
mTBI	Mild traumatic brain injury
MTF	Medical treatment facility
MVC	Mobile Vet Center
NCI	National Cancer Institute
NDAA	National Defense Authorization Act
NDI	National Death Index
NHRC	Navy Health Research Center
NIAAA	National Institute of Alcohol Abuse and Alcoholism
NIDA	National Institute on Drug Abuse
NIDRR	National Institute on Disability and Rehabilitation Research
NIH	National Institutes of Health
NIMH	National Institute of Mental Health
NINDS	National Institute of Neurological Disorders and Stroke
NP	Nurse practitioner

Appendix J: Acronyms (CONTINUED)

OACT	Office of the Actuary
OEF	Operation Enduring Freedom
OHI	Office of Health Administration
OI&T	Office of Information and Technology
OIF	Operation Iraqi Freedom
OMHS	Office of Mental Health Services
OPES	Office of Productivity, Efficiency, and Staffing
OQP	Office of Quality and Performance (VA)
ORD	Office of Research and Development (VA)
OSD	Office of the Secretary of Defense
OTS	Office of Telehealth Services
PA	Physician assistant
PACT	Prazosin and Combat Trauma
PBRN	practice-based research network
PCL	PTSD Checklist
PCS (1)	Physical Component Summary
PCS (2)	Post-concussion Syndrome
PFCBT	PTSD-Focused Cognitive Behavior Therapy
PH	Psychological health
PHS	Public Health Service
PHRAMS	Psychological Health Risk-Adjusted Model for Staffing
PRC	Polytrauma Rehabilitation Centers
PRO	Proactive care intervention
PSA	Public service announcements
PT/BRI QUERI	Polytrauma and Blast-Related Injury Quality Enhancement Research Initiative
PFCBT	PTSD-focused cognitive behavior therapy
PTSD	Post traumatic stress disorder
QUERI	Quality Enhancement Research Initiative
RC01	Research Committee 01 of the International Sociological Association
RCS	Office of Readjustment Counseling
RCT	Randomized controlled trial
RFA	Request for Applications
R/NG	Reserve and National Guard
rTMS	Repetitive transcranial magnetic stimulation
RM	Regular military
SAMHSA	Substance Abuse and Mental Health Services Administration
SBIRT	Screening, Brief Intervention, Referral and Treatment

Appendix J: Acronyms (CONTINUED)

SCI	Spinal Cord Injury
SF-36V	The Veterans Short Form 36 Questionnaire
SME	Subject matter expert
SMI	Serious mental illness
SOC	Senior Oversight Committee
SSA	Social Security Administration
STARRS	Study to Assess Risk and Resilience in Service Members
SDQ	Strengths and Difficulties Questionnaire
SUD	Substance use disorder
T2	DCoE's National Center for Telehealth and Technology
TATRC	Telemedicine and Advanced Technology Research Center
TBI	Traumatic brain injury
TEAM	Troop education for army morale
TRICARE	*not an acronym* (the military medical health system)
TBIMS	TBI Model Systems
TLD	Third-location decompression
TOP	Telemedicine Outreach for Post Traumatic Stress
TRMD	Treatment-resistant major depression
UC	Usual care
UK	United Kingdom
USAMRMC	US Army Medical Research and Materiel Command
USDA	US Department of Agriculture
USUHS	Uniformed Services University of the Health Sciences
VA	Department of Veterans Affairs
VA RR&D	VA Rehabilitation Research and Development Service
VAMC	VA Medical Center
VBA	Veterans Benefits Administration
VetPop	The Veteran Population
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network
VRP	Vocational rehabilitation program
VSA	Veterans Service Area
WVHSHG	Women Veterans Health Strategic Health Care Group