READINESS

### UNDER SECRETARY OF DEFENSE

4000 DEFENSE PENTAGON WASHINGTON, DC 20301-4000

MAY 10 2011

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

Dear Mr. Chairman:

This letter is in response to section 1634(b) of the National Defense Authorization Act for Fiscal Year 2008 (P.L. 111-181), which requires that the Secretary of Defense submit an annual report setting forth the amounts expended by the Department of Defense during the preceding calendar year on activities relating to the diagnosis, treatment, and rehabilitation of members of the Armed Forces with traumatic brain injury (TBI) and psychological health (PH) concerns, to include Posttraumatic Stress Disorder (PTSD).

The enclosed report, for calendar year 2010, includes descriptions of the activities for which funds were expended; a statement of the Department's priorities relating to the prevention, diagnosis, research, treatment, and rehabilitation of TBI and PH, including PTSD; and an assessment of the progress made toward achieving those priorities. The Department apologizes that this report was delayed by extensive data collection and coordination process.

A similar letter has been sent to the other congressional defense committees. Thank you for your interest in the health and well-being of Service members, veterans, and their families.

Sincerely,

Clifford L. Stanley

Chi ford L.

Enclosure:

As stated

cc:

The Honorable John McCain Ranking Member

### **UNDER SECRETARY OF DEFENSE**

4000 DEFENSE PENTAGON WASHINGTON, DC 20301-4000

MAY 1.0 2011

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

Dear Mr. Chairman:

This letter is in response to section 1634(b) of the National Defense Authorization Act for Fiscal Year 2008 (P.L. 111-181), which requires that the Secretary of Defense submit an annual report setting forth the amounts expended by the Department of Defense during the preceding calendar year on activities relating to the diagnosis, treatment, and rehabilitation of members of the Armed Forces with traumatic brain injury (TBI) and psychological health (PH) concerns, to include Posttraumatic Stress Disorder (PTSD).

The enclosed report, for calendar year 2010, includes descriptions of the activities for which funds were expended; a statement of the Department's priorities relating to the prevention, diagnosis, research, treatment, and rehabilitation of TBI and PH, including PTSD; and an assessment of the progress made toward achieving those priorities. The Department apologizes that this report was delayed by extensive data collection and coordination process.

A similar letter has been sent to the other congressional defense committees. Thank you for your interest in the health and well-being of Service members, veterans, and their families.

Sincerely,

Clifford L. Stanley

Clifford LIB

Enclosure: As stated

cc:

The Honorable Lindsey Graham Ranking Member

### **UNDER SECRETARY OF DEFENSE**

4000 DEFENSE PENTAGON WASHINGTON, DC 20301-4000

The Honorable Howard P. "Buck" McKeon
Chairman, Committee on Armed Services

MAY 10 2011

Dear Mr. Chairman:

Washington, DC 20515

U.S. House of Representatives

This letter is in response to section 1634(b) of the National Defense Authorization Act for Fiscal Year 2008 (P.L. 111-181), which requires that the Secretary of Defense submit an annual report setting forth the amounts expended by the Department of Defense during the preceding calendar year on activities relating to the diagnosis, treatment, and rehabilitation of members of the Armed Forces with traumatic brain injury (TBI) and psychological health (PH) concerns, to include Posttraumatic Stress Disorder (PTSD).

The enclosed report, for calendar year 2010, includes descriptions of the activities for which funds were expended; a statement of the Department's priorities relating to the prevention, diagnosis, research, treatment, and rehabilitation of TBI and PH, including PTSD; and an assessment of the progress made toward achieving those priorities. The Department apologizes that this report was delayed by extensive data collection and coordination process.

A similar letter has been sent to the other congressional defense committees. Thank you for your interest in the health and well-being of Service members, veterans, and their families.

Sincerely,

Clifford L. Stanley

Chilfred h 1847

Enclosure: As stated

cc:

The Honorable Adam Smith Ranking Member

### PERSONNEL AND

READINESS

### UNDER SECRETARY OF DEFENSE

4000 DEFENSE PENTAGON WASHINGTON, DC 20301-4000

MAY 10 2011

The Honorable Joe Wilson Chairman, Subcommittee on Military Personnel Committee on Armed Services U.S. House of Representatives Washington, DC 20515

Dear Mr. Chairman:

This letter is in response to section 1634(b) of the National Defense Authorization Act for Fiscal Year 2008 (P.L. 111-181), which requires that the Secretary of Defense submit an annual report setting forth the amounts expended by the Department of Defense during the preceding calendar year on activities relating to the diagnosis, treatment, and rehabilitation of members of the Armed Forces with traumatic brain injury (TBI) and psychological health (PH) concerns, to include Posttraumatic Stress Disorder (PTSD).

The enclosed report, for calendar year 2010, includes descriptions of the activities for which funds were expended; a statement of the Department's priorities relating to the prevention, diagnosis, research, treatment, and rehabilitation of TBI and PH, including PTSD; and an assessment of the progress made toward achieving those priorities. The Department apologizes that this report was delayed by extensive data collection and coordination process.

A similar letter has been sent to the other congressional defense committees. Thank you for your interest in the health and well-being of Service members, veterans, and their families.

Sincerely,

Clifford L. Stanley

Cliffond L ST

Enclosure: As stated

cc:

The Honorable Susan A. Davis Ranking Member

### **UNDER SECRETARY OF DEFENSE**

4000 DEFENSE PENTAGON WASHINGTON, DC 20301-4000

MAY 10 2011

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

Dear Mr. Chairman:

This letter is in response to section 1634(b) of the National Defense Authorization Act for Fiscal Year 2008 (P.L. 111-181), which requires that the Secretary of Defense submit an annual report setting forth the amounts expended by the Department of Defense during the preceding calendar year on activities relating to the diagnosis, treatment, and rehabilitation of members of the Armed Forces with traumatic brain injury (TBI) and psychological health (PH) concerns, to include Posttraumatic Stress Disorder (PTSD).

The enclosed report, for calendar year 2010, includes descriptions of the activities for which funds were expended; a statement of the Department's priorities relating to the prevention, diagnosis, research, treatment, and rehabilitation of TBI and PH, including PTSD; and an assessment of the progress made toward achieving those priorities. The Department apologizes that this report was delayed by extensive data collection and coordination process.

A similar letter has been sent to the other congressional defense committees. Thank you for your interest in the health and well-being of Service members, veterans, and their families.

Sincerely,

Clifford L. Stanley

Wilfred L Sterlin

Enclosure: As stated

cc:

The Honorable Thad Cochran Vice Chairman

### **UNDER SECRETARY OF DEFENSE**

4000 DEFENSE PENTAGON WASHINGTON, DC 20301-4000

MAY 10 2011

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

Dear Mr. Chairman:

This letter is in response to section 1634(b) of the National Defense Authorization Act for Fiscal Year 2008 (P.L. 111-181), which requires that the Secretary of Defense submit an annual report setting forth the amounts expended by the Department of Defense during the preceding calendar year on activities relating to the diagnosis, treatment, and rehabilitation of members of the Armed Forces with traumatic brain injury (TBI) and psychological health (PH) concerns, to include Posttraumatic Stress Disorder (PTSD).

The enclosed report, for calendar year 2010, includes descriptions of the activities for which funds were expended; a statement of the Department's priorities relating to the prevention, diagnosis, research, treatment, and rehabilitation of TBI and PH, including PTSD; and an assessment of the progress made toward achieving those priorities. The Department apologizes that this report was delayed by extensive data collection and coordination process.

A similar letter has been sent to the other congressional defense committees. Thank you for your interest in the health and well-being of Service members, veterans, and their families.

Sincerely,

Clifford L. Stanley

Calfred h. thigh

Enclosure: As stated

cc:

The Honorable Thad Cochran Vice Chairman

### **UNDER SECRETARY OF DEFENSE**

4000 DEFENSE PENTAGON WASHINGTON, DC 20301-4000

LAY 10 2017

The Honorable Harold Rogers Chairman, Committee on Appropriations U.S. House of Representatives Washington, DC 20515

Dear Mr. Chairman:

This letter is in response to section 1634(b) of the National Defense Authorization Act for Fiscal Year 2008 (P.L. 111-181), which requires that the Secretary of Defense submit an annual report setting forth the amounts expended by the Department of Defense during the preceding calendar year on activities relating to the diagnosis, treatment, and rehabilitation of members of the Armed Forces with traumatic brain injury (TBI) and psychological health (PH) concerns, to include Posttraumatic Stress Disorder (PTSD).

The enclosed report, for calendar year 2010, includes descriptions of the activities for which funds were expended; a statement of the Department's priorities relating to the prevention, diagnosis, research, treatment, and rehabilitation of TBI and PH, including PTSD; and an assessment of the progress made toward achieving those priorities. The Department apologizes that this report was delayed by extensive data collection and coordination process.

A similar letter has been sent to the other congressional defense committees. Thank you for your interest in the health and well-being of Service members, veterans, and their families.

Sincerely,

Clifford L. Stanley

Chilford L Stilly

Enclosure: As stated

cc:

The Honorable Norman D. Dicks Ranking Member

### **UNDER SECRETARY OF DEFENSE**

4000 DEFENSE PENTAGON WASHINGTON, DC 20301-4000

MAY 10 2011

The Honorable C. W. Bill Young Chairman, Subcommittee on Defense Committee on Appropriations U.S. House of Representatives Washington, DC 20515

Dear Mr. Chairman:

This letter is in response to section 1634(b) of the National Defense Authorization Act for Fiscal Year 2008 (P.L. 111-181), which requires that the Secretary of Defense submit an annual report setting forth the amounts expended by the Department of Defense during the preceding calendar year on activities relating to the diagnosis, treatment, and rehabilitation of members of the Armed Forces with traumatic brain injury (TBI) and psychological health (PH) concerns, to include Posttraumatic Stress Disorder (PTSD).

The enclosed report, for calendar year 2010, includes descriptions of the activities for which funds were expended; a statement of the Department's priorities relating to the prevention, diagnosis, research, treatment, and rehabilitation of TBI and PH, including PTSD; and an assessment of the progress made toward achieving those priorities. The Department apologizes that this report was delayed by extensive data collection and coordination process.

A similar letter has been sent to the other congressional defense committees. Thank you for your interest in the health and well-being of Service members, veterans, and their families.

Sincerely,

Clifford L. Stanley

Clifford L Alley

Enclosure: As stated

cc:

The Honorable Norman D. Dicks Ranking Member



# Report to Congress On Expenditures for Activities on Traumatic Brain Injury and Psychological Health, Including Posttraumatic Stress Disorder, for 2010

### In Accordance with Section 1634 (b) of the National Defense Authorization Act For Fiscal Year 2008

Preparation of this study/report cost the Department of Defense a total of approximately \$11,955 for the 2010 Fiscal Year. Generated on 20110308 RefID: F-28E9BAD.

### **Table of Contents**

1.0	Intr	oductio	n	1
	1.1	Backg	round	1
	1.2	Purpo	se of this Report	1
2.0	Amo	ounts A	llocated to the Defense and Veterans Brain Injury Center (DVBIC)	6
3.0	Prio	rities, A	mount Expended, and an Assessment of Outcomes Related to Improving	
			Freatment, and Rehabilitation for Psychological Health, Including	
	Post	traumat	ic Stress Disorder, and Traumatic Brain Injury	6
	3.1		s to Care	
		3.1.1	Funding for Access to Care	6
		3.1.2	Description and Assessment of Outcomes for Access to Care	
		3.1.3	Description of Actions Planned for Access to Care	
	3.2	Qualit	y of Care	
		3.2.1	Funding for Quality of Care	13
		3.2.2	Description and Assessment of Outcomes for Quality of Care	13
		3.2.3	Description of Actions Planned for Quality of Care	15
	3.3	Resilie	ence	
		3.3.1	Funding for Resilience	16
		3.3.2	Description and Assessment of Outcomes for Resilience	16
		3.3.3	Description of Actions Planned for Resilience	18
	3.4	Transi	tion of Care	18
		3.4.1	Funding for Transition of Care	19
		3.4.2	Description and Assessment of Outcomes for Transition of Care	19
		3.4.3	Description of Actions Planned for Transition of Care	20
	3.5	Screen	ning and Surveillance	
		3.5.1	Funding for Screening and Surveillance	21
		3.5.2	Description and Assessment of Outcomes for Screening and	
			Surveillance	
		3.5.3	Description of Actions Planned for Screening and Surveillance	24
	3.6	Leade	rship and Advocacy	26
		3.6.1	Funding for Leadership and Advocacy	26
		3.6.2	Description and Assessment of Outcomes for Leadership	
			and Advocacy	
		3.6.3	Description of Actions Planned for Leadership and Advocacy	28
	3.7	Resear	rch and Development	
		3.7.1	Funding for Research and Development	29
		3.7.2	Description and Assessment of Outcomes for Research	
			and Development	
		3.7.3	Description of Actions Planned for Research and Development	31
4.0		_	Patients within the Military Health System as Routinely Captured	
	in t	he Base	Military Health Accounting System	33
		4.1	Costs in Fiscal Year 2010 for formerly deployed Service members with	
			a psychological health diagnosis	34
		4.2	Costs in Fiscal Year 2010 for formerly deployed Service members with	
			a traumatic brain injury diagnosis	35

### 1.0 Introduction

### 1.1 Background

The effects of military deployments on psychological health (PH), including Posttraumatic Stress Disorder (PTSD), and traumatic brain injury (TBI), have gained great visibility throughout the Department of Defense (DoD) and the Department of Veterans Affairs (VA). As a result, DoD, in coordination with VA and with the support of Congress, has increased attention on programs and initiatives designed to improve the diagnosis, treatment, and rehabilitation of members of the Armed Forces with PH and TBI concerns.

Since the first infusion of PH and TBI funding in the Fiscal Year (FY) 2007 Supplemental Appropriation, DoD has initiated and sustained more than 150 projects to address the recommendations outlined in various task forces and commissions (such as the President's Commission on Care for Returning Wounded Warriors, also known as the Dole-Shalala Commission, and the DoD Task Force on Mental Health). The appropriated funds for PH and TBI have enabled DoD to implement improvements in its consistency and capability to respond to PH and TBI conditions across the full continuum of care within DoD. Efforts have focused on collaborative development and improvement of programs dedicated to prevention, protection, identification, diagnosis, treatment, recovery, research, and rehabilitation of Service members and veterans with PH and TBI concerns.

### 1.2 Purpose of this Report

This report is the third annual submission in response to specific requirements defined in section 1634(b) of the National Defense Authorization Act (NDAA) for FY 2008. Last year's report identified DoD priorities for PH and TBI in seven areas:

- Access to Care
- Quality of Care
- Resilience
- Transition
- Screening and Surveillance
- Leadership and Advocacy
- Research

The identified actions in the following subsections address each of the seven priority areas and provide detailed descriptions of completed actions, followed by a subsection for in-progress and planned actions. The unfulfilled actions under the seven priority areas will carry to the next annual submission for discussion. This report addresses PH and TBI concerns, including PTSD, as follows:

- The following funding tables contained in this section outline expenditures from FY 2007/2008 (Table 1), FY 2008 (Table 2), FY 2009 (Table 3), FY 2010 (Table 4), and FY 2011 (Table 5);
- Amounts allocated to the Defense and Veterans Brain Injury Center (DVBIC) (Section 2.0);

- Priorities, amount expended, and an assessment of select outcomes for activities relating to the prevention, diagnosis, research, treatment, and rehabilitation of PH and TBI concerns, including PTSD, in Service members during the years supported by the FY 2010 Appropriation (Section 3.0); and
- Caring for patients with TBI and mental health (MH)<sup>1</sup> issues as captured in the Mental Health Accounting System (Section 4.0).

TABLE 1: FISCAL YEAR 2007/2008 (\$ millions)

	Appropriated Operations & Maintenance (O&M) <sup>1</sup>	Appropriated Research Development Test & Evaluation (RDT&E) 2	Reprogrammed RDT&E <sup>2</sup>	Reprogrammed Procurement <sup>3</sup>	Total
Appropriated Amounts	\$ 600.0	\$ 300.0	\$ 0.0	\$ 0.0	\$ 900.0
Less: O&M Extended to FY08/09	\$ (75.0)	\$ 0.0	\$ 0.0	\$ 0.0	\$ (75.0)
Less: O&M Reprogrammed to RDT&E and Procurement	\$ (70.5)	\$ 0.0	\$ 58.8	\$ 11.7	\$ 0.0
Less: Statutory withhold for Small Business Innovation Research (SBIR); (Small Business Act, Title 15, U.S. Code (U.S.C.), Section 638)	\$ 0.0	\$ (7.5)	\$ (1.5)	\$ 0.0	\$ (9.0)
Net Funding	\$ 454.5	\$ 292.5	\$ 57.3	\$ 11.7	\$ 816.0
Amount Obligated	\$ 416.0	\$ 292.0	\$ 57.3	\$ 10.3	\$ 775.6
Percentage of Net Funding Obligated	92%	99.9%	100%	88%	95%

<sup>&</sup>lt;sup>1</sup> O&M Obligations are as of September 30, 2008.

<sup>&</sup>lt;sup>2</sup> RDT&E Obligations are as of December 31, 2010. RDT&E funds appropriated in FY 2007/2008 continued to obligate through FY 2008.

<sup>&</sup>lt;sup>3</sup> Procurement Obligations are as of December 31, 2010. Procurement funds were appropriated in FY 2007/2008 and continued to obligate through FY 2009.

<sup>&</sup>lt;sup>1</sup> Throughout this report, the terms mental health (MH), behavioral health (BH), and psychological health (PH) appear in various contexts. For purposes of this report, the following definitions help distinguish the difference in use of the terms:

mental health (MH) – clinically related treatment for a disorder

behavioral health (BH) – behaviors that are observable (e.g., alcohol, spousal, or substance abuse), and may include mental health

psychological health (PH) – overall psychological well-being, including mental health

TABLE 2: FISCAL YEAR 2008 (\$ millions)

	O&M Funding <sup>1</sup>	Appropriated RDT&E 2	Reprogrammed RDTE <sup>2</sup>	Reprogrammed Procurement <sup>3</sup>	Total
FY 2008 Supplemental Appropriation - RDT&E (Portion of \$273.8 appropriated for Battle Casualty/ Psychological Health Research) <sup>3</sup>	\$ 0.0	\$ 143.0	\$ 0.0	\$ 0.0	\$ 143.0
Reprogrammed from WII-SOC	\$ 0.0	\$ 0.0	\$ 13.7	\$ 7.2	\$ 20.9
Total Available FY 2008 Funding	\$ 0.0	\$ 143.0	\$ 13.7	\$ 7.2	\$ 163.9
Amount Obligated	\$ 0.0	\$ 143.0	\$ 13.5	\$ 7.2	\$ 163.7
Percentage of Net Funding Obligated	0%	100%	99%	100%	99.9%

<sup>&</sup>lt;sup>1</sup>O&M Obligations are as of September 30, 2008.

<sup>&</sup>lt;sup>2</sup> RDT&E Obligations are as of December 31, 2010. FY 2008 RDT&E for Army reflects only the funding awarded for TBI/PH research as part of the "Battle Casualty Care and Psychological Health" supplemental.

<sup>&</sup>lt;sup>3</sup> Procurement Funding and Obligations are as of December 31, 2010.

**TABLE 3: FISCAL YEAR 2009 (\$ millions)** 

	O&M Funding <sup>1</sup>	Appropriated RDT&E <sup>2</sup>	Appropriated Procurement <sup>3</sup>	Total
FY 2009 Supplemental Bridge Funding	\$ 300.0	\$ 0.0	\$ 0.0	\$ 300.0
FY 2009 Appropriation	\$ 210.0	\$ 90.0	\$ 0.0	\$ 300.0
FY 2009 Supplemental Funding	\$ 0.0	\$ 75.0	\$ 20.0	\$ 95.0
FY 2007/2008 Funding Extended to FY 2008/2009	\$ 75.0	\$ 0.0	\$ 0.0	\$ 75.0
FY 2009 Less: Statutory withhold for Small Business Innovation Research (Small Business Act, Title 15, U.S.C. 638) <sup>4</sup>	\$ 0.0	\$ (1.9)	\$ 0.0	\$ (1.9)
Reprogrammed for Army Suicide Study with National Institute for Mental Health	\$ (10.0)	\$ 0.0	\$ 0.0	\$ (10.0)
Total Available FY 2009 Funding	\$ 575.0	\$ 163.1	\$ 20.0	\$ 758.1
Amount Obligated	\$ 532.3	\$ 163.0	\$ 8.6	\$ 703.9
Percentage of Net Funding Obligated	93%	99.9%	43%	93%

<sup>&</sup>lt;sup>1</sup> O&M Obligations are as of September 30, 2009. <sup>2</sup> RDT&E Obligations are as of December 31, 2010.

<sup>&</sup>lt;sup>3</sup> Procurement Obligations are as of December 31, 2010. Procurement funds remain available for obligation through FY 2011.

 $<sup>^4</sup>$  SBIR withhold only applied to the Supplemental funding. Per Section 8006 of the FY 2009 NDAA, SBIR withhold was not applied to one-time Congressional-adds.

TABLE 4: FY 2010 (\$ millions)

	O&M Funding <sup>1</sup>	Appropriated RDT&E <sup>2</sup>	Procurement	Total
FY 2010 Appropriation	\$ 655.9	\$ 200.7	\$ 0.0	\$ 856.6
FY 2010 Less: Statutory withhold for Small Business Innovation Research (Small Business Act, Title 15, U.S.C. 638) <sup>3</sup>	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
Total Available FY 2010 Funding	\$ 655.9	\$ 200.7	\$ 0.0	\$ 856.6
Amount Obligated	\$ 570.0	\$ 83.2	\$ 0.0	\$ 653.2
Percentage of Net Funding Obligated	87%	42%	0%	76%

<sup>&</sup>lt;sup>1</sup>O&M Obligations are as of September 30, 2010.

**TABLE 5: FY 2011 (\$ millions)** 

	O&M Funding <sup>1</sup>	Appropriated RDT&E <sup>2</sup>	Procurement	Total
FY 2011 Appropriation	\$0.0	\$0.0	\$0.0	\$0.0
FY 2011 Less: Statutory withhold for Small Business Innovation Research (Small Business Act, Title 15, U.S.C. 638)	\$0.0	\$0.0	\$0.0	\$0.0
Total Available FY 2011 Funding	\$0.0	\$0.0	\$0.0	\$0.0
Amount Obligated	\$52.1	\$0.0	\$0.0	\$52.1
Percentage of Net Funding Obligated	N/A	N/A	N/A	N/A

<sup>&</sup>lt;sup>1</sup> O&M Appropriation and Obligation amounts are not available for FY 2011 due to the Continuing Resolutions. O&M Obligations are as of December 31, 2010.

<sup>&</sup>lt;sup>2</sup> RDT&E FY 2010 Appropriated Funding and Obligations are as of December 31, 2010. RDT&E funding remains available for obligation through FY 2011; actuals may vary based upon proposals awarded. Total amount includes One-time congressional add, Guidance for the Development of the Force (GDF), and Wounded Warrior Enhancement (WWE) funding.

<sup>&</sup>lt;sup>3</sup> SBIR reductions are not included since SBIR was applied to the total GDF and WWE appropriated amounts, not just the TBI/PH awards. In addition, per Section 8006 of the FY 2010 NDAA, SBIR withhold may not be applied to one-time Congressional-adds.

<sup>&</sup>lt;sup>2</sup> Research Development Test and Evaluation Appropriation and Funding amounts are not available for FY 2011 due to the Continuing Resolutions. If FY 2011 RDT&E funds are Appropriated, funding will continue to obligate through FY 2012.

### 2.0 Amounts Allocated to DVBIC

DVBIC serves active duty Service members, their beneficiaries, and veterans through state-of-the-art medical care, innovative clinical research initiatives, and educational programs for TBI. In 2007, DVBIC became the TBI operational component of Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE). DVBIC obligated 100 percent of the \$34.25 million in Operations and Maintenance (O&M) funding, and \$1.7 million in Procurement funding it received in FY 2009. For FY 2010, DVBIC obligated \$36.62 million in O&M funding. DVBICs FY 2011 budget is \$38.38 million in O&M funding.

### 3.0 Priorities, Amount Expended, and an Assessment of Outcomes Related to Improving Diagnosis, Treatment, and Rehabilitation for TBI and PH (including PTSD)

The plan for implementing the PH and TBI strategies is founded on seven strategic goals to transform the system of care addressing PH and TBI concerns for Service members and their families. The following subsections discuss DoD and Service-specific actions by priority area, and have been organized within each priority area by completed actions; a description and assessment of select outcomes within each area; and a description of the planned actions for the upcoming year.

### 3.1 Access to Care

The primary objective of the access-to-care initiative is to ensure Service members and their family members have timely access to comprehensive health care related to TBI or PH concerns. This involves improved staffing and innovative delivery strategies including outreach and prevention services, primary-care-based PH services, improved primary care capability for TBI, specialty PH care, specialized TBI care, and improved inpatient care.

### 3.1.1 Funding for Access to Care

	FY 2010 *	FY 2011 **	
	Obligated (K)	Funded (K) ***	Obligated (K)
ТВІ	\$78,819	\$0	\$8,501
PH	\$169,464	\$0	\$30,697

<sup>\*</sup> As of September 30, 2010

### 3.1.2 Description and Assessment of Outcomes for Access to Care

DoD is committed to providing the necessary funding, coordination, and support to Service and benefit operations to assure there are adequate mental health (MH) resources to meet the MH treatment needs of Military Health System (MHS) beneficiaries. A full spectrum of MH care is available to Service members and their families through the MHS and TRICARE before, during, and after deployment.

Due to increased screening referrals and help-seeking in the face of sustained operations, the military Services have increased civilian MH staffing, including

<sup>\*\*</sup> As of December 31, 2010

<sup>\*\*\*</sup> Funded amounts are not available for FY 2011 due to the Continuing Resolutions (CR). However, the CR continues funding for programs at the FY2010 operating level, thus programs continue to incur FY 2011 obligations.

contractors and government civilians, to augment care in instances when military MH providers have been deployed, and to meet established access standards for urgent and routine appointments. Each Service provides MH care designed to best serve its unique operational requirements.

Army obligated 95 percent of its access-to-care funding for FY 2010. The majority of the Army access-to-care funding was directed to hire of 990 additional BH providers. During FY 2010, Army focused specific attention on recruiting BH staff, which ultimately resulted in the hire of 88 additional BH personnel. As a result of additional staffing, Army was able to increase the number of monthly clinic encounters from 94,784 to 105,898, an increase of 11,117, or 12 percent during FY 2010.

Army is working to improve its compliance with the DoD 7-day access-to-care standard from a FY 2010 average of 82 percent, to the DoD established goal of 90 percent. With the additional staff hired during FY 2010, Army should see an improvement in meeting that standard during FY 2011. There has been marked improvement in its ability to meet the 24-hour urgent care access-to-care standard, which for FY 2010 averaged 95 percent, matching DoD's established goal. In addition, Army was able to increase the number of sessions per patient for PH-related symptoms from six to eight during FY 2010. Clinical trial data indicates that as many as 67.2 percent of patients seen for more than five sessions of psychotherapy will see symptom improvement.

Another significant Army initiative, Child and Family Assistance Centers (CAFACs), provides direct BH support for Army Service members and their families, including marriage and family therapy, and is directed at the promotion of optimal military readiness and wellness in Army children and families. The CAFAC is based on a public health model to increase capacity and flexibility in the delivery of BH services through Army and civilian partnerships. During calendar year 2010, one CAFAC became operational at Schofield Barracks, Hawaii, and three additional CAFACs began standing up at: Joint Base Lewis-McChord, Washington; Ft. Carson, Colorado; and Ft. Wainwright, Alaska.

Army launched the Comprehensive Behavioral Health System of Care Campaign Plan (CBHSOC-CP) in February 2010 to standardize, synchronize, and coordinate BH care across the Army. The intent of the CBHSOC-CP is to optimize and standardize care and maximize limited Army BH resources to ensure the highest care to Service members. Key components of this CBHSOC-CP effort will be enhancing family support through expanding CAFACs that provide a comprehensive plan for Army installations to provide direct BH support for Army children and their families, with all BH resources integrated under a single umbrella organization to facilitate coordination and increase capacity and flexibility in delivery of BH services.

Army has made significant progress in improving TBI access-to-care. Army has funded 444 additional TBI staff in locations ranging from large Army hospitals to rural outpatient clinics, including a five-person TBI rehab surge team, and a team of providers deployed to theater, made up of a neurologist and four occupational therapists. During FY 2010, the Army increased TBI clinic encounters from 1,993 per month to 2,032 per month. There were also more than 1,800 telehealth encounters for patients with TBI.

Service members are seen at some locations 14-30 days sooner using advances in telehealth rather than relying on conventional face-to-face appointments.

Navy worked through FY 2010 to increase timely access for Service and family members to comprehensive healthcare. The Navy contracted and filled an additional 297 staff in healthcare areas to include: outreach; education and prevention services; traditional PH treatment; the integration of BH into primary care; and inpatient care. With the additional staff, Navy was able to meet or exceed the established access-to-care standards for routine and urgent care appointments for FY 2010.

Navy Bureau of Medicine and Surgery announced the launch of a new Web-based continuing care support system for Service members, family members and retirees who are enrolled within Navy substance abuse and rehabilitation services. The new online program, Navy MORE (My Ongoing Recovery Experience), began in August 2010, and had more than 250 members by the end of FY 2010. The online program, created in collaboration with Hazelden, one of the world's largest and most respected private, non-profit alcohol and drug addiction treatment centers, is a customized, interactive and confidential recovery tool designed to increase access-to-care whether the Service member is shipboard, on base, leave, or retired (https://www.navymore.org/home.html).

The Air Force (AF) hired 96 contract providers to increase Service member access-to-care. During FY 2010, AF increased their clinical capacity to 459,000 encounters, a 28 percent increase since 2007. These providers have significantly increased the total AF MH clinical capacity and enabled uniformed providers to increase outreach activities to military units.

At 13 MTFs and five Air National Guard units, video teleconference (VTC) capability was installed and providers were trained on how to use the technology to deliver patient care. A Web-based service was developed allowing the ability to advertise specialty services via VTC. AF continued deploying secure VTC equipment to 18 MH units allowing specialty care access to patients at smaller bases, reducing cost of travel and network care.

AF initiated a six-week psychiatric and MH nursing course at Travis AF Base, California, to "grow its own" AF MH professional nurses. This initiative was implemented to meet the 25 percent personnel increase required by the National Defense Authorization Act for FY 2010, Section 714<sup>2</sup>, and to support psychiatric and MH nurse attrition in future years.

DoD, through the Center for Deployment Psychology (CDP), trains military and civilian psychologists, psychology interns/residents, and other PH professionals to provide high-quality deployment-related PH services to Service members and their families. In partnerships with a number of civilian agencies, CDP conducted workshops and provided training and education events to BH providers during 2010. CDP has partnered with the National Guard Bureau's State Directors of Psychological Health and

documents as authorized; or the amount required to fulfill the requirements of NDAA10, Section 708.

8

<sup>&</sup>lt;sup>2</sup> National Defense Authorization Act for FY 2010, Section 714, required the Secretary of each military department to increase the number of active duty mental health personnel authorized in an amount equal to the sum of the following: the greater of— (A) the amount identified on personnel authorization documents as required but not authorized to be filled; (B) the amount that is 25 percent of the amount identified on personnel authorization

the Department of Veterans Affairs Medical Centers to promote awareness of and attendance at events in their areas. In addition, more than 40 professionals completed a post-Master's certificate program in Military and Veteran Behavioral Health in 2010 conducted in partnership between DoD and Widener University.

CDP staff conducted more than 30 seminars and symposia to more than 3,000 providers across the country in FY 2010, including online learning courses such as the "Impact of Deployment and Combat Stress on Families"; the "Impact of Deployment and Combat Stress on Children"; and the "Fundamentals of TBI." These seminars also included hosting a core competency program to for university and college counselors who may encounter the unique needs of Service and family members on their campuses. Courses such as these raise awareness of PH and TBI concerns impacting Service members and their families.

DoD observed heightened readership of the educational and information materials created and published by the Center for the Study of Traumatic Stress (CSTS) during FY 2010, implying anecdotal evidence that their communities of interest are seeking an enhanced understanding of treatment and prevention of TBI and PTSD conditions. Some accomplishments include additions to the *Courage to Care* and *Courage to Talk* educational series. This initiative is designed to help healthcare providers and families to communicate more effectively about war injuries (http://www.couragetotalk.org/). A wealth of information available in the *Courage to Care* series, which has been specifically developed to target health issues of the military family (www.centerforthestudyoftraumaticstress.org/ resources/category-1\_courage\_to\_care). In 2010, DoD published *Joining Forces/Joining Families* for the Army Family Morale, Welfare and Recreation Command, detailing the goals and objectives of the Family Violence and Trauma Project, which addresses the prevalence and trends of spousal abuse and child maltreatment in the Army, and can be found at: www.cstsonline.org/programs/familyviolence 2-overview.

As discussed in section 2.0, DoD's primary source for TBI subject matter expertise, the Defense and Veterans Brain Injury Center (DVBIC), serves DoD and Veteran's Affairs (VA) by providing state-of-the-art clinical care, innovative clinical research initiatives, and educational programs. During FY 2010, DVBIC systematically and strategically increased access-to-care efforts by adding two positions to their existing Regional Education Coordinators (REC). This multi-site network of REC's addresses the unique needs of target populations within each of their assigned areas. They work in collaboration with the DVBIC team at each site to develop educational resources for clinicians, Service members, veterans, families and communities. During FY 2010, DVBIC intensified the coordinators' focus on underserved Guard and Reserve Service members. RECs also focused efforts on civilian (community) -based Brain Injury Association fairs and Army Reserve and National Guard Yellow Ribbon Reintegration events for returning Service members and their families. In the first year of involvement in the Yellow Ribbon Reintegration Programs, DVBIC RECs touched 22,660 Guard and Reserve Service and family members while attending 39 Yellow Ribbon Events.

DVBIC developed the Family Caregiver Curriculum and received the approval for distribution within DoD on April 14, 2010. This curriculum is intended to provide support, guidance, and education on TBI symptoms and their management to caregivers

of Service members and veterans who sustained a moderate or severe TBI. In addition to the distribution of more than 4,000 hard copies of the six module guide, it is available online at: http://www.traumaticbraininjuryatoz.org/Caregivers-Journey/Caregiver-Guides.aspx.

To better address gaps in TBI care to remote or underserved locations for providers, Service and family members, DVBIC expanded capabilities for providing tele-TBI clinic services during 2010 to eight additional remote MTFs, and were able to complete a comprehensive assessment of Service members with TBI, where such assessments were previously limited or unavailable. DVBIC partnered with the Pennsylvania Red Cross to develop and deliver clinically relevant TBI content to primary care providers caring for Service members with limited access to DoD and VA healthcare facilities and initiated direct and collaborative efforts to train civilian providers on TBI. These efforts were primarily aimed at increasing access-to-care and quality of care for Guard, Reserve and other Service members and families in underserved rural areas through education of providers within the communities.

DoD continues work on a diverse range of technologies to forward advances in PH and TBI care through the National Center for Telehealth and Technology (T2). These have included projects focused on clinical care as well as projects focused on population interventions. During FY 2010, there were great strides in advancing telehealth care using Web-based and mobile smart phone applications.

Supporting Service and family members, veterans, and health care providers serving the military community, afterdeployment.org, a Web-based application, provides interactive, self-paced solutions to common post-deployment adjustment problems. Users can connect to the site anonymously and work at their own pace, using materials that best fit their individual concerns, and practitioners can access the site's materials to augment their practice. Adding to the robust collection of resources is available within a media-rich, pre-clinical format, afterdeployment.org, underwent a substantial revision during 2010. Six new topics were introduced, increasing the number of program modules from 12 to 18. The original 12 self-assessments increased to 29. Additionally, a provider portal was introduced to the site to assist both BH and primary care health workers understand and treat posttraumatic stress and related conditions experienced by Service members and families. The afterdeployment.org application is averaging approximately 4,000 to 5,000 visitors per month, and has received more than 130,000 visitors from its August 2008 initial launch through December 2010.

DoD's Suicide Prevention and Risk Reduction Committee (SPARRC) developed SuicideOutreach.org in October 2010. The application is a meta-site containing suicide prevention information and links to the Service's suicide-related sites. The site's features include warning signs, assessments, resource libraries, and quick links to call centers and hotlines. In its first two months of operation, SuicideOutreach.org logged 3,280 visits.

DoD continues to work on various aspects of clinical telehealth. An 8'x20' three-station Transportable Telehealth Unit (TTU) was deployed to American Samoa. It has been operational with clinical support from the Tripler Army Medical Center since October 2010. Without the TTU, BH patients would either have to fly to Tripler or go without care, as the TTU provides the only access-to-care for DoD beneficiaries in

American Samoa. The TTU was used by 35 patients for a total of 88 clinical encounters in the final three months of 2010. It is notable that 30 of 35 or 86 percent of patients have had more than one visit. The conservative cost offset based on number of patients seen is \$91,525. The liberal cost offset based on number of encounters is \$230,120. The TTU is starting to be used for care coordination encounters other than those originally intended. This suggests the utility of the TTU for remote locations.

### 3.1.3 Description of Actions Planned for Access to Care

For FY 2011, the Army is working on increasing the percentage of permanent government positions and decreasing the number of contract positions, specifically as related to TBI. Currently, contractors comprise 43.7 percent of all TBI staff in the Army. The goal is to decrease this percentage by seven percent in FY 2011 which will result in a cost savings to the government.

Army will begin resourcing the development of Embedded Behavioral Health in FY 2011, which is a program that provides multidisciplinary community BH care to Service members in proximity to their unit area and in close coordination with unit leaders. Utilization of this model has shown statistically significant reductions in rates of hospitalization and high-risk behaviors along with improvements in BH readiness for Service members.

Army plans to increase the number of telehealth services offered in FY 2011, thereby improving access-to-care and increasing encounter volume. The program will continue to standardize resources and leverage exiting resources to meet garrison and theater needs and will explore options for developing and maintaining a global scheduling function. A future-state concept plan and standard operating procedure is in the final stages of development.

Navy will focus future efforts on improving timely access to comprehensive healthcare for Service members and their families. This includes focusing efforts on information, metrics, tools, and guidance that will allow for more effective decisions throughout the Navy Medicine enterprise support to facilitate and incorporate the appropriate mix of MH staff within the Navy. Navy intends to increase emphasis on evidence-based, acute and chronic care and exploration and expansion of the use of telemedicine.

AF will continue to employ contracted providers to maintain and improve access-to-care for patients. Installation of clinical VTC capability at all 85 active duty MTF, Air National Guard and AF Reserve sites will be complete by the end of FY 2011. In addition, the AF anticipates six to eight graduates of the six-week psychiatric and MH nursing course at Travis AF Base, California, in 2011. AF anticipates an increase in its student population in the upcoming year, as the program is designed to accommodate up to 40 students annually.

CDP will expand the number of one-week workshops for civilian professionals by 33 percent, from six per year to eight. This, combined with improved dissemination of information about these training workshops, will increase the number of providers who complete these workshops by more than 650 in FY 2011. CDP will continue to deliver

the University/College Counseling Center Core Competency courses across campuses in the United States, with plans of completing 18 of these workshops during FY 2011.

CDP will continue to work with Widener University to offer the Post-Master's Certificate Program in Military and Veteran Behavioral Health. CDP is partnering with the Military Family Research Institute at Purdue University and the Indiana National Guard to develop a model program for identifying providers with training in military and veteran PH and TBI issues to serve as a referral network for Service members and their families seeking care in Indiana.

CSTS will draft and disseminate additional informational and behavior change materials for physical and MH providers, Service members, and their families to better respond to and recover from the consequences of traumatic stress as related to service in the military.

DVBIC will add two new Regional Care Coordinator positions at selected MTFs to help handle the increased number of Service members requiring TBI-related care in the MHS. They will continue to work with the Services and VA to identify additional locations or access points lacking in TBI resources where DVBIC can expand personnel and services on behalf of DoD TBI care. An increase of direct clinical care providers is planned at DoD MTFs, including Camp Pendleton; Navy Medical Center San Diego: and Camp Lejeune. The addition of these providers will improve access to, and quality of, TBI care provided to Service members in DoD.

DVBIC will continue collaboration with the Pennsylvania Red Cross to develop and deliver clinically relevant TBI content to primary care providers caring for Service members with limited access to DoD and VA healthcare facilities, including three additional joint DoD/VA events targeting primary care providers in Pennsylvania. DVBIC is also planning a regional, bicoastal one-day TBI conference targeting civilian primary care physicians and mid-level providers caring for Guard and Reserve Service and family members.

DoD will continue to develop and provide population-focused interventions and support for Service members, veterans and their families through afterdeployment.org. In FY 2011, afterdeployment.org planning includes coach-guided self-assessments, video-based documentaries, a user-friendly customizable dashboard, and enhanced community-networking features.

Telehealth initiatives will include work on policy, regulation, education, guidelines, and other projects to facilitate implementation of use. Additionally, new technology solutions and approaches to provide for telehealth will be investigated to determine which will meet the requirements for protection and security of the Health Insurance Portability and Accountability Act, Protected Health Information, and Personally Identifiable Information. Discussions continue with the Army to examine the potential placement of a TTU in the Northern Regional Medical Command to support specialty BH support for a smaller clinic.

DoD will publicly launch an interactive educational tool in a virtual world for Service members, veterans, and their families to learn about the causes, symptoms, and help available for PTSD. This virtual PTSD experience will be available from any broadband internet connection. In addition, DoD will release a smartphone application that will assist with the implementation of gold-standard, evidence-based, treatment of PTSD. The application will provide a suite of tools used in prolonged exposure therapy to aid in the dissemination of effective treatments to support Service members.

### 3.2 Quality of Care

The primary objective of the Quality of Care initiative is to ensure that Service members and their families receive the best possible care by developing and publishing evidence-based clinical practice guidelines (CPGs) as well as clinical management guidelines in the absence of conclusive evidence. Another objective is to ensure availability of clinical training, tools, equipment, and guidance needed for state-of-the-art care.

### 3.2.1 Funding for Quality of Care

	FY 2010 *	FY 2011 **	
	Obligated (K)	Funded (K) ***	Obligated (K)
ТВІ	\$8,904	\$0	\$758
PH	\$29,192	\$0	\$1,165

<sup>\*</sup> As of September 30, 2010

### 3.2.2 Description and Assessment of Outcomes for Quality of Care

In November 2007, DoD established the Defense Center of Excellence for PH and TBI (DCoE) to maximize the health and care of Service members, veterans, and their families in all areas related to PH and TBI. This joint organization works with a collaborative network involving other federal agencies, academia, and public-private partners to lead clinical efforts toward developing excellence in practice standards, education and training, and comprehensive direct care for our military community with PH concerns and TBI. DoD has targeted its efforts in developing healthcare strategies for both PH and TBI through a comprehensive plan of care directed at each health condition across the spectrum, beginning with prevention and early identification through treatment, rehabilitation, and reintegration.

DoD implemented Directive Type Memorandum (DTM) 09-033, "Policy Guidance for the Management of Concussion/mild TBI (mTBI) in Theater," in June 2010. The intended outcome of the policy is to provide early detection of Service members who are at risk for mTBI and to ensure proper management of mTBI by providers. It outlines procedures and medical algorithms for the treatment of TBI, including comprehensive medical evaluations for Service members who sustain three concussions within 12 months.

DoD and VA partnered to revise ICD-9 codes related to TBI to ensure proper diagnosis and tracking of clinical outcomes. The final code revisions, related to cognitive and memory symptoms, were accepted by the National Center for Health Statistics and

<sup>\*\*</sup> As of December 31, 2010

<sup>\*\*\*</sup> Funded amounts are not available for FY 2011 due to the Continuing Resolutions (CR). However, the CR continues funding for programs at the FY2010 operating level, thus programs continue to incur FY 2011 obligations.

released in October 2010. All TBI code revisions have been incorporated into DoD's AHLTA and VA's VistA medical record systems. DoD developed an "ICD-9 Coding for TBI" quick-reference pocket card to assist providers in accurately coding TBI-related visits within the MHS using the newly established codes. DoD disseminated the TBI pocket card to over 10,000 healthcare professionals.

Construction of the National Intrepid Center of Excellence (NICoE), a component center of DCoE, was completed in June 2010. NICoE is an advanced facility, constructed using non-DoD charitable contributions, dedicated to research, diagnosis, and treatment of Service members and veterans suffering from PH and TBI issues. NICoE is also a referral center for Service members and their families with complex care needs. The 72,000 square foot facility is located on the Navy medical campus in Bethesda, MD. NICoE reached initial operating capability and began treating patients in October. At full operating capability, NICoE will be able to host 20 Service members and their families on a rolling basis.

Through the Deployment Health Clinical Center (DHCC), DoD provides an intensive, integrated, outpatient Specialized Care Program for PTSD and reintegration issues. This tertiary level program receives referrals worldwide and focuses on a therapeutic group process, emphasizes strength-based resiliency, and delivers intensive education to enable Service members to cultivate skills to manage their symptoms and maximize their overall work and social functioning. As a result of research, complementary and alternative methods for treatment of PTSD are incorporated as adjunctive therapies, including yoga and acupuncture. Data on clinical outcomes from the program demonstrate improvements in depression and PTSD symptoms, health anxiety, and MH functioning.

DoD continues to enhance and develop training curricula for clinical providers across MHS, utilizing the latest evidence-based treatments for PH and TBI issues. Through CDP, DoD trained 1,340 providers in the use of evidence-based psychotherapies for the treatment of PTSD in 2010. Specifically, this total includes 600 providers working at DoD facilities and 700 community providers trained in either Prolonged Exposure (PE) or Cognitive Processing Therapy (CPT). CDP offers free web-based trainings for providers and launched a provider portal on its Website to enable providers trained by CDP to access materials that support therapy delivery, consult with experts, and share lessons learned. CDP developed a new workshop in evidence-based care for insomnia for providers and training in management of concussion and administration of the Military Acute Concussion Evaluation (MACE) for corpsmen and medics.

DoD training is augmented by Service-specific training. As one example, the Army maintains a PTSD training program to train and provide consultation to BH providers in one of three evidence-based treatments: PE, CPT, and Eye Movement Desensitization Reprocessing (EMDR). In 2010, the Army trained 865 providers in these treatments: 199 in PE, 379 in CPT, and 287 in EMDR.

DoD held its fourth annual DVBIC Military Training Conference. The three-day conference brought 924 DoD and VA medical personnel together for interactive TBI education. Through DVBIC's email-based TBI.consult@us.army.mil and via

phone-based tele-TBI services, DoD provided clinical consultation to deployed providers to help improve management of TBI patients in-theater.

DoD has implemented new tools, aids, and equipment to provide state-of-the-art PH and TBI care. DoD utilizes virtual reality equipment as a tool for PE therapy for PTSD. AF has deployed virtual reality equipment to 10 MTFs worldwide. For TBI, DoD has funded neurosurgery and imaging equipment to enhance treatment and diagnosis, "Frame of Choice" custom sunglasses to ameliorate visual deficits, and driving simulators to assist with rehabilitation.

DoD further supports the implementation of evidence-based practices by developing, revising, and disseminating clinical practice guidelines (CPGs) and clinical support tools (CSTs). DoD and VA partnered to issue an updated CPG on the management of PTSD and Acute Stress Reaction. The guideline is intended to improve patient outcomes and local management of patients with one of these diagnoses. DoD developed and disseminated CSTs for Major Depressive Disorder (MDD) and Co-occurring mTBI and PH disorders. In addition, DoD developed an mTBI pocket guide, which is a quick-reference, all-encompassing resource for providers and other healthcare professionals. The mTBI pocket guide was disseminated to more than 20,000 healthcare professionals.

### 3.2.3 Description of Actions Planned for Quality of Care

DoD plans to develop standardized clinical outcome metrics and quality measures related to CPGs in order to track the quality of care provided to Service members. Four CPGs have been jointly approved by DoD and VA as the basis for the development of related metrics. These CPGs include mTBI, PTSD, MDD, and Substance Use Disorder. Results are based on the assumption that if the CPGs were followed, then clinical care would meet minimum standards of quality as defined by industry. The Navy is leading efforts to influence the delivery of care toward the provision of evidence-based clinical practices and plans to measure clinical outcomes as a result of that intervention.

DoD intends to complete a clinical outcomes project for TBI and has identified five Army MTFs for initial participation. Standardized outcome assessments, aimed at measuring functional status and quality of life, will be administered to mTBI patients at intake, discharge, and predetermined follow up time points. The main objective is to correlate patient outcomes with specific clinical practices and programs to elucidate clinical best practices. DoD will initiate the clinical outcomes project in spring 2011. Data collection will continue throughout the year, and the project will be expanded to additional sites.

DoD is collecting initial data from DTM 09-033 on concussion management in theater. The data collected will be used for revisions to the policy prior to drafting a permanent policy as a DoDI. The DoDI is expected to be complete in November 2011.

NICoE continues to make progress in hiring and onboarding staff. The NICoE plans to reach full operating capability in March 2011. Once full operating capability is reached, NICoE will treat 20 patients and their families on a rolling basis using individualized two- to three-week treatment programs.

DoD is committed to reviewing and updating, as needed, all theater relevant educational tools and resources. These updates will be based on regular feedback from providers and will be reviewed and approved by all Services and key DoD experts. DoD plans to continue its partnership with the VA to update existing or establish new CPGs based on the latest research and advances in evidence-based care. Additionally, DoD plans to develop two new CSTs in the upcoming fiscal year: a Substance Use Disorder toolkit and a PTSD toolkit.

DoD will continue to train and educate providers regarding the latest evidence-based treatments. Through CDP, DoD plans to administer workshops to train providers to treat insomnia, depression and suicide, and marital and relationship difficulties. DoD also plans to release 12 Web-based case studies in TBI for providers on its training portal, MHS Learn.

### 3.3 Resilience

Resilience promotion encompasses solid prevention and mitigation and is most pertinent to PH, although leaders can influence TBI prevention through enforcement and oversight of safety programs. This strategic goal focuses on the full continuum of PH to produce individuals who are more resistant to the stresses of deployment and combat. By using individually targeted approaches consistent with the Services' cultures and organizations, DoD will strengthen the PH of individual Service members and their families, while simultaneously strengthening individuals' bonds within their units and communities.

### 3.3.1 Funding for Resilience

	FY 2010 *	FY 2011 **	
	Obligated (K)	Funded (K) ***	Obligated (K)
TBI	\$0	\$0	\$0
PH	\$30,249	\$0	\$3,240

<sup>\*</sup> As of September 30, 2010

### 3.3.2 Description and Assessment of Outcomes for Resilience

In May 2009, DoD launched a national outreach campaign, "Real Warriors, Real Battles, Real Strength," to combat the stigma around PH conditions and treatment and encourage psychological resilience. This public information campaign continued throughout FY 2010, soliciting the involvement of DoD, VA, and the general population to foster a culture of support for PH. The campaign uses a variety of communication strategies, including radio and television public service announcements, media outreach, social media, print materials, conference and event outreach, partnerships with other organizations, and an interactive website. Additionally, DoD's afterdeployment.org Web site contains a resilience self-assessment module along with a new provider portal with materials for provider stress and burnout.

<sup>\*\*</sup> As of December 31, 2010

<sup>\*\*\*</sup> Funded amounts are not available for FY 2011 due to the Continuing Resolutions (CR). However, the CR continues funding for programs at the FY2010 operating level, thus programs continue to incur FY 2011 obligations.

To combat suicide, DoD and VA partnered to launch a Suicide Outreach website in FY 2010, suicideoutreach.org, with resources for suicide prevention. DoD also partnered with the RAND Corporation to conduct a suicide prevention study and provide recommendations for suicide prevention programs. The RAND Suicide Prevention Report complements the DoD Suicide Prevention Task Force Report, and DoD is working to address issues identified in both reports.

Each Service operates projects aimed at increasing Service member and family resilience. AF established a Resiliency Branch within its Medical Operations Agency, Mental Health Division. The Resiliency Branch developed and implemented many projects and services to support the resilience of AF communities. Projects include an Airman Resilience Pre- and Post-Deployment Training program, as well as training content for annual Wingman Day events. AF developed and fielded an automated quarterly report to wing and Major Command commanders to provide visibility into substance abuse metrics so that line leaders are able to quickly identify unit trends.

Army incorporated 11 resilience modules into training for its Comprehensive Soldier Fitness effort, added resilience training into three Basic Officer Leadership courses, and developed post-deployment resilience training for targeted, at-risk groups. For children and families, the Army implemented a School Behavioral Health (SBH) program that provides cost-effective, comprehensive behavioral health services in support of military children and their families in both schools and Child Development Centers. In FY 2010, SBH programs operated in seven installations in a total of 30 school venues, with services provided by child and adolescent psychiatrists, clinical child psychologists, and clinical social workers. Army launched a SBH Web site, brainhealth.army.mil/SBH, offering a series of evidence-based websites, readings, and materials to help both professionals and parents learn more about successfully supporting military kids, in schools and at home, dealing with the impact of multiple deployments.

Navy provided ongoing education, outreach, and reintegration support through resilience projects based on the Maritime Combat and Operational Stress Control (COSC) doctrine. The doctrine is based on four foundational principles: the Stress Continuum, the Five Core Leader Functions, the Four Sources of Stress Injury, and Combat Operational Stress First Aid. The COSC doctrine is included in leadership and enlisted training, posters, pocket cards, YouTube and TroopTube videos, and Weblogs. The Navy Families OverComing Under Stress (FOCUS) project offered family-centered resilience training to enhance understanding of combat and operational stress, PH, and developmental outcomes for children and families. For caregivers, the Caregiver Occupational Stress Control program worked to enhance the resilience of caregivers experiencing the psychological demands of exposure to trauma, wear and tear, loss, and inner conflict associated with providing clinical care and counseling.

Navy's Reserve Psychological Health Outreach program was established to improve the PH and resiliency of reserve component sailors and their families. Teams of PH outreach coordinators and outreach team members located at the five regional reserve commands provide PH assessments, education, and referrals to MH specialists. In FY 2010, these teams conducted MH assessments for more than 1,600 reserve component sailors, made outreach calls to over 2,400 returning reserve component sailors, and conducted approximately 300 visits to Navy Operational Support Centers (NOSCs)

around the country, providing basic Operational Stress Control awareness training to more than 23,000 reserve component sailors and staff members.

Through DCoE, DoD evaluates the efficacy of various PH and TBI projects to improve care and establish best practices. In FY 2010, DCoE completed the program evaluation and site visit support of eight PH and TBI resilience-building pilot projects.

### 3.3.3 Description of Actions Planned for Resilience

DoD will host two resilience conferences next year, the Third Annual Warrior Resilience Conference and the Third Annual DoD/VA Suicide Prevention Conference, to educate and enhance collaboration among military health professionals. DoD also plans to respond to recommendations from the DoD Suicide Prevention Task Force and will complete a Suicide Nomenclature and Postvention Policy to enhance tracking and prevention of suicide throughout the military.

DoD is working to launch a new Web application, MilitaryKidsConnect.org. The site is in development and will focus on military children, adolescents, parents, and educators and will support peer networking and target both prevention and resilience.

In FY 2011, DoD will work with the VA to ensure that developing VA programs for the promotion of PH and prevention of MH problems are informed with the lessons that the Services have learned through their resilience programs. AF plans to develop resilience training for new recruits at basic military training sites. Army plans to expand its SBH program and will implement a Care Provider Support Program to target all medical professions within the Army. The Care Provider Support Program will conduct a survey of the force to baseline levels of burnout and provider fatigue.

Finally, through DCoE, DoD will continue the evaluation of the efficacy of various PH and TBI projects to improve care and establish best practices. DCoE will continue site visits to evaluate 10 more projects in FY 2011, for a total of 18 projects, first funded in FY 2007/2008 and deemed "pilot" projects. The assessments will be presented to the Force Health Protection Council, made up of Service representatives, including the Service Deputy Surgeons' General, to provide lessons learned and recommendations for future project improvement.

### 3.4 Transition of Care

The objective of this goal is to improve the quality and effectiveness of treatment through transition and coordination of care across DoD, VA, and civilian networks for all duty statuses, both active and reserve. This includes ensuring rapid and effective information sharing to support continuity of care and support across all levels.

### 3.4.1 Funding for Transition of Care

	FY 2010 *	FY 2011 **	
	Obligated (K)	Funded (K) ***	Obligated (K)
ТВІ	\$0	\$0	\$0
PH	\$7,833	\$0	\$53

<sup>\*</sup> As of September 30, 2010

### 3.4.2 Description of Outcomes for Transition of Care

In FY 2010, DoD established policy 10-001 to implement the *inTransition* program, which offers specialized coaching and assistance to support Service members in BH care who are relocating to another assignment, returning from deployment, transitioning from active duty to reserve, reserve to active duty, or preparing to leave military service. *inTransition* was identified as a means of providing coaching and assistance to bridge potential gaps and encourage the continuation of BH care during Service member transitions to a new medical care facility, to a new geographic location, or into a new health care system. *inTransition* assists Service members during transition periods, which could be as short as a week, or much longer if the Service member is returning to reserve status from active duty. The primary objective of the program is to support Service member's efforts to achieve and maintain wellness and to assure continuity of needed services.

DoD's clinical network at DVBIC added two Regional Care Coordinator positions in FY 2010, increasing the existing 15 positions at MTFs, VA hospitals, and civilian sites. Regional Care Coordinators connect Service members with TBI healthcare and resources, assist them with the transition to civilian life, and follow them for at least two years, or until symptoms resolve. DVBIC's Care Coordination Program began integrating Armed Forces Health Surveillance Center data to identify newly diagnosed and symptomatic patients who may need clinical or non-clinical care and services.

The Marine Corps Wounded Warrior Regiment provides and facilitates non-medical care to combat and non-combat Wounded, Ill, and Injured (WII) marines, and sailors attached to or in direct support of marine units, and their family members in order to assist them as they return to duty or transition to civilian life. In FY 2010, Navy increased partnerships with the Wounded Warrior Regiments to provide call center, non-medical case management support, increased care coordination, and BH care advocacy for marines and sailors assigned to Marine Corps units.

Navy extended the continuum of care to support transition between providers, networks, and duty status, and facilitated partnerships throughout the care community including: developing a reintegration network offering education, outreach, and case management support for active-duty, reservist, and wounded Service members and

<sup>\*\*</sup> As of December 31, 2010

<sup>\*\*\*</sup> Funded amounts are not available for FY 2011 due to the Continuing Resolutions (CR). However, the CR continues funding for programs at the FY2010 operating level, thus programs continue to incur FY 2011 obligations.

conducting six case management quality assurance site visits to ensure compliance with policy and credentialing.

Navy also continued support of the Navy Reserve Psychological Health Outreach Program (PHOP) while developing and implementing a sister program for the Marine Corps Reserve. The PHOPs create a psychological safety net and improve the overall MH of reservists and their families and focus solely on providing outreach coordination to the Marine Corps and Navy Reserve members to improve their overall MH.

The Joint AF Base Elmendorf-Richardson TBI Clinic collaborated with the VA Medical Center to formalize a process to assist separating active duty members transitioning into the VA system, and worked with the Western Regional AF Reserve Psychological Health Advocacy Program to ensure timely referrals and transition care for reservists. The Joint Base Elmendorf Richardson TBI Clinic maintained weekly interdisciplinary case conferences to coordinate and plan for medical needs of TBI patients, and partnered with network psychiatric facilities to secure inpatient care for PTSD, substance use disorders, and cognitive rehabilitation. AF developed Service member transition procedures with the VA system in Alaska at the end of FY 2010, and results will be available in FY 2011.

### 3.4.3 Description of Actions Planned for Transition of Care

DoD plans to evaluate the *inTransition* program during FY 2011. The evaluation will include the number of Service members who were enrolled in FY 2010; the average length of engagement per Service member; the total number of enrolled Service members with favorable satisfaction ratings relative to the total number surveyed (every six months beginning with program initiation); and the total number of enrollees who remain in the program from initial enrollment to hand-off to gaining site/provider compared to the total number of enrollees in the program in FY 2010. This information will be collected and annually, and DoD will prepare a report of the effectiveness of the program, based on the data described above starting one year after the initial implementation of the program. *inTransition* will be modified as needed based on the results of the evaluation.

AF will continue to collaborate with VA, Army, civilian, and reserve counterparts to ensure timely referral and transition processes occur between facilities. AF plans to increase efforts to educate commanders about TBI, its symptoms, and the resources available to active duty and their families for TBI services.

Navy will improve timeliness and coordination of healthcare services across the recovery, rehabilitation, and reintegration continuum by improving systemic process and performance in the Integrated Disability Evaluation System for active duty Service members and their families across the enterprise, and fostering the integration and collaboration of Navy and Marine Corps programs, such as the Wounded Warrior Regiment. The FY 2011 plan is to establish of collaborations and partnerships with Safe Harbor, Wounded Warrior Regiment, and VA (e.g. non-clinical care managers, Recovery Care Coordinators, Federal Recovery Care Coordinators) to better address identified gaps in care.

### 3.5 Screening and Surveillance

The primary objective of the screening and surveillance initiative is to promote the use of consistent and effective assessment practices along with accelerated development of electronic tracking, monitoring, and management of PH and TBI concerns. DoD is incorporating screening and surveillance initiatives into the lifecycle health assessment process as screening tools are developed and validated.

### 3.5.1 Funding for Screening and Surveillance

	FY 2010 *	FY 2011 **	
	Obligated (K)	Funded (K) ***	Obligated (K)
ТВІ	\$13,462	\$0	\$1,869
PH	\$18,168	\$0	\$1,844

<sup>\*</sup> As of September 30, 2010

### 3.5.2 Description of Outcomes for Screening and Surveillance

DoD implemented DTM-09-033, "Policy Guidance for Management of Concussion/mTBI in the Deployed Setting," which mandates a medical evaluation for Service members involved in an event associated with concussion/TBI. This policy requires forwarding surveillance efforts for early detection of possible brain injuries and earlier access to treatment.

FY 2010 was a very productive year for the Neurocognitive Assessment Testing Program (NCAT) for Automated Neuropsychological Assessment Metrics (ANAM). With no increase in budget, productivity doubled. NCAT has tested a total of 300,529 people: 181,137 Army, 60,382 AF, 43,532 Marine Corps, 11,113 Navy, 455 Coast Guard, and 910 other. This makes for over 800,000 ANAM tests administered since the program began. The NCAT program currently has the capability to test approximately 30,000 Service members per month.

During 2010, there was an increase in the number of NCAT sites in operation. Army now has 21 individuals and one in-sourced proctor at 18 embedded sites, and stand-alone machines at 15 Army sites, and 12 locations in Germany. In the AF, there are two individuals at two sites. Navy now has nine individuals at seven sites. There are stand-alone laptops at 216 AF sites, 45 at Navy sites, one AF site with a pod, and four Navy sites with mini-pods. The Army's Neurocognitive Assessment Branch trained 141 providers and 566 test proctors in 2010. This breaks down to: 68 Army providers and 59 Army proctors; 66 AF providers and 405 AF proctors; and seven Navy providers and 102 Navy proctors trained.

Army funded four screening and surveillance programs in FY 2010. Significant of these efforts is the Army's Behavioral Health and Social Outcomes Program (BHSOP) and the Child, Adolescent and Family - Behavioral Health Office (CAF-BHO). The

<sup>\*\*</sup> As of December 31, 2010

<sup>\*\*\*</sup> Funded amounts are not available for FY 2011 due to the Continuing Resolutions (CR). However, the CR continues funding for programs at the FY2010 operating level, thus programs continue to incur FY 2011 obligations.

Behavioral Health and Social Outcomes Program provides comprehensive behavioral epidemiology and surveillance programs to evaluate the full spectrum of health and wellness in Army communities.

The CAF-BHO was established in January 2010 to support and sustain a comprehensive and integrated BH system of care for children and families throughout the Army. This program is responsible for the overall proponency for CAFACs and School Behavioral Health (SBH) programs Army-wide, and provides training and training assistance at Army installations for care providers, other BH specialists, and Army Service and family members on child and family BH subjects. CAF-BHO also maintains a repository of knowledge of professional expertise, reference materials in the field, and provided subject matter experts, who conducted specialized training at seven locations in CY 2010. In 2010, the SBH program in Hawaii, in partnership with CAF-BHO, sponsored two week-long training sessions for approximately 65 SBH clinical providers, administrators, administrative staff, school district superintendents, and school principals from installations across the Army.

The Epidemiology Consultant Service (EPICON) of the Walter Reed Army Institute of Research (WRAIR) is the central epidemiological investigation source for Army. It provides assistance and support to worldwide Army medical activities. The Army conducted three major BH field studies (EPICONs) during FY 2010: the Post-Shooting Fort Hood Behavioral Health Surveillance Plan; the Warrior Transition Unit Suicide/Preventable Death EPICON; and the Joint Base-Lewis McChord Aggression Risk Factors EPICON. Each of these consisted of extensive surveys, focus groups, and analysis of installation level data and trends. The final reports will be prepared and available in FY 2011.

The Navy Marine Corps Public Health Center, Naval Health Research Center (NHRC), and the Naval Center Combat Operational Stress Control program offices partnered to orchestrate broad and wide-ranging surveillance, screening, and metrics efforts. Navy continues to build infrastructure to provide screening and surveillance for at-risk populations as well as establish leading and lagging indicators that guide prevention, wellness, and clinical care efforts. Navy continued to improve BH surveillance efforts to extract Career History Archival Medical and Personnel System (CHAMPS) deployment data and assess post-deployment behavioral problems to develop surveillance metrics to augment diagnoses as indicators of combat related problems. This project is nearing completion and will produce final results in FY 2011.

The Navy Combat Stress Burden office is working to develop an integrated (psychological, psychosocial, physiological) understanding of how combat stress injuries manifest in Service members. Navy gathered and reported information related to warzone stressors focusing on morale and MH in-theater through Navy Behavioral Health Needs Assessment Survey (BHNAS). BHNAS has been incorporated into the Mobile Care Team and is in use in Afghanistan. Results will be used to develop improved pre- and post-deployment screening protocols based on this integrative profile of stress injuries. Also, the Navy and Marine Corps Combat Trauma Registry (CTR) Deployment Health Database and Infrastructure includes the maintenance of the Navy-Marine Corps Expeditionary Medical Encounter Database to support collection and analysis of

deployment health data to make information gathering more efficient for Service members across the continuum of care.

The Joint AF Base Elmendorf-Richardson TBI Clinic assumed all pre-deployment neurocognitive screening for joint-base personnel, acquired 25 additional laptop screening systems, and trained MH technicians to conduct mass screenings, increasing screening capacity to 180 per day. The Lackland Behavioral Questionnaire (LBQ), developed by the Behavioral Analysis Service at Lackland AF Base, is a MH screening tool that is currently administered to every AF recruit entering basic military training, and the relation between the LBQ and important MH and behavioral outcomes has been demonstrated. In FY 2010, in addition to ongoing support for this program, DoD began considering implementation of the LBQ DoD-wide.

Baseline measures of cognitive functioning were added to the pre-deployment checklist for all Army and AF deployers serving in Alaska and it is expected to capture 2,000 deployers over the next year. In FY 2010, more than 36,500 recruits were screened with the LBQ. The high attrition rates related to MH problems among first-term Airmen supports the need for improved MH screening prior to and after entry into basic military training, and four studies are underway to measure those factors.

Through the DHCC, DoD pioneered the concept of BH integration in military primary care. DHCC's collaboration with researchers at Duke and Dartmouth Universities and the MacArthur Foundation and its Initiative on Depression and Primary Care resulted in Re-Engineering Systems for the Primary Care Treatment of Depression and PTSD (RESPECT-Mil). This three-component model works by preparing primary care practices for MH service delivery, facilitating optimal care continuity through the efficient and effective use of a nurse care manager, and enhancing the BH specialist interface for every primary care patient. The program ensures recognition and appropriate treatment, both psychotherapeutic and medication management, for depression and PTSD starting in the primary care setting. Patient treatment response and adherence are carefully tracked by care facilitators to insure the timely review and revision of treatment that is not working.

First implemented at 36 primary clinics at 15 sites, the RESPECT-Mil program is being implemented at an additional 53 clinics at 19 sites. The program has touched nearly one million Service members to date including nearly 400,000 visits in FY 2010. A positive screen will result in further assessment of the Service member during his or her primary care appointment, discussion of treatment options, referral for care, and enrollment in RESPECT-Mil. A suicide assessment is included in this assessment process, and patients with urgent or emergent suicidality are rapidly assisted. In the past year, there have been approximately, as many referrals to RESPECT-Mil as to specialty BH services at participating sites, indicating the acceptable nature of RESPECT-Mil care management. During FY 2010, DoD initiated a new information technology platform to allow benchmarking and performance reporting for all participating sites.

From program inception through the end of September 2010, 42 clinics at 18 active RESPECT-Mil sites provided 985,806 primary care visits to active duty Service members, with 720,369 of those visits screened for PTSD and depression. This

represents an overall 73 percent screening rate for active duty primary care visits to participating clinics since February 2007.

Of screened visits, 91,961 (or 12.8 percent) resulted in a positive screen, and 49 percent of positive screens resulted in a primary care diagnosis of depression, possible PTSD, or both. In FY 2010, 357,328 visits were screened (83.5 percent of total visits), 43,474 visits generated positive screens, and 18,156 resulted in a diagnosis. In the past fiscal year alone, the program has been responsible for identifying suicidality in over 3,000 Service member visits, a phenomenon that care managers now refer to routinely as "saves." More than 6,200 Service members have been referred to and followed by RESPECT-Mil and more than 16,000 (nearly 6,700 in FY 2010) with previously unmet BH needs were referred for care. At present, program care managers are following 1,900 Service members. Program participation continues to increase, with approximately 40,000 visits screened per month at the close of FY 2010.

As part of DoD's Military Acute Concussion Evaluation (MACE) project, DVBIC collected normative data on existing and additional versions of the Standard Assessment of Concussion (SAC). The goal of this effort is to prevent memorization of SAC subsections that confounds performance and clinical interpretation of SAC data collected during the evaluation of military members with TBI. It also establishes a SAC database that is more appropriate for a military population, considered critical to both normative and clinical application of the SAC in a military setting.

The DoD Suicide Event Report (DoDSER) is one of the primary suicide surveillance tools in DoD. The annual DoDSER report is key for informing DoD senior leaders on suicide trends and occurrence data, and was heavily cited in the final report of the DoD Suicide Prevention Task Force, released in August 2010, to support suicide prevention recommendations for the Secretary of Defense. The Services leveraged the data for their suicide prevention programs. DoD is working to maximize the use of the data for suicide prevention. For example, a similar civilian system is maintained by the CDC called the National Violent Death Reporting System (NVDRS), is being evaluated in a DoD pilot program to examine how the DoDSER and NVDRS databases may inform one another. This will extend the range of applicability and offers greater use outside of the DoD. Furthermore, the DoDSER underwent an annual refinement based on feedback from senior leaders and the Services program managers. One of the most important modifications is the refinement of DoDSER data collection for suicide attempts, which was launched for all Services in January 2010. Additionally, VA adopted the DoDSER as a model for its surveillance efforts.

### 3.5.3 Description of Actions Planned for Screening and Surveillance

DoD continues professional discussion regarding post-deployment testing of Service members for residual problems possibly related to mild traumatic brain injury (mTBI), and has focused on the spectrum of issues (physical, behavioral, cognitive) that can result from mTBI. A DoD TBI screening protocol, initiated in response to positive answers to concussive/mTBI event questions on the Post-Deployment Health Assessment, includes a clinical referral/evaluation and a neurocognitive assessment as part of the post-deployment TBI screening. Recently completed studies have reinforced DoDs position that there is no utility in performing population-based post-deployment

assessments, and that more focus should be placed on determining the utility and validity of appropriate post-injury testing. This will help inform return-to-duty decision making in an effort to assure our Service members are adequately protected from repeated head injury.

RESPECT-Mil implementation will continue to a total of 95 clinics at 34 MHS sites. This implementation process includes training of site champions, BH supervisors, and clinic staff; hiring and training of RESPECT-Mil care facilitators; and site visits with intensive site mentoring.

Representatives from RESPECT-Mil collaborated with Service subject matter experts to create the "Re-Engineering Healthcare Integration Programs" (REHIP), a blended model for integrating BH specialists' right into the primary care clinic that includes the Army RESPECT-Mil; the AF Behavioral Health Optimization Program; and the Navy Behavioral Health Integration Program. This promises to be the model of the future given the MHS transition to the Patient Centered Medical Home model. The same characteristic RESPECT-Mil methods of tracking, benchmarking, outcomes monitoring, and accountability will be used for REHIP. After a series of meetings with Service representatives, a concept of operations and memorandum of understanding have been completed for this effort. Two Army, two AF and two Navy sites have been selected for the pilot, and clinical services at these sites will commence during FY 2011.

Army will continue to evolve its screening and surveillance activities as well as conduct systematic program evaluations to further inform current standards of practice that will lead to increased efficiencies in the execution of BH services delivered to Service members and families.

Navy will focus FY 2011 surveillance efforts on the identification and communication of deployment associated health threats for Service members and their families. This includes improved patient tracking through all levels of care and the collection of quality, accessible data, with specific focus on at-risk populations, including those with multiple deployments, overseas contingency operations, individual augmentee status, and family separation issues. Navy intends to improve the communication and dissemination of health surveillance data with leadership, across regions, with VA, and with other research organizations in FY 2011.

AF will provide training for MH technicians to maintain current pre-deployment neurocognitive screening capabilities at Joint Base Elmendorf-Richardson. In addition, AF will implement a cognitive assessment screening curriculum into the AF MH technician career-field training at the Medical Education Training Campus in San Antonio, Texas. FY 2011 includes plans for additional studies to better understand the impacts of MH problems in active duty enlisted personnel and the continuation of studies to improve entry-level screening and assignment of AF recruits chosen or electing to serve in sensitive occupations.

The DoDSER, now in its third year, will provide vital data on both risk and protective factors and on trends. Additionally, it is anticipated that there will be continued work and coordination with all the military Services during FY 2011.

### 3.6 Leadership and Advocacy

A priority of DoD is to strengthen and maintain a culture of leadership and advocacy, creating a supportive environment, free of stigma, for Service members and veterans in need of clinical care for PTSD or other MH concerns, as well as TBI. Taking care of people is a leadership responsibility, and the program encompasses this responsibility at every level of leadership, with special emphasis on families and the community environment.

### 3.6.1 Funding for Leadership and Advocacy

	FY 2010 *	FY 2011 **	
	Obligated (K)	Funded (K) ***	Obligated (K)
TBI	\$0	\$0	\$1,660
PH	\$213,944	\$0	\$2,391

<sup>\*</sup> As of September 30, 2010

### 3.6.2 Description of Outcomes for Leadership and Advocacy

Leadership and advocacy accomplishments include those that provide opportunities for an improved awareness, understanding, and engagement by military and civilian providers in the identification, treatment, and prevention of TBI/PTSD conditions. In response to that mission DoD, through CSTS, sponsored and hosted the 5th Annual Conference on the Neurobiology of Amygdala and Stress, held April 2010 at the Uniformed Services University for 335 attendees, and conducted a forum on Health and National Security: Stigma and Barriers to Care pertaining to National Guard and Reserve Service members and families, held in November 2010 at the Carter Center Atlanta, Georgia.

DoD initiated a strategic communications program in FY 2010 through DHCC to build public awareness and to promote discussion about deployment-related health concerns such as TBI, PTSD, and medically unexplained physical symptoms. The program seeks to educate military personnel and the wider community about DHCC clinical and education programs to optimize enrollment and to help those who could benefit take advantage of these programs.

DoD continues to sponsor ongoing productions of *Theater of War*, a state-of-the-art public health and community outreach campaign that presents readings of ancient Greek plays as a catalyst for town hall discussions regarding the challenges faced by post-combat Service members, veterans, and their families. Well-known actors perform for 85 minutes, followed by a thoughtfully moderated discussion lasting up to an hour involving the actors, the audience, and invited discussants including combat veterans, medical personnel, caregivers, and family members. In FY 2010, the project presented 100 performances of scenes from the Trojan War to more than 17,000 military and community audience members in 50 military venues worldwide. These performances were featured in numerous press articles. DHCC sponsored the January

<sup>\*\*</sup> As of December 31, 2010

<sup>\*\*\*</sup> Funded amounts are not available for FY 2011 due to the Continuing Resolutions (CR). However, the CR continues funding for programs at the FY2010 operating level, thus programs continue to incur FY 2011 obligations.

2010 staging of *Theater of War* at Walter Reed Army Medical Center attended by news outlets including the BBC, Agence France Presse, and the PBS *NewsHour with Jim Lehrer*. DHCC's director and Specialized Care Program graduates were interviewed as part of an HBO documentary on the history of PTSD.

DoD identified a need to have standardized training and education materials throughout the Services. Subsequently, DVBIC, in conjunction with Service points of contact and DoD subject matter experts, officially developed a series of training presentations and products that were rapidly implementable by in-theater medical and line commanders to become trained to standard on DTM 09-033, "Policy Guidance for Management of Concussion/Mild Traumatic Brain Injury in the Deployed Setting," and its associated policy and medical care requirements. DVBIC used a similar Service coordination processes to host a series of meetings that resulted in consensus on improvements to both AHLTA mobile and ANAM testing and processes.

Thousands of providers have increased their knowledge and understanding of TBI treatment and care, including hundreds who have received continuing education credit through participation in interactive sessions. DoD, through DVBIC outreach and educational efforts, saw an overall increase in the awareness of TBI throughout military and civilian population. In FY 2010, DVBIC distributed 364,813 TBI awareness and education items on TBI, helping to raise awareness of TBI and DVBIC. Of total products distributed, 127,770 were clinical education materials. Through its regional education outreach activities, DVBIC reached 2,400 military providers, 600 VA providers, almost 300 civilian providers, and 1,800 unspecified providers. Finally, in 2010, DVBIC's BrainLine Web site, www.brainline.org, garnered 304,963 unique visitors, up 67 percent from 2009. BrainLine's total number of page views for FY 2010 was 895,495, a 79 percent increase over 2009.

DCoE has taken a leadership role in the broad area of integrating technology into PH and TBI care. Their Telehealth and Technology Center (T2) has trained 129 providers representing all Services from 31 different locations to provide a state-of-the-art virtual reality exposure therapy (VRET) approach to treating posttraumatic stress disorder. Additionally, T2 completed an empirical evaluation of the effectiveness of VRET in day-to-day clinical practice. The empirical evaluation of VRET has indicated that 62 percent of patients reported a clinically meaningful reduction in PTSD symptoms. This evaluation was summarized in a manuscript and is currently in press at the *Journal of Traumatic Stress*. Additionally, 90 percent of DoD BH professions trained by T2 in VRET strongly agreed that the training met their professional needs and interests. In existence for only three years, T2 has published 19 articles in peer-reviewed journals and ended FY 2010 with another seven in press and 11 in development.

At the request of the DoD/VA Senior Oversight Committee (SOC), DoD and VA have developed an Integrated Mental Health Strategy (IMHS) to address the growing population of Service members and veterans with MH needs. MH care provides unique mission challenges for DoD and VA because they serve the same population, but at different times in their lives and careers. As such, the IMHS will center on a coordinated public health model to improve the access, quality, effectiveness, and efficiency of MH services for all active duty Service members, National Guard and Reserve Component members, veterans, and their families.

The IMHS, approved by the SOC in November 2010, and transferred to the Health Executive Council for oversight, includes 28 actions aligned under four strategic goals that will be used to guide DoD and VA collaborative efforts. The four strategic goals of the IMHS are: expanding access to BH care in DoD and VA; ensuring quality and continuity of care across DoD and VA for Service members, veterans, and their families; advancing care through community partnership, education, and successful public communication; and promoting resilience and the building of better BH care systems for the future.

### 3.6.3 Description of Actions Planned for Leadership and Advocacy

DoD will launch an updated www.PDHealth.mil Web site in 2011. When fully deployed, the redesigned site will feature rich content such as images, videos, and custom surveys as well as a more robust content management system. DoD will continue to leverage the subject matter expertise of CSTS personnel in the leadership and advocacy of TBI and PTSD issues to improve the well-being of the affected Service member and his or her family.

DoD, through DVBIC, will continue further standardization of pre-deployment education and training including securing Service approval to develop a standardized curriculum with the potential for joint Service or common training of Service members, line commanders, and medical assets. DVBIC will also expand the BrainLine outreach Web site to include a military-specific platform to link Service members with military TBI services and providers with continuing education. The site will develop a mobile platform to provide Service members with services such as a TBI facilities directory on their mobile phones.

DCoE's T2 will pursue additional technology alternatives and solutions for telehealth work and initiate and further work on regulations, policies, and practice guidelines for telehealth practice in PH and TBI care. T2 is preparing to launch a study examining the safety of providing tele-behavioral health directly to Service members' homes. The growing promise of virtual worlds may present additional opportunities to provide education, training, and access to other psychological services to members of the Armed Forces. Evaluation of evolving applications and training in new promising applications is anticipated.

Work continues on the DoD/VA IMHS. While the initial 28 Strategic Actions and cost estimates were approved by the SOC in November 2010, the mission of the IMHS will take approximately three years to complete. DoD is currently constrained due to the Continuing Resolutions for FY 2011 for those actions requesting additional funding, but has begun the implementation of six Strategic Actions that do not require additional funding. In the interim, work groups continue to define strategies that will: promote the early recognition of MH conditions; assist in the delivery of effective, evidence-based treatments; implement and expand preventive services; and educate, provide outreach, and establish partnerships with other providers, organizations, and agencies outside DoD and VA. All of the 28 Strategic Actions are currently being incorporated into the DoD/VA FY 2011-FY 2013 Joint Strategic Plan.

### 3.7 Research and Development

DoD is committed to providing a management structure and associated processes that are open to participation by all stakeholders. The United States Army Medical Research and Materiel Command (USAMRMC) is the lead agent of the Office of the Assistant Secretary of Defense for Health Affairs in providing support for the planning, programming, budgeting and execution processes required for management of the DHP Research and Development Program. The establishment of the Joint Program Committees (JPC) has allowed for open participation by all components and agencies, including the Services, other agencies such as Veterans Affairs and National Institutes of Health (NIH), industry and academia.

The overall goal of the PH and TBI research program is to prevent, mitigate, and treat the detrimental effects of traumatic stress and TBI on psychological and physical functioning, wellness, and overall quality of life for Service members, as well as for their caregivers and families. Key priorities of the research programs complement ongoing DoD initiatives to ensure the health and readiness of our military forces, and to support efforts to advance and spread knowledge, enhance clinical and management approaches, and facilitate other vital services to best serve the needs of Service member families impacted by PH concerns or TBI.

### 3.7.1 Funding for Research and Development

	FY 2007	FY 2008	FY 2009		FY 2010 <sup>1</sup>		FY 2011 <sup>2</sup>
	Obligated (K)	Obligated (K)	Funded (K)	Obligated (K)	Funded (K)	Obligated (K)	Requested (K)
TBI	\$146,195	\$57,339	\$101,206	\$101,071	\$200,700	\$83,225	\$55,600
PH	\$145,861	\$85,720	\$61,919	\$61,919	φ200,700 φ03,2	<b>Ψ03,22</b> 3	φ33,000

<sup>&</sup>lt;sup>1</sup> FY 2010 Appropriated funding and Obligations are as of December 31, 2010. RDT&E funding remains available for obligation through FY 2011; actuals may vary based upon proposals awarded. Total amount includes One-time congressional add, GDF, and Wounded Warrior Enhancement funding.

### 3.7.2 Description of Outcomes for Research and Development

DoD has initiated individual research projects as well as clinical consortia to fill knowledge gaps in prevention, diagnosis and treatment of PH and TBI concerns in the military, becoming one the world's leading sponsors of such research (examples of extracts describing awards can be found at http://cdmrp.army.mil). The 2007-2010 Defense Health Program (DHP) funding appropriations have accelerated and facilitated advances in PH and TBI research. The funding has established large portfolios of projects that begin to address a significant portion of PH and TBI prevention, assessment, and intervention research gaps that have been identified as DoD priorities. Research gaps were identified with input from scientific leaders in their respective fields of science representing DoD, other government agencies (including VA and NI H), private industry, and academia using DoD strategic guidance and Joint Force Health Protection Concepts

<sup>&</sup>lt;sup>2</sup> FY 2011 Requested funding reflects a portion of GDF medical research funding requested in the Defense Health Programs (DHPs) FY 2011 Budget Estimate Submission, not actual funding appropriated or executed. Actuals will vary based upon the amount appropriated and awarded.

of Operation capability gaps as the strategic framework. The current investment represents a solid foundation for a comprehensive research portfolio addressing the medical research continuum of care for PH and TBI focused on delivering solutions and capabilities to the military community.

DoD has made strides toward implementing a comprehensive strategic suicide research program aimed at prevention of suicide in the military. The DHP has funded studies in the areas of suicide epidemiology, prevention interventions, and assessment and management of suicide behavior. Additionally, a Military Suicide Research Consortium (MSRC) was established in 2010 to focus and integrate suicide prevention research efforts across DoD, other government agencies, and academia. The MSRC is funded as a cooperative agreement and is directed by two world renowned suicidologists.

DHP funding supports a significant effort in resilience building research aimed at mitigating the effects of military stressors on PH and well-being. The research program focuses on population-based behavioral skills training to build resilience and promote well-being in Service members and families. Funding also supports development and validation of post-deployment skills-based resilience training for Service members. Innovative enhanced delivery platforms (e.g., mobile phone technology) are under investigation for feasibility and efficacy. One example is a project exploring the use of mobile electroencephalography-based neurofeedback technology in an effort to train Service members to regulate PTSD related emotions. Research efforts also focus on prevention interventions for spouses of Service members, lending support to successful transitions during the military lifecycle, and maintaining family well-being.

To effectively treat Service members experiencing PTSD and other psychological problems that threaten readiness and well-being, DHP funding supports clinical trials of enhanced traditional psychotherapy approaches and novel delivery formats. One novel approach involves the use of Virtual Reality technology to enhance traditional psychotherapeutic approaches. These studies aim to elucidate methods to enhance therapies, increase access to treatment, and boost compliance. Randomized clinical trials are also underway to examine pharmacological interventions for treating PTSD. Some studies are investigating the degree to which various pharmaceuticals can enhance the effectiveness of psychotherapies. There is a significant amount of DHP funded research dedicated to understanding the epidemiology of post traumatic stress and PTSD, as well as underlying neurobiological mechanisms of the disorder.

There is a significant DHP investment supporting the development and validation of measures and techniques to differentiate PTSD and mTBI and predict outcome trajectories. Efforts include an activity-based physiologic monitor and associated software to distinguish between the two disorders. There is also a large investment in research to identify PTSD and mTBI specific proteomic, imaging, and genetic biomarkers for these disorders. Another research focus aims to identify the most efficient and effective training platforms for disseminating evidence-based prevention oriented education and training for clinicians and Service members.

DHP supports a large portfolio of research on preventing, diagnosing and treating mTBI/concussion, and tracking recovery. The research addressing mTBI/concussion assessment and guideline gaps is focused on a fieldable neurocognitive assessment

tool (NCAT), a tool for assessing vestibular and motor functioning, and a return-to-duty tool. There is also research ongoing to understand the consequences of repeated low-level blast exposures and repeated impact events. The set of tools that will be produced from this research will provide fieldable tools for mTBI assessment and will track recovery and return to duty status. DHP supports a research effort examining the utility of hyperbaric oxygen therapy as a treatment to improve mTBI/concussion outcomes. Low-level light therapy is also being explored as a technique to improve mTBI outcomes and sleep. The other large mTBI program of research is looking at a broad range of studies aimed at understanding the prevalence, risk, and protective factors that will inform assessment and diagnosis of mTBI/concussion as well as prevention and treatment intervention research. In addition, there is also significant research investigating the underlying neurobiological mechanisms of mTBI/concussion.

DHP funding now supports more family-focused research than in previous years. Current and future research initiatives reflect the importance of better understanding the needs of family members of combat injured Service members (to include psychological and physical injury) and developing interventions to encourage positive adaptation and adjustment. DHP also supports epidemiological studies to elucidate risk and resilience factors influencing family functioning. Findings from the epidemiological studies will inform prevention and treatment interventions and needs unique to the military family.

Overall, DoD made significant progress toward fulfilling the recommendations of the various task forces, commissions and work groups for PH (including PTSD) and TBI. DoD, through DCoE, has partnered with the National Institute of Neurological Disorders and Stroke (NINDS) to refine and expand the NINDS Common Data Elements (CDE) program (http://www.commondataelements.ninds.nih.gov/). As noted therein, "the use of different measures to assess similar study variables and/or differing metrics to assess outcomes may limit important advances in PH and TBI research. Without a common set of data elements (which include variable definitions and recommended measures), comparison of findings across studies is challenging." The CDE program aims to rectify this. To expand on this advance, USAMRMC is working with DCoE, DVBIC, NICoE and NINDS, a division of NIH, to develop a comprehensive patient data repository that will be populated by any clinical trial group using the CDE standards.

### 3.7.3 Description of Actions Planned for Research and Development

With respect to basic, applied, and clinical research funded by Congress in DoD, a process has been established for identifying research gaps, releasing program announcements to address those gaps, and then scientifically and programmatically reviewing submitted proposals. USAMRMC, per the request of the Assistant Secretary of Defense for Health Affairs, has leveraged its existing Research Area Directorate structure to provide the administrative support platform for the JPCs and subordinate working groups that are aligned to the structure of the Armed Services Biomedical Research Evaluation and Management Joint Technology Coordinating Groups. The JPCs are responsible for gap identification and programmatic review, while an external independent, scientific review is done on all proposals. Upon funding, investigators are now required to submit quarterly and annual reports that are reviewed by military subject matter experts for scientific and technical acceptability. We are beginning to perform

in-process reviews so that DoD and other stakeholders can assess progress directly from the investigator and can then use that information to inform the revision of research gaps.

Working groups have been formed to help guide the translation of research findings to clinical use. With respect to translation, USAMRMC utilizes the "Decision Gate" process where a drug or device under development must pass through a series of intensive reviews and "go/no-go" decision points on their way towards military acquisition. In July 2010, USAMRMC presented the TBI portfolio to the Director, Defense Medical Research and Development Program where recommendations were made regarding continuing and emerging research areas; a final report from that effort is pending.

Future actions planned for suicide prevention research include continued efforts to develop and validate evidence-based prevention and treatment interventions. Basic science efforts are needed to validate underlying psychological and biopsychological theories of suicide to inform the interventions. Future research will focus on brief interventions to address problem drinking, suicide behavior, polypharmacy, and other factors that might reinforce suicidal tendencies. In addition, evidence-based systems of care and postvention research for Service members and family members remain as areas of future investigation.

There is a foundational research effort in preventing and mitigating negative BH outcomes. The resilience research is integrated with the Army's Comprehensive Soldier Fitness effort. There is close coordination to ensure integration and consistency across organizations within the DoD. Further resilience research is required in order to deliver evidence-based skills training to enhance the ability of Service members and families to maintain and restore psychological well-being in the face of military stressors.

Research needs to continue to focus on enhancement of existing treatments and development of new treatments for combat-related BH problems, especially those focused on addressing co-morbidities and long-standing PTSD symptoms. Head-to-head comparisons of treatments and studies examining systems of care are also necessary to provide evidence-based recommendations on best practice clinical guidelines. To ensure that Service members and families are being treated as effectively as possible, research is necessary to enhance the dissemination of evidence-based clinical practices and their adoption of by providers.

Despite the large investment in mTBI/concussion research, there are still gaps that remain. Future efforts are needed to develop neuroprotection to reduce the negative psychological and physical consequences that are associated with mTBI. The future needs for the program also include research to understand the underlying neurobiological mechanisms of the negative consequences of mTBI. Longitudinal prospective studies are also needed in order to understand the time course of injury and recovery in order to develop appropriate interventions.

DoD, through DVBIC, initiated the Study of Cognitive Rehabilitation Effectiveness; the first DoD randomized controlled trial that will determine the effectiveness of cognitive rehabilitation therapy for mTBI. The expected outcome is to help inform TRICARE Management Agency of the appropriateness of coverage for cognitive rehabilitation therapy for mTBI, as well as to contribute to medical literature as

the first randomized controlled trial of cognitive rehabilitation for mTBI. The SCORE protocol has been developed and submitted for review and approval by the Institutional Review Board.

DoD remains focused on the unique stressors that military families face, while leveraging civilian family research findings as appropriate. Future research efforts will continue to address the processes that are involved in family function and dysfunction across the military lifecycle. Additionally ongoing emphasis will be placed on research developing and validating prevention interventions.

### 4.0 Caring For Patients Within the Military Health System as Routinely Captured in the Base Military Health Accounting System

Sections 4.1 and 4.2 show the PH and TBI costs for FY 2010, reported annually in the MHS by cohort beginning in 2003. The cohort year identifies the first year in which patients were diagnosed with the condition. The costs reflected correspond only to those individuals who meet the criteria of the sub-table (e.g., any diagnosis is TBI, or any diagnosis is PH).

Using the lists of PH and TBI patients, direct care and purchased care medical records and pharmacy prescriptions were pulled from the MHS Data Repository. The records for active duty Service members that occurred on or after the date when the patient was first identified with PH concerns or TBI were included. Former active duty Service members who are no longer on active duty due to retirement or separation and who may have continued to receive care either in TRICARE or elsewhere for PH or TBI are excluded.

The analysis looked at costs incurred by PH and TBI patients separately. Costs included both direct care services (based on the Patient Level Cost Allocation full cost definition) and purchased care services (based upon government paid amounts).

The following tables report on four different definitions/types of care:

- medical costs incurred when PH or TBI was the primary diagnosis;
- medical costs incurred when PH or TBI was one of the diagnoses (i.e. PH or TBI is in any diagnosis position);
- medical costs incurred for each patient with PH or TBI regardless if the care was related to PH or TBI; and
- pharmacy costs.

### 4.1 Funding for Psychological Health

The scope of PH is very broad and includes programs ranging from preclinical to transitional health programs and services, as well as family, leadership, and community education and training. The estimated cost for direct and purchased care in FY 2010 was almost \$262 million for cases where PH was the primary diagnosis, about \$440 million where PH was one of any diagnoses, and nearly \$1.6 billion for any care after initial PH diagnosis. Annual data are portrayed in Table 1.

TABLE 1
Estimated Costs for PH

Primary I	Diagnosis is PH	Any Diag	Any Diagnosis is PH		
Cohort (FY)	FY 2010	Cohort (FY)	FY 2010		
FY 2003	\$ 44,349,822	FY 2003	\$ 62,387,497		
FY 2004	\$ 87,237,489	FY 2004	\$ 128,212,475		
FY 2005	\$ 98,447,670	FY 2005	\$ 158,340,731		
FY 2006	\$ 107,436,247	FY 2006	\$ 186,014,682		
FY 2007	\$ 124,392,590	FY 2007	\$ 223,536,653		
FY 2008	\$ 167,686,930	FY 2008	\$ 303,057,578		
FY 2009	\$ 213,325,744	FY 2009	\$ 380,433,103		
FY 2010	\$ 261,095,167	FY 2010	\$ 439,842,562		
Total	\$ 1.103.971.659	Total	\$ 1.881.825.281		

Any Care Afte	er Initial PH Diagnosis	Any Prescriptions Fille	Any Prescriptions Filled After Initial PH Diagnosis		
Cohort (FY)	FY 2010	Cohort (FY)	FY 2010		
FY 2003	\$ 154,746,030	FY 2003	\$ 7,849,262		
FY 2004	\$ 422,329,651	FY 2004	\$ 28,190,684		
FY 2005	\$ 627,364,098	FY 2005	\$ 45,880,558		
FY 2006	\$ 779,602,365	FY 2006	\$ 57,477,236		
FY 2007	\$ 947,999,677	FY 2007	\$ 67,168,196		
FY 2008	\$ 1,178,302,397	FY 2008	\$ 79,997,608		
FY 2009	\$ 1,372,796,528	FY 2009	\$ 96,185,111		
FY 2010	\$ 1,585,854,817	FY 2010	\$ 110,806,898		
Total	\$7,068,995,563	Total	\$ 493,555,553		

<sup>\*</sup> Data for active duty Service members who deployed in Operations Enduring Freedom or Iraqi Freedom.

Sources: MDR - Military Health System Data Repository

SIDR - Standard Inpatient Data Record

SADR - Standard Ambulatory Data Record

TED - TRICARE Encounter Data

PDTS - Pharmacy Data Transaction Service

<sup>\*</sup> Psychological health based on diagnosis codes 295-309, 311-319, V40, V61-V62, V11, V91, E950-959, V154, V652, V655, V701-V702, 99551, 99582, V6542, and V6549.

<sup>\*</sup> All costs are estimated to completion.

<sup>\*</sup> Costs are the sum of Patient level Cost Allocation for Direct Care and Amount Paid for Purchased Care.

<sup>\*</sup> Data as of September 30, 2010.

### 4.2 Funding for Traumatic Brain Injury

The lack of preciseness in International Classification of Diseases and Injuries—Version 9 (ICD-9) codes for TBI presented challenges to accurately glean cost data from medical systems. Data was pulled via commonly used ICD-9 proxy codes for active duty Service members who incurred TBI, and had deployed in support of OEF/OIF, provided visibility into how much the MHS has spent on TBI diagnosis, treatment, and recovery.

The estimated cost for direct and purchased care in FY 2010 was almost \$50 million for cases where TBI was the primary diagnosis, about \$142 million where TBI was one of any diagnoses, and nearly \$646 million for any care after initial TBI diagnosis. Annual data are portrayed in Table 2.

TABLE 2

### **Estimated Costs for TBI**

Primary D	iagnosis is TBI	Any Diagnosis is TBI		
Cohort (FY)	FY 2010	Cohort (FY)	FY 2010	
FY 2003	\$ 5,457,111	FY 2003	\$ 9,581,606	
FY 2004	\$ 18,645,284	FY 2004	\$ 28,656,594	
FY 2005	\$ 25,528,746	FY 2005	\$ 39,971,156	
FY 2006	\$ 26,022,717	FY 2006	\$ 44,542,831	
FY 2007	\$ 35,601,801	FY 2007	\$ 79,859,750	
FY 2008	\$ 42,876,925	FY 2008	\$ 99,636,524	
FY 2009	\$ 40,071,833	FY 2009	\$ 107,718,783	
FY 2010	\$ 49,668,278	FY 2010	\$ 141,885,451	
Total	\$ 243,872,695	Total	\$ 551,852,695	
Any Care After	Initial TBI Diagnosis	Any Prescriptions Filled	After Initial TBI Diagnosis	
Cohort (FY)	FY 2010	Cohort (FY)	FY 2010	

7 my Gare 7 mon milan 121 2 magnetic		
Cohort (FY)	FY 2010	
FY 2003	\$ 21,563,416	
FY 2004	\$ 70,208,104	
FY 2005	\$ 129,136,292	
FY 2006	\$ 163,247,187	
FY 2007	\$ 262,504,096	
FY 2008	\$ 390,178,214	
FY 2009	\$ 488,704,726	
FY 2010	\$ 645,950,298	

Any Frescriptions Filled After initial Tol Diagnosis		
Cohort (FY)	FY 2010	
FY 2003	\$ 317,558	
FY 2004	\$ 1,695,882	
FY 2005	\$ 3,431,085	
FY 2006	\$ 5,307,778	
FY 2007	\$ 8,640,663	
FY 2008	\$ 15,151,128	
FY 2009	\$ 22,111,537	
FY 2010	\$ 30,261,462	
Total	\$ 86,917,093	

<sup>\*</sup> Data for active duty Service members who deployed in Operations Enduring Freedom or Iraqi Freedom.

Total

Sources: MDR - Military Health System Data Repository

SIDR - Standard Inpatient Data Record

SADR - Standard Ambulatory Data Record

TED - TRICARE Encounter Data

PDTS - Pharmacy Data Transaction Service

\$ 2,171,492,333

<sup>\*</sup> TBI based on principal or secondary diagnosis codes 800-801,803-804,850-854,310.2, 950.1-950.3, 907.0, 959.01, V15.5.

<sup>\*</sup> All costs are estimated to completion.

<sup>\*</sup> Costs are the sum of Patient level Cost Allocation for Direct Care and Amount Paid for Purchased Care.

<sup>\*</sup> Data as of September 30, 2010.