Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601101HP: *In-House Laboratory Independent Research (ILIR)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	2.827	3.030	3.088	-	3.088	3.151	3.262	3.319	3.379	Continuing	Continuing
240A: *Infectious Disease (USUHS)*	-	0.396	0.424	0.431	-	0.431	0.441	0.456	0.463	0.471	Continuing	Continuing
240B: *Military Operational Medicine (USUHS)*	-	1.213	1.300	1.325	-	1.325	1.352	1.400	1.425	1.451	Continuing	Continuing
240C: *Combat Casualty Care (USUHS)*	-	1.218	1.306	1.332	-	1.332	1.358	1.406	1.431	1.457	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Uniformed Services University of the Health Sciences (USUHS), this program element supports basic medical research at the Uniformed Services University of the Health Sciences (USUHS). It facilitates the recruitment and retention of faculty; supports unique research training for military medical students and resident fellows; and allows the University's faculty researchers to collect pilot data towards military relevant medical research projects in order to secure research funds from extramural sources (estimated $127 million annually). Approximately 130 intramural research projects are active each year, including 37 faculty start-ups. Projects are funded on a peer-reviewed, competitive basis. Results from these studies contribute to the fund of knowledge intended to enable technical approaches and investment strategies within Defense Science and Technology (S&T) programs.

The ILIR program at USUHS is designed to answer fundamental questions of importance to the military medical mission of the Department of Defense in the areas of Infectious Disease, Military Operational Medicine, Combat Casualty Care, and Chemical, Biological, and Radiologic Defense. The portfolio of research projects will vary annually because this research is investigator-initiated. Examples of typical research efforts are detailed in R-2a.

Infectious Disease: Immunology and molecular biology of bacterial, viral and parasitic disease threats to military operations. These threats include Bartonella bacilliformis, Clostridium difficile, E. coli and their Shiga toxins, Henipaviruses (Hendra & Nipah), Hepatitis A, Helicobacter pylori, HIV, HTLV-1, Leishmaniasis, Malaria, Neisseriae gonorrhea, Shigella spp., Streptococcus, Staphylococcus, and Typhoid fever.

Military Operational Medicine: Sustainment of individual performance; mapping and managing deployment and operational stressors; cognitive enhancement; and military and medical training readiness.

Combat Casualty Care: Ischemia and reperfusion injury, traumatic brain and peripheral nerve injury, neural control of pain, endotoxic shock, cryotherapy, malignant hyperthermia, inflammation, and wound healing.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601101HP: *In-House Laboratory Independent Research (ILIR)*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	2.862	3.030	3.088	-	3.088
Current President's Budget	2.827	3.030	3.088	-	3.088
Total Adjustments	-0.035	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.035	-			

Change Summary Explanation

FY 2012: Realignment from Defense Health Program, Research, Development, Test and Evaluation (DHP RDT&E), Program Element (PE) 0601101-In-House Laboratory Independent Research (-$0.035 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$0.035 million).

FY 2013: No Change

FY 2014: No Change

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601101HP: *In-House Laboratory Independent Research (ILIR)*	240A: *Infectious Disease (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
240A: *Infectious Disease (USUHS)*	-	0.396	0.424	0.431	-	0.431	0.441	0.456	0.463	0.471	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Infectious Disease: Immunology and molecular biology of bacterial, viral and parasitic disease threats to military operations. These threats include Bartonella bacilliformis, Clostridium difficile, E. coli and their Shiga toxins, Henipaviruses (Hendra & Nipah), Hepatitis A, Helicobacter pylori, HIV, HTLV-1, Leishmaniasis, Malaria, Neisseriae gonorrhea, Shigella spp., Streptococcus, Staphylococcus, and Typhoid fever.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Infectious Disease	0.396	0.424	0.431

Description: Infectious Disease: Immunology and molecular biology of bacterial, viral and parasitic disease threats to military operations. These threats include Bartonella bacilliformis, Clostridium difficile, E. coli and their Shiga toxins, Henipaviruses (Hendra & Nipah), Hepatitis A, Helicobacter pylori, HIV, HTLV-1, Leishmaniasis, Malaria, Neisseriae gonorrhea, Shigella spp., Streptococcus, Staphylococcus, and Typhoid fever.

FY 2012 Accomplishments:

Representative projects include the following: determination of the factors responsible for maintaining and driving the immune response against helminth (parasitic worm) infections eventually leading to effective vaccines against these infections; investigation of skin and soft tissue infections (SSTI) in the military population, generally caused by community-associated methicillin-resistant Staphylococcus aureus (CA-MRSA), towards the development of novel prevention and treatment strategies; investigation of the Henipaviruses and their bat hosts towards the development of novel intervention and vaccine strategies; development of a cutaneous leishmaniasis vaccine to prevent parasitic infection; elucidation of the natural transmission of Bartonella bacilliformis by the sand fly towards disease prevention and control; surveillance and treatment of Rickettsia parkeri and their associated tick vectors; analysis of genetic factors resulting in colonization of the host intestinal tract by Escherichia coli O157:H7, the most common infectious cause of bloody diarrhea & hemorrhagic colitis; and the health behaviors and deployment factors that are associated with acquisition of sexually transmitted diseases (STDs).

These projects support the essential military mission by advancing our understanding of both the transmission and the internal mechanisms of a spectrum of pernicious and/or common diseases that may be faced by warfighters both at home and abroad.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601101HP: *In-House Laboratory Independent Research (ILIR)*	240A: *Infectious Disease (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
In turn, that understanding opens avenues to better control, diagnosis, and treatment of both natural and manmade biological threats. ***FY 2013 Plans:*** We will continue to investigate infectious diseases that impact soldiers from the standpoint of lost "man-days" to death. We recognize that infectious diseases can severely hamper combat readiness and effectiveness, and therefore we will continue to concentrate our efforts on diagnosis and treatment of those naturally occurring infectious diseases that can affect the war fighter by further development of vaccines, drugs, and diagnostic tools. ***FY 2014 Plans:*** Efforts will continue within the Infectious Disease research area in FY 2014. Specific investigator-initiated projects compete for funding each year, usually with two to three-year project periods. Therefore, no detailed description of the research is possible at this time.			
Accomplishments/Planned Programs Subtotals	0.396	0.424	0.431

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601101HP: *In-House Laboratory Independent Research (ILIR)*	240B: *Military Operational Medicine (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
240B: *Military Operational Medicine (USUHS)*	-	1.213	1.300	1.325	-	1.325	1.352	1.400	1.425	1.451	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Military Operational Medicine: Sustainment of individual performance; mapping and managing deployment and operational stressors; cognitive enhancement; and military and medical training readiness.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Military Operational Medicine	1.213	1.300	1.325

Description: Military Operational Medicine: Sustainment of individual performance; mapping and managing deployment and operational stressors; cognitive enhancement; and military and medical training readiness.

FY 2012 Accomplishments:
Representative projects include the following: refinement of a single item post traumatic stress disorder (PTSD) screening tool for use in the DOD Primary Care system; understanding and attenuating deleterious effects of tobacco, alcohol, stress and their interactions upon military personnel; forecasting levels of full or threshold PTSD, depression, health and alcohol problems within the military population; understanding the determinants of health promoting behaviors towards preventing obesity in both active duty military and their family members; implementation of a neuromuscular routine that minimizes musculoskeletal injury in military academy cadets; evaluation of suicidal behaviors within recent suicide deaths of active duty service members to aid in identification and prevention efforts; determination of the psychosocial and biomedical risks and protective factors for heart failure and ischemia within the military and veteran population; and the determination of non-invasive neurological biomarkers for heat intolerance using in vivo Magnetic Resonance Imaging (MRI) and Spectroscopy (MRS).

These studies support the essential military mission by enhancing and protecting the health, performance and fitness of soldiers throughout the deployment cycle. These studies strive to increase our understanding of and ability to manipulate the physiological mechanisms of stress and immunity, human sleep and seasonal cycles, and neurological changes necessary for short- and long-term memory. Their discoveries should enable warfighters to stay awake longer with fewer detriments to performance; lead to better strategies for enhancing and preserving memory and reasoning capabilities under battle conditions; help understand

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601101HP: *In-House Laboratory Independent Research (ILIR)*	240B: *Military Operational Medicine (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
and ultimately prevent and treat neuropsychiatric illnesses such as depression and PTSD; and assist deployed troops and their families better prepare for and contend with common, significant stressors related to the deployment cycle. ***FY 2013 Plans:*** Our efforts will concentrate on biomedical solutions that protect and enhance the health, performance, and fitness of our soldiers. Our focus will continue to understand stress as it is related to performance and health. We will also study performance in environmental extremes. Our goal is to lay the ground work that will establish platforms that build biomedical products and solutions that mitigate risk to soldiers and protect them from "head to toe" both on the battlefield and at home. ***FY 2014 Plans:*** Efforts will continue within the Military Operational Medicine research area in FY 2014. Specific investigator-initiated projects compete for funding each year, usually with two to three-year project periods. Therefore, no detailed description of the research is possible at this time.			
Accomplishments/Planned Programs Subtotals	1.213	1.300	1.325

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601101HP: *In-House Laboratory Independent Research (ILIR)*	240C: *Combat Casualty Care (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
240C: *Combat Casualty Care (USUHS)*	-	1.218	1.306	1.332	-	1.332	1.358	1.406	1.431	1.457	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Combat Casualty Care: Ischemia and reperfusion injury, traumatic brain and peripheral nerve injury, neural control of pain, endotoxic shock, cryotherapy, malignant hyperthermia, inflammation, and wound healing.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Combat Casualty Care	1.218	1.306	1.332

Description: Combat Casualty Care: Ischemia and reperfusion injury, traumatic brain and peripheral nerve injury, neural control of pain, endotoxic shock, cryotherapy, malignant hyperthermia, inflammation, and wound healing.

FY 2012 Accomplishments:
Representative projects include: investigation of synaptic plasticity in temporal lobe epilepsy and possible development of novel therapies; determination whether BMP-2 is a effective therapy to promotes recapitulation of the meninges surrounding the spinal cord; understanding the contribution of inflammation to post-injury loss of function after traumatic brain and spinal cord injury; identifying how the formation of nerve cell circuits in the brain are affected by psychological stress and traumatic brain injury; analysis of the underlying mechanisms responsible for the development of tolerance following the chronic use of opiates for severe pain; development of psychological interventions to be used with military health care providers who experience post-traumatic stress symptoms to prevent burn-out; and development of accurate millisecond-level assessment tools and computer based analyses to assist in the evaluation and assessment of traumatic brain injury.

These studies support the essential military mission by further exploring the mechanism of pain control for an established treatment; providing the groundwork for effective treatments to limit nerve damage and encourage regeneration; and identifying a possible cause for life-threatening complications due to the combination of exertion and injury common under heavy battlefield conditions.

FY 2013 Plans:
Our efforts will concentrate on diagnosis and treatment for our wounded warriors to reduce mortality and morbidity resulting from injuries on the battlefield. We will study physical and biological determinants of brain injury and post-traumatic stress disorder. In

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601101HP: *In-House Laboratory Independent Research (ILIR)*	240C: *Combat Casualty Care (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
addition, we will also focus on rehabilitation for amputees and pain management. Our goal is to understand how to best care for soldiers who have suffered any type of physical or mental traumatic injury in the field. ***FY 2014 Plans:*** Efforts will continue within the Combat Casualty Care research area in FY 2014. Specific investigator-initiated projects compete for funding each year, usually with two to three-year project periods. Therefore, no detailed description of the research is possible at this time.			
Accomplishments/Planned Programs Subtotals	1.218	1.306	1.332

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601117HP: *Basic Operational Medical Research Sciences*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	1.000	3.038	6.074	-	6.074	11.121	11.131	11.132	11.332	Continuing	Continuing
100A: *CSI - Congressional Special Interests*	-	1.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
371A: *GDF-Basic Operational Medical Research Sciences*	-	0.000	3.038	6.074	-	6.074	11.121	11.131	11.132	11.332	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Guidance for Development of the Force-Basic Operational Medical Research Sciences: This program element (PE) provides support for basic medical research directed toward greater knowledge and understanding of the fundamental principles of science and medicine that are relevant to the improvement of Force Health Protection. Research in this PE is designed to address the following: areas of interest to the Secretary of Defense regarding Wounded Warriors, capabilities identified through the Joint Capabilities Integration and Development System (JCIDS), and the strategy and initiatives described in the Quadrennial Defense Review (QDR). Program development is peer-reviewed and coordinated with all of the Military Services, appropriate Defense Agencies or Activities and other federal agencies, to include the Department of Veterans Affairs, the Department of Health and Human Services, and the Department of Homeland Security. This coordination occurs through the planning and execution activities of the Joint Program Committees, established for the Defense Health Program Research, Development, Test and Evaluation (RDT&E) funding. Research supported by this PE includes polytrauma and blast injury, diagnosis and treatment of brain injury, and psychological health and well-being for military personnel and families. Funds in this PE are for basic research that promises to provide important new approaches to complex military medical problems. As the research efforts mature, the most promising efforts will transition to applied research (PE 0602115HP) or technology development (0603115HP) funding.

The FY12 DHP Congressional Special Interests (CSI) funded peer-reviewed directed basic research for Hemorrhage (bleeding) Control. Because of the CSI annual structure, out-year funding is not programmed.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601117HP: *Basic Operational Medical Research Sciences*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.975	3.038	6.074	-	6.074
Current President's Budget	1.000	3.038	6.074	-	6.074
Total Adjustments	0.025	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	0.025	-			

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2012	FY 2013
Project: 100A: *CSI - Congressional Special Interests*		
Congressional Add: *436A - Peer-Reviewed Hemorrhage Control Research*	1.000	-
Congressional Add Subtotals for Project: 100A	1.000	0.000
Congressional Add Totals for all Projects	1.000	0.000

Change Summary Explanation

FY 2012: Restore FY 2013 President's Budget decrease to Congressional Special Interest from DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (-$0.025 million) to DHP RDT&E, PE 0601117- Basic Operational Medical Research Sciences (+$0.025 million).

FY 2013: No Change

FY 2014: No Change

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601117HP: *Basic Operational Medical Research Sciences*	100A: *CSI - Congressional Special Interests*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
100A: *CSI - Congressional Special Interests*	-	1.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The FY12 DHP Congressional Special Interests (CSI) funded peer-reviewed directed research for Hemorrhage Control. Because of the CSI annual structure, out-year funding is not programmed.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
Congressional Add: 436A - Peer-Reviewed Hemorrhage Control Research	1.000	-
FY 2012 Accomplishments: The CSI for Peer-Reviewed Hemorrhage Control Research seeks solutions to the problem of impaired clotting caused by severe trauma. Approximately 38% of severe combat trauma patients suffer unexplained heavy and prolonged bleeding after injury which makes hemorrhage (bleeding) control extremely difficult. These funds supplement the basic research efforts currently underway to better understand the related fundamental mechanisms. Solutions are also being sought to develop diagnostics or treatments for this life-threatening condition.		
Congressional Adds Subtotals	1.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601117HP: *Basic Operational Medical Research Sciences*	371A: *GDF-Basic Operational Medical Research Sciences*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
371A: *GDF-Basic Operational Medical Research Sciences*	-	0.000	3.038	6.074	-	6.074	11.121	11.131	11.132	11.332	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Guidance for Development of the Force-Basic Operational Medical Research Sciences: Basic research described here will be focused on enhancement of knowledge to support capabilities identified through the JCIDS process and the strategy and initiatives addressed in the QDR. Within this Program Element, research will be conducted in the general categories of polytrauma and blast injury, diagnosis and treatment of brain injury, and psychological health and wellbeing for military personnel and families. Polytrauma and blast injury efforts will focus on fundamental mechanisms to support forward surgical and intensive critical care, treatment for extremity trauma, enroute care, devices for hemorrhage (bleeding) control, military medical photonics (interdisciplinary branch of medicine that involves the study and application of light with respect to health and disease), blast injury models and performance standards for protections systems, and diagnostics and metrics for hearing loss and protection. Traumatic brain injury (TBI) efforts will focus on fundamental mechanisms to support far-forward deployable technologies for diagnosis of mild TBI, identification and characterization of mechanisms of TBI, and improved therapeutics for TBI. Psychological health efforts will focus on characterization and identification of family and community health and resilience, diagnosis of deployment-related psychological health problems, and causes of post traumatic stress disorder.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Project 371 GDF – Basic Operational Medical Research Sciences	0.000	3.038	6.074
Description: Provide support for basic medical research directed toward attaining greater knowledge and understanding of fundamental principles of science and medicine relevant to the improvement of medical care in operationally relevant environments.			
FY 2012 Accomplishments: No funding programmed.			
FY 2013 Plans: Combat casualty care research is conducting studies to understand the fundamental mechanisms in support of diagnosis and treatment of excessive hemorrhage (bleeding) resulting from severe trauma.			
FY 2014 Plans: Military operational medicine research will conduct studies to understand fundamental effects of exposure to blast, which will inform development of performance standards for protection systems. Research efforts will also: identify strategies for			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0601117HP: *Basic Operational Medical Research Sciences*	371A: *GDF-Basic Operational Medical Research Sciences*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
diagnostics and metrics for hearing loss and protection; identify new candidate diagnostics for deployment-related psychological health problems, including health risk behaviors (accidents, tobacco use, etc.), alcohol misuse and substance abuse; formulate new concepts in support of diagnosis and treatment of post-traumatic stress disorder; and, assess how single and multiple deployments affect military family and community health, well-being and resilience.			
Accomplishments/Planned Programs Subtotals	0.000	3.038	6.074

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not required for basic science.

E. Performance Metrics

Principal investigators will participate in In-Progress Reviews, high-level DHP-sponsored Review & Analysis meetings, submit quarterly and annual status reports, and are subjected to Program Sponsor Representative progress reviews to ensure that milestones are being met and deliverables will be transitioned on schedule. The benchmark performance metric for transition of research conducted with Basic Medical Research Sciences funding will be the attainment of a maturity level that is typical of Technology Readiness Level 2 or the equivalent for knowledge products.

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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	67.160	42.188	46.761	-	46.761	66.699	71.233	75.608	76.969	Continuing	Continuing
200A: *Congressional Special Interests*	-	34.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
306B: *Advanced Diagnostics & Therapeutics Research & Development (Air Force)*	-	3.377	3.566	3.637	-	3.637	3.710	3.840	3.905	3.975	Continuing	Continuing
372A: *GDF Applied Biomedical Technology*	-	29.033	38.622	34.148	-	34.148	54.020	58.430	62.579	63.705	Continuing	Continuing
447A: *Military HIV Research Program (Army)*	-	0.000	0.000	8.976	-	8.976	8.969	8.963	9.124	9.289	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Guidance for Development of the Force - Applied Biomedical Technology: This applied research funding is to refine concepts and ideas into potential solutions to military health and performance problems, with a view towards evaluating technical feasibility. Included are studies and investigations leading to candidate solutions that may involve use of animal models for testing in preparation for initial human testing. Research in this program element is designed to address the following: areas of interest to the Secretary of Defense regarding Wounded Warriors, capabilities identified through the Joint Capabilities Integration and Development System, and the strategy and initiatives described in the Quadrennial Defense Review. Program development is peer-reviewed and fully coordinated with all Military Services, appropriate Defense Agencies or Activities, and other federal agencies, to include the Department of Veterans Affairs, the Department of Health and Human Services, and the Department of Homeland Security. This coordination occurs through the planning and execution activities of the Joint Program Committees, established for the Defense Health Program Research, Development, Test and Evaluation (RDT&E) funding. Research supported by this program element includes polytrauma and blast injury, rehabilitation, diagnosis and treatment of brain injury, operational health and performance, radiation countermeasures, and psychological health and well-being for military personnel and families.

For the Army Medical Command, beginning in FY14, the military HIV research program funding is transferred from the Army to the Defense Health Program. HIV causes acquired immunodeficiency syndrome (AIDS). Work in this area includes refining improved identification methods to determine genetic diversity of the virus, preclinical work in laboratory animals including non-human primates to identify candidates for future vaccine refinement, and evaluating and preparing overseas sites for future vaccine trials.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*

The Army Medical Command also received DHP Congressional Special Interest (CSI) research funding focused on Peer-Reviewed Traumatic Brain Injury and Psychological Health Research, and Peer-Reviewed Hemorrhage (bleeding) Control Research. Because of the CSI annual structure, out-year funding is not programmed.

For the Air Force, this PE funds applied research which seeks to promote 'omic'-informed personalized medicine with an emphasis on targeted prevention, diagnosis, and treatment. The delivery of pro-active, evidence-based, personalized medicine will improve health in Warfighters and beneficiaries by providing care that is specific to the situation and patient, to include preventing disease or injury, early and accurate diagnosis, and selection of appropriate and effective treatment. Personalized medicine will reduce morbidity, mortality, mission impact of illness/injury, and healthcare costs while increasing health and wellness of the AF population and efficiency of the healthcare system. This applied research supports multiple focus areas, each of which represents an identified barrier/gap which must be addressed for successful implementation of 'omic-informed personalized medicine. Focus areas for applied research include knowledge generation research; ethical legal and social issues/policy research; bioinformatics research; educational research; research for development of advanced genomic diagnostic system. For efforts supported by this program element, research will be pursued with the intent to support solutions that answer Air Force specific needs. During this process, the efforts of other government agencies in those areas will be assessed to avoid redundancy.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	66.841	42.188	37.785	-	37.785
Current President's Budget	67.160	42.188	46.761	-	46.761
Total Adjustments	0.319	0.000	8.976	-	8.976
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	0.319	-			
• Military HIV Research Program	-	-	8.976	-	8.976

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2012	FY 2013
Project: 200A: *Congressional Special Interests*		
Congressional Add: *426A – Traumatic Brain Injury and Psychological Health (TBI/PH) (Army)*	31.750	-
Congressional Add: *437A - Peer-Reviewed Hemorrhage Control Research*	3.000	-
Congressional Add Subtotals for Project: 200A	34.750	0.000
Congressional Add Totals for all Projects	34.750	0.000

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*

Change Summary Explanation

FY 2012: Restore FY 2013 President's Budget decrease to Congressional Special Interest from DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (-$0.869 million) to DHP RDT&E, PE 0602115- Applied Biomedical Technology (+$0.869 million).

Realignment from DHP RDT&E, PE 0602115-Applied Biomedical Technology (-$0.550 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$0.550 million).

FY 2013: No Change

FY 2014: Change Proposal increase to DHP RDT&E, PE 0602115-Applied Biomedical Technology (+$8.976 million) for the Military HIV Research Program (MHRP) from RDT&E, Army, appropriation.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	200A: *Congressional Special Interests*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
200A: *Congressional Special Interests*	-	34.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For FY12, DHP Congressional Special Interests (CSI) directed funding to stimulate innovative research through a competitive, peer-reviewed research program focused on Peer-Reviewed Traumatic Brain Injury and Psychological Health Research, and Peer-Reviewed Hemorrhage Control Research. Because of the CSI annual structure, out-year funding is not programmed.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
Congressional Add: 426A – Traumatic Brain Injury and Psychological Health (TBI/PH) (Army)	31.750	-
FY 2012 Accomplishments: The Traumatic Brain Injury and Psychological Health (TBI/PH) CSI project aims to prevent, mitigate, and treat the effects of combat-relevant traumatic stress and TBI on function, wellness, and overall quality of life, including interventions across the deployment lifecycle for warriors, Veterans, family members, caregivers, and communities. Project funding was divided into applied research, technology development and concept development efforts. A key priority of the TBI/PH Research Program is to complement ongoing DoD efforts to ensure the health and readiness of our military forces by promoting a better standard of care for Post Traumatic Stress Disorder (PTSD) and TBI in the areas of prevention, detection, diagnosis, treatment, and rehabilitation. Program announcements, programmatic reviews, Service requested nominations, and ongoing studies that would benefit from program acceleration have been incorporated to address these priorities and gather proposals. In the area of TBI, researchers performed investigations to find a universally-agreed upon concussion grading system; they continued experiments into the effects of penetrating injuries on the brain and experiments on the effects of blasts on the brain. Proposals were solicited in the areas of blast-induced hyper-acceleration upon the generation of TBI and the role of inflammation in spreading TBI damage. In addition, a new VA/DoD Neurotrauma consortium program announcement was released to form a five-year, multi-university consortium to discover mechanisms of treatment and the long-term effects of TBI and its relationship to Chronic Traumatic Encephalopathy (CTE), a degenerative brain disease diagnosed in patients with a history of multiple concussions.		
Congressional Add: 437A - Peer-Reviewed Hemorrhage Control Research	3.000	-

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	200A: *Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
FY 2012 Accomplishments: The CSI for Peer-Reviewed Hemorrhage Control Research is intended to seek solutions to uncontrolled bleeding without clotting resulting from severe trauma. Approximately 38% of severe combat trauma patients suffer unexplained heavy and prolonged bleeding after injury which makes hemorrhage control extremely difficult. Applied research efforts seek solutions to develop diagnostics or treatments for this life-threatening condition. Platelets are important in stopping bleeding. Currently, platelets must be administered within 5 days of collection because they must be kept at room temperature. Thus it is impossible to collect platelets in CONUS and ship them to the battlefield. Solutions are being sought to extend this timeline as long as possible, and yet make them quickly useable during a trauma scenario with a minimum of logistic support requirements.		
Congressional Adds Subtotals	34.750	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	306B: *Advanced Diagnostics & Therapeutics Research & Development (Air Force)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
306B: *Advanced Diagnostics & Therapeutics Research & Development (Air Force)*	-	3.377	3.566	3.637	-	3.637	3.710	3.840	3.905	3.975	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Advanced Diagnostics & Therapeutics Clinical Translational Applied Research (Air Force): This project provides applied research funding needed to increase efficiency and efficacy of care across the spectrum of Advanced Diagnostics and Therapeutics requirements in the defined Modernization Thrust Areas to improve and enhance clinical Diagnosis, Identification, Quantification and Mitigation (DIQM) methods, techniques protocols, guidelines and practices for all DoD wounded, ill and/or injured beneficiaries.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Advanced Diagnostics & Therapeutics Research & Development (Air Force)	3.377	3.566	3.637
Description: Advanced Diagnostics & Therapeutics Clinical Translational Applied Research (Air Force): This project provides applied research funding needed to increase efficiency and efficacy of care across the spectrum of Advanced Diagnostics and Therapeutics requirements in the defined Modernization Thrust Areas to improve and enhance clinical Diagnosis, Identification, Quantification and Mitigation (DIQM) methods, techniques protocols, guidelines and practices for all DoD wounded, ill and/or injured beneficiaries.			
FY 2012 Accomplishments: Continued to support regenerative medicine program at Armed Forces Institute of Regenerative Medicine. Completed AF Surgeon General-directed deep-dive on Telecombat as it relates to the health impact on AF operators. Continued nanotechnology research projects at the Massachusetts Institute of Technology. Obtained Institutional Review Board approval for Personalized Medicine/Genomic Medicine project and initiated the associated clinical utility study. Established an advisory panel for personalized medicine/genomic medicine. Supported a continuing forum to educate leaders on futures based thinking; created a learning laboratory for mid-level leadership development, and initiated a strategic roadmap to chart health/healthcare direction. Initiated research on the development of a global events tool to filter, aggregate analyze information from public/Government sources. Analyzed outcomes of symposium on genomics ethical and social policy issues; submitted two associated papers for publication. Awarded intramural project to identify and characterize epigenetic biomarkers of stress caused by high altitude			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	306B: *Advanced Diagnostics & Therapeutics Research & Development (Air Force)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
conditions in a collaborative clinical translational research project in collaboration with the Uniformed Services University of the Healthcare Sciences (USUHS). ***FY 2013 Plans:*** Continue to support regenerative medicine program at Armed Forces Institute of Regenerative Medicine. Perform AF Surgeon General directed deep dive on Health as a National Strategic Imperative/Lifestyle Medicine. Assess initial results of nanotechnology research projects at the Massachusetts Institute of Technology as they relate to Enroute Care and Expeditionary Medicine missions. Transfer the leadership of the continuing forum to educate leaders on futures based thinking from AFMS/SG to OSD/HA. Continue research on the development of a global events tool. Sponsor symposium on translating genomic medicine through provider education. Continue the genomics clinical utility study. Implement a milestone approach for Personalized Medicine/Genomic Medicine. Continue to leverage joint diagnostic efforts to meet AF mission requirements. Transition findings / outcomes of intramural project to identify and characterize epigenetic biomarkers of stress caused by high altitude conditions in a collaborative clinical translational research project in collaboration with the Uniformed Services University of the Healthcare Sciences (USUHS) to clinical practice / practice guidelines. ***FY 2014 Plans:*** Continue to support regenerative medicine program at Armed Forces Institute of Regenerative Medicine. Perform AF Surgeon General directed deep-dive on topic to be determined; develop a database library of submissions and topics for further use within the AFMS community. Complete nanotechnology research projects at the Massachusetts Institute of Technology. Analyze outcomes of symposium. Complete genomics clinical utility study. Continue to mature the global events tool.			
Accomplishments/Planned Programs Subtotals	3.377	3.566	3.637

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Interagency Agreements and Interservice Support Agreements with the US Army, US Navy and the Department of Homeland Security are used to support ongoing scientific and technical efforts within this program -- these agreements are supplemented with Broad Area Announcement (BAA) and Intramural calls for proposal are used to award initiatives in this program and project following determinations of scientific and technical merit, validation of need, prioritization, selection and any necessary legal and/or regulatory approvals (IRB, etc)

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	306B: *Advanced Diagnostics & Therapeutics Research & Development (Air Force)*

E. Performance Metrics

Individual initiatives are measured through a quarterly annual project performance reporting system and program management review process -- performance is measured against standardized criteria for cost, schedule and performance (technical objectives) and key performance parameters. Variances, deviations and/or breaches in key areas are reviewed and a decision is rendered on any adjustments through a formalized process of S&T governance.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	372A: *GDF Applied Biomedical Technology*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
372A: *GDF Applied Biomedical Technology*	-	29.033	38.622	34.148	-	34.148	54.020	58.430	62.579	63.705	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Guidance for Development of the Force - Applied Biomedical Technology: Applied Biomedical Technology Research will focus on refining concepts and ideas into potential solutions to military problems and conducting analyses of alternatives to select the best potential solution for further advanced technology development. Applied research will be conducted in the general categories of trauma, polytrauma and blast injury, rehabilitation, diagnosis and treatment of brain injury, radiation countermeasures, operational health and performance, and psychological health and well-being for military personnel and families. Applied research in traumatic brain injury (TBI) focuses on diagnosis and treatment, disentanglement of combat stress injuries, and TBI in evaluations, and clinical management. Trauma, polytrauma and blast injury applied research focuses on control of bleeding, tissue viability, diagnosis and life support, craniomaxillofacial (head, neck, face, and jaw) injury, evacuation applications and practices, forward surgical applications, blast injury models and performance standards for protection systems, blast induced brain injury models, diagnostics and metrics for hearing loss and protection, blast exposure and breaching, scar contracture (tightening of muscle, tendons, ligaments or skin that prevents normal movement), treatment of ocular and visual system traumatic injury, rapid screening of fresh whole blood, wound infection prevention and management, and antimicrobial (a substance that kills or inhibits the growth of microorganisms) countermeasures.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: GDF Applied Biomedical Technology	29.033	38.622	34.148
Description: Applied Biomedical Technology Research focuses on refining concepts and ideas into potential solutions to military problems and conducting analyses of alternatives to select the best potential solution for further advanced technology development.			
FY 2012 Accomplishments: Military infectious diseases research saw significant progress in two platforms for rapid screening of pre-transfused whole blood for pathogens (Task Area: Rapid Screening of Fresh Whole Blood). Down selection will occur in FY14, and if successful, subsequent RFP with 6.4 DHP funds will be announced in FY15. Supported multi-year studies initiated in FY10 and FY11 to transition the most appropriate efforts in development of antibacterial agents for biofilms (a thin layer of microorganisms adhering to the surface of a structure) and multidrug-resistant organisms (MDROs), detection of MDROs, and biomarker and diagnostic assay development to Medical Technology Development.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	372A: *GDF Applied Biomedical Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Military operational medicine efforts evaluated models of blast exposure to allow for a better understanding of the underlying mechanisms of blast-induced trauma and allow for the development of optimal protective equipment. Research assessed the effectiveness of pharmacological interventions for treatment of tissue injury and cognitive dysfunction during heat stress progression and recovery; validated the interventions currently employed; investigated candidate biomarkers for lung disease following exposure to toxic substances; characterized abnormalities in lung tissue samples from deployed personnel compared to normal lungs and lung samples from non-deployed personnel; investigated what developmental trajectories emerge after exposure to adversity (e.g., resilience, recovery, growth, disorder) during the deployment cycle; evaluated the causal relationship between Service member deployment, diagnosis of mental illness in active duty Service members, and events of intra-family violence; and characterized a comprehensive set of PTSD-related variables to compare the intensity of the impact of sleep restriction and of juvenile stress as risk factors of PTSD. Combat casualty care continued to advance successful research, initiated in FY11, in hemorrhagic shock and trauma, TBI biomarkers and screening tools, and combination drug therapies, to higher categories of funding. A new program announcement was released and research was initiated in the areas of enroute care, therapies for and mechanisms of shock, and permanent pathology caused by mild and moderate TBI. Radiation health effects and countermeasure research studied the anti-ceramide antibody as both a protector and mitigator of gastrointestinal tract damage following high dose acute radiation exposure. Evaluated Alxn4100TPO, a thrombopoietin (protein in humans that regulates production of platelets by bone marrow) analogue (a similar protein) for treatment of acute radiation injury. Evaluated the use of Captopril with and without a multipotent progenitor (biological ancestor) cell to treat radiation exposure. Clinical and rehabilitative medicine performed studies, initiated in FY11, to define candidate strategies for preventing heterotopic ossification (HO) (growth of bone in abnormal places like soft tissue) including the development of an animal model of HO, treadmill-based training for neuromusculoskeletal rehabilitation, managing burn pain, and regenerating hair follicles in engineered skin.			
FY 2013 Plans: Military infectious diseases research is supporting multi-year studies, initiated in FY11 and FY12, in development of antibacterial agents for biofilms and multidrug-resistant organisms (MDROs), detection of MDROs, and biomarker and diagnostic assay development for down selection and transition of promising efforts to Medical Technology Development. Military operational medicine researchers are validating the predictive capacity of biomarkers of lung disease identified in pulmonary samples from deployed Warfighters exposed to potentially toxic particulate material; developing a scoring system for small airways disease to standardize interpretation of lung biopsies; conducting analysis of mineral, fiber, and particulate matter			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	372A: *GDF Applied Biomedical Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
components in post-deployment lung tissue samples compared to controls; determining what psychological, interpersonal, and social factors and assets predict a resilient trajectory following exposure to adversity during the deployment cycle; evaluating nutrition and dietary supplement benefits to physiological health; evaluating specific factors that may modify the causal relationship between individual factors such as demographics, military occupational specialties and prior health, family factors and deployment factors on diagnosis of mental illness and intra-family violence; establishing recommendations to enhance the successful implementation of future interventions for mental illness and intra-family violence; and identifying specific targets with relevance for drug treatment development in PTSD that will lead to the development of a pharmacological treatment for PTSD. Combat casualty care researchers are continuing studies, initiated in FY11 and 12, in hemorrhagic (bleeding) shock and trauma, TBI biomarkers and screening tools, enroute care, permanent pathology caused by mild and moderate TBI and combination drug therapies. Researchers will start applied technology research of new products that will be chosen by the Combat Casualty Care Joint Program Committee from a group of products currently in basic research and will issue a program announcement with topics that will be determined by the Combat Casualty Care Joint Program Committee. Radiation health effects and countermeasure research is addressing advances in the development of small molecules, protein and cellular-based strategies for protection and mitigation of radiation-induced tissue injury due to high doses of radiation exposure. The studies are exploring advances in the development of bioinformatics and physics-based approaches to biodosimetry (calculating the absorbed dose) for triage and patient management. Clinical and rehabilitative medicine is continuing studies in neuromusculoskeletal injury, pain management, regenerative medicine, and/or sensory system traumatic injury to identify and evaluate candidate approaches for incorporation into restoration and rehabilitation strategies and medical products. Specific focus areas include: neuromusculoskeletal injury rehabilitation strategies and devices, prosthetics, and the prevention of heterotopic ossification (growth of bone in abnormal places like soft tissue); novel therapeutics and devices for pain management; regenerative medicine-based approaches for limb and digit salvage, craniomaxillofacial (skull, face and jaw) reconstruction, scarless wound healing, burn repair, genitourinary restoration and addressing compartment syndrome (muscle and nerve damage due to swelling post-injury); and restoration and rehabilitation of sensory system injury, including vision, hearing and balance injury and dysfunction. ***FY 2014 Plans:*** Military infectious disease research will continue to support multi-year studies, initiated in FY12, in development of antibacterial agents for biofilms and multidrug-resistant organisms (MDROs), detection of MDROs, and biomarker and diagnostic assay development for down selection and transition of promising efforts to Medical Technology Development. Release of program announcement to solicit novel proposals in the areas of drug discovery and development for wound infection prevention and management, acute respiratory diseases, as well as further strengthening of our antimicrobial countermeasures program.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	372A: *GDF Applied Biomedical Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Military operational research will continue studies, initiated in FY12 and FY13, in nutrition and dietary supplements, warfighter performance and sustainment in extreme environments (such as extreme heat, cold, or altitude), will establish return to duty/ medical standards criteria, blast injury models and performance standards for protections systems, diagnostics and metrics for hearing loss and protection, alcohol and substance abuse, diagnosis of deployment-related psychological health problems, diagnosis of PTSD, military family and warfighter resilience, suicide prevention, pulmonary health in the deployed environment, and blast exposure during breaching. The Military Operational Medicine Joint Program will issue program announcements in the areas of physiological health, injury prevention and reduction, psychological health, and environmental health and protection. Combat casualty care research will continue studies, initiated in FY12 and 13, in hemorrhagic (bleeding) shock and trauma, TBI biomarkers and screening tools, enroute care, permanent pathology caused by mild and moderate TBI and combination drug therapies. Researchers will start applied technology research of new products that will be chosen by the Combat Casualty Care Joint Program Committee from a group of products currently in basic research and will issue a program announcement with topics that will be determined by the Combat Casualty Care Joint Program Committee. Radiation health effects and countermeasure research will continue in the development of small molecules, protein and cellular-based strategies for protection and mitigation of radiation-induced tissue injury due to high doses of radiation exposure. Research advances in the development of bioinformatics and physics based approaches to biodosimetry for triage and patient management will continue to be pursued in support of a comprehensive radiation countermeasures program. Clinical and rehabilitative medicine will continue studies in neuromusculoskeletal injury, pain management, regenerative medicine, and/or sensory (hearing and sight) system traumatic injury to identify and evaluate candidate approaches for incorporation into restoration and rehabilitation strategies and medical products. Specific focus areas include: neuromusculoskeletal injury rehabilitation strategies and devices, prosthetics & orthotics, neural interfaces (invasive and non-invasive methods of using the brain for device control), the prevention of heterotopic ossification (growth of bone in abnormal places like soft tissue), and treatment of training injuries to the musculoskeletal system; novel therapeutics and devices for pain management; regenerative medicine-based approaches for limb and digit salvage, craniomaxillofacial (skull, face and jaw) reconstruction, scarless wound healing, burn repair, genitourinary restoration and addressing compartment syndrome (muscle, nerve and vascular damage due to swelling post-injury); and restoration and rehabilitation of sensory system injury, including vision, hearing and balance injury and dysfunction. Clinical and rehabilitative medicine will continue studies started in FY13 focused on evaluating and down-selecting novel diagnostic and treatment strategies in the areas of pain management and sensory system (vision, hearing, and balance) restoration and rehabilitation.			
Accomplishments/Planned Programs Subtotals	29.033	38.622	34.148

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	372A: *GDF Applied Biomedical Technology*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Principal Investigators will participate in In-Progress Reviews, high-level DHP-sponsored review and analysis meetings, submit quarterly and annual status reports to include information on publications, intellectual property, additional funding support, and are subjected to Program Sponsor Representative progress reviews to ensure that milestones are being met and deliverables will be transitioned on schedule. The benchmark performance metric for transition of research conducted with applied research funding will be the attainment of a maturity level that is at least Technology Readiness Level (TRL) 4, and typically TRL 5, or the equivalent for knowledge products. Products nearing attainment of TRL 5 will be considered for transition.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	447A: *Military HIV Research Program (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
447A: *Military HIV Research Program (Army)*	-	0.000	0.000	8.976	-	8.976	8.969	8.963	9.124	9.289	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project conducts research on HIV, which causes AIDS. Work in this area includes refining improved identification methods to determine genetic diversity of the virus and evaluating and preparing overseas sites for future vaccine trials. Additional activities include refining candidate vaccines for preventing HIV and undertaking preclinical studies (studies required before testing in humans) to assess vaccine for potential to protect and/or manage the disease in infected individuals.

This project is jointly managed through an Interagency Agreement between USAMRMC and the National Institute of Allergy and Infectious Diseases of the National Institutes of Health. This project contains no duplication of effort within the Military Departments or other government organizations. The cited work is also consistent with the Assistant Secretary of Defense, Research and Engineering Science and Technology focus areas, and supports the principal area of Military Relevant Infectious Diseases to include HIV.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Military HIV Research Program	0.000	0.000	8.976
Description: This project conducts research on HIV, which causes AIDS. Work in this area includes refining improved identification methods to determine genetic diversity of the virus and evaluating and preparing overseas sites for future vaccine trials. Additional activities include refining candidate vaccines for preventing HIV and undertaking preclinical studies (studies required before testing in humans) to assess vaccine for potential to protect and/or manage the disease in infected individuals. ***FY 2012 Accomplishments:*** No DHP funding programmed. ***FY 2013 Plans:*** No DHP funding programmed. ***FY 2014 Plans:*** Transition from the Army to DHP. Identify and characterize new populations who are at high risk of being infected with HIV for clinical evaluation of potential new vaccine candidates at overseas sites and for production of additional vaccines for various HIV subtypes and complete evaluation in non-human primates.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	8.976

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602115HP: *Applied Biomedical Technology*	447A: *Military HIV Research Program (Army)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance of the HIV research program will be monitored and evaluated through an external peer review process, with periodic reviews by the HIV Program Steering Committee and the Military Infectious Diseases Research Program Integrating Integrated Project Team to include Health Affairs representation.

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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	3.558	1.193	1.216	-	1.216	1.241	1.286	1.307	1.331	Continuing	Continuing
241A: *Biodosimetry (USUHS)*	-	0.726	0.244	0.248	-	0.248	0.253	0.262	0.267	0.272	Continuing	Continuing
241B: *Internal Contamination (USUHS)*	-	0.376	0.127	0.129	-	0.129	0.132	0.138	0.140	0.143	Continuing	Continuing
241C: *Radiation Countermeasures (USUHS)*	-	2.456	0.822	0.839	-	0.839	0.856	0.886	0.900	0.916	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Uniformed Services University of the Health Sciences (USUHS), Armed Forces Radiobiology Research Institute (AFRRI), this program supports developmental research to investigate new approaches that will lead to advancements in biomedical strategies for preventing, treating, assessing and predicting the health effects of human exposure to ionizing radiation. Program objectives focus on mitigating the health consequences from exposures to ionizing radiation that represent the highest probable threat to U.S. forces in current tactical, humanitarian and counterterrorism mission environments. New protective and therapeutic strategies will broaden the military commander's options for operating within nuclear or radiological environments by minimizing both short-and long-term risks of adverse health consequences. Advances in assessment, prognostication, and therapy in case of actual or suspected radiation exposures will enhance triage, treatment decisions and risk assessment in operational settings.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	3.602	1.193	1.216	-	1.216
Current President's Budget	3.558	1.193	1.216	-	1.216
Total Adjustments	-0.044	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.044	-			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*

Change Summary Explanation

FY 2012: Realignment from DHP RDT&E, PE 0602787-Medical Technology (AFRRI) (-$0.044 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$0.044 million).

FY 2013: No Change

FY 2014: No Change

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241A: *Biodosimetry (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
241A: *Biodosimetry (USUHS)*	-	0.726	0.244	0.248	-	0.248	0.253	0.262	0.267	0.272	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Biodosimetry (USUHS): For the Uniformed Services University of the Health Sciences (USUHS), the mission and research objectives for biodosimetry are to assess radiation exposure by developing and providing biological and biophysical dosimetry capabilities for acute, protracted, and prior radiation exposures; to identify proper medical treatment of injuries to military personnel to sustain warfighting capabilities; and to reduce dose detection threshold and automate assays to permit a robust and rapid capability.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Biodosimetry (USUHS)	0.726	0.244	0.248

FY 2012 Accomplishments:

- Determined that epigenetic changes in an in vitro model depend on the radiation quality and may be a new biomarker of radiation exposure quality.
- Determined that intra-chromosomal inversions – cytogenetic aberrations can discriminate between internalized uranium exposure and nitrogen mustard in an in vivo model.
- Extended the time- and dose-window for use in the combination of multiple protein biomarkers and hematological parameters using a murine (several mouse strains) radiation model (60Co gamma-rays total-body irradiation to 0-14 Gy and time-points 6h - 7d after irradiation) for the radiation dose and injury assessment as well as for the survival prognosis; extended the radiation biomarker panel.
- Sustained efforts to establish an animal model for evaluation of candidate bioassays to assess partial-body exposures.
- Evaluated the use of lymphocytes and neutrophil to lymphocyte ratio as diagnostic indicators of radiation exposure using murine model system.
- Completed report on the evaluation of the combination of multiple protein biomarkers, hematological parameters, and clinical signs ranging 1d – 30d in total-body irradiated.
- Evaluated the subset of biomarkers affected by wounding in mouse radiation model (60Co gamma-rays total-body irradiation to 0-14 Gy and time-points 6h - 7d after irradiation) for radiation dose assessment.
- Successfully completed the "blinded" study for radiation dose assessment and dose-dependent discrimination of study animal groups using a mouse radiation model (60Co gamma-rays total-body irradiation to 0-14 Gy and time-points 6h - 7d after irradiation).

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241A: *Biodosimetry (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
- New radiation-responsive biomarkers were discovered. Provided inputs and invention disclosure to the HJF Joint Office of Technology (JOTT) on AFRRI's significant contributions to the provisional patent application entitled: "BIODOSIMETRY PANELS AND METHODS". - Provided contributions of necessary proof-of-concept dose-response data to transition combined proteomic and hematologic concept for further development of diagnostic devices (i.e., hand-held, field deployable) and to facilitate obtaining necessary FDA approval.			
FY 2013 Plans: - Continue efforts on the further evaluation of new radiation-responsive biomarkers in animal models and extend the utility of the newly developed molecular biomarker assay system for individual biodosimetry. - Identify specific epigenetic changes that can discriminate high-dose from low-dose radiation exposure. - Evaluate the enhancement for radiation dose assessment using a combination of hematological and protein biomarkers in two FDA-approved animal models. - Initiate preparation of report for FDA on combined utility of hematological and protein biomarkers for biodosimetry applications. - Extend murine partial-body radiation studies to evaluate late-phase and gastrointestinal injury radiation biomarkers. - Incorporate radiation bioinformatics (radioinformatics) capabilities, to include computational methods and data management tools to advance data collection, analysis, interpretation, and reporting of large data sets. - Create the ARS category score system based on multiple biodosimetric endpoints (i.e., peripheral blood cell counts and radiation-responsive protein expression profile), taking into account animal body weight, and temperature in the mouse radiation model. - Investigate the effect of exposure to different doses of radiation (6-14 Gy) on survival of mice in order to find associations between protein expression profiles, hematology parameters, body weight, and hematopoietic and GI sub-syndromes of the acute-radiation sickness (ARS). - Investigate dose-rate effect for low (photons) and high (mixed field neutrons and photons) Linear Energy Transfer (LET) for protein biomarkers in Total-Body Irradiation (TBI) animal models up to 7 days post irradiation. - Investigate combined utility of hematological and protein biomarkers for biodosimetry applications high (mixed field of neutrons and photons) LET total-body irradiations in TBI animal models. - Continue to study radiation-responsive biomarkers and clinical signs after radiation combined injury in mice. Investigate effects of combined injury (irradiation in combinations with wounds or burns) on candidate panel of protein biomarkers in mouse model up to 7 days post irradiation and trauma. - Investigate the gender and age effects on evaluated panel of protein biomarkers in mouse model up to 7 days post irradiation. - Sustain efforts to provide necessary proof-of-concept dose-response data to transition combined proteomic and hematological concept for further development of diagnostic devices (i.e., hand-held, field deployable) and obtain necessary FDA approval.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241A: *Biodosimetry (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
- Continue to evaluate the protein biomarkers, hematological parameters, and clinical signs ranging 1 day to 30 days in total-body irradiated wounded mice at non-lethal, sub-lethal, and lethal radiation doses. - Establish Dosimetry map for protracted (Low-Dose-Rate) 60Co irradiation for murine model; initiate comparison studies between LDR and prompt radiation on selected biomarkers in murine models. ***FY 2014 Plans:*** - Contribute to the further evaluation of discovered new radiation-responsive biomarkers in animal models. - Prepare report for FDA on combined utility of hematological and protein biomarkers for biodosimetry applications in two FDA-required animal models. - Continue to provide necessary proof-of-concept dose-response data to transition combined proteomic and hematological concept for further development of diagnostic devices (i.e., hand-held, field deployable) and obtain necessary FDA approval. - Begin to develop the protocol for evaluating newly discovered protein biomarkers for use in human radiation accident cases. - Begin to evaluate the protein biomarkers, hematological parameters, and clinical signs ranging 1d – 30d in partial-body irradiated wounded mice at non-lethal, sub-lethal, and lethal radiation doses.			
Accomplishments/Planned Programs Subtotals	0.726	0.244	0.248

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

By FY 2012

– Evaluate the combination of multiple protein biomarkers and hematological parameters in murine (several mouse strains) radiation model for the radiation dose and injury assessment as well as for survival prognosis.
- Expand the panel of radiation-responsive protein biomarkers.
- Evaluate the subset of radiation biomarkers affected by wounding.
- Determine whether epigenetic changes during leukemogenesis can be used as neoplastic prognostic markers.

By FY 2013

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241A: *Biodosimetry (USUHS)*

- Further evaluate new radiation-responsive biomarkers for ARS sub-syndromes in animal models. Demonstrate accurate radiological detection from biological samples into quartiles of doses 0-1 Gy, 1-3 Gy, 3-6 Gy, 6-10 Gy, and greater than 10 Gy.
- Incorporate radiation bioinformatics (radioinformatics) capabilities, to include computational methods and data management tools to advance data collection, analysis, interpretation, and reporting of large data sets.
- Create the ARS category score system based on multiple biodosimetric endpoints (i.e., peripheral blood cell counts and radiation-responsive protein expression profile), taking into account animal body weight, and temperature in the mouse radiation model.
- Initiate assessment of partial-body radiation murine models over the protracted time period.
- Investigate the dose-rate effect for low and high LET total-body irradiations for protein biomarkers. Investigate combined utility of hematological and protein biomarkers for biodosimetry applications high (mixed field neutrons and photons) LET total-body irradiations in TBI animal models.
- Investigate the combined injury (irradiation in combination with wounds or burns) effects from the evaluation panel of protein biomarkers.
- Further evaluate the dose assessment protein biomarker panel, the hematological panel, and clinical sign ranging 1 day to 30 days after total-body irradiation with wound trauma at 1 Gy, 5.5 Gy, and 9.75 Gy.
- Investigate the gender and age effects as well as the partial-body irradiation effects on the evaluated panel of protein biomarkers.

By FY 2014

- Characterize partial-body radiation murine models over the protracted time period and compare results with prompt irradiation on selected biomarkers.
- Provide necessary proof-of-concept dose-response data to transition combined proteomic and hematological concept for further development of diagnostic devices (i.e., hand-held, field deployable) and obtain the necessary FDA approval. Prepare preliminary report for FDA on combined utility of hematological and protein biomarkers for biodosimetry applications in two FDA-required animal models.
- Begin to develop the protocol on evaluated and newly developed protein biomarkers for use in human radiation accident cases.
- Begin to evaluate the protein biomarkers, hematological parameters, and clinical signs ranging 1d – 30d in partial-body irradiated wounded mice at non-lethal, sub-lethal, and lethal radiation doses.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241B: *Internal Contamination (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
241B: *Internal Contamination (USUHS)*	-	0.376	0.127	0.129	-	0.129	0.132	0.138	0.140	0.143	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Internal Contamination (USUHS): For the Uniformed Services University of the Health Sciences (USUHS), the mission and research objective for Internal Contamination is to determine whether the short-term and long-term radiological and toxicological risks of embedded metals warrant changes in the current combat and post-combat fragment removal policies for military personnel. Additionally, the biological effects of internalization of radioactive elements from Radiological Dispersal Devices (RDDs) and depleted uranium weapons, as well as therapeutic approaches to enhance the elimination of radionuclides from the body are being investigated.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Internal Contamination (USUHS)	0.376	0.127	0.129
FY 2012 Accomplishments: - Determined that exposure to depleted uranium can cause direct DNA damage to male reproductive tissues in a rodent model system. - Determined that leukemic transformation by depleted uranium exposure involves non-targeted radiation damage in a rodent model system. - Determined that epigenetic changes manifested as global DNA alterations and genetic changes manifested as chromosomal instability are associated with depleted uranium-induced leukemia. - Demonstrated that molecularly imprinted polymers synthesized to likely radiological dispersal device material selectively bind these metals in artificial biofluids. - Showed that embedded fragments of surrogate radiological dispersal device material exhibit widely varying solubility characteristics in a rodent model system. - Initiated characterization of renal tumors observed in depleted uranium-implanted laboratory rats.			
FY 2013 Plans: - Develop combinatorial approaches to depleted uranium-induced transformation using a combination of drugs to target the properties of the epigenetic machinery. - Assess the ability of molecularly imprinted polymers to bind to potential internal contamination risks using an in vitro model system.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241B: *Internal Contamination (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
- Continue characterization of depleted uranium-associated rat renal tumors. ***FY 2014 Plans:*** - Determine the efficacy of molecularly imprinted polymers on reducing the body burden of internalized radionuclides using a rodent model system. - Test novel leukemia countermeasures to determine if chemoprevention mechanism involves modification of chromatin regulation in depleted uranium-induced leukemia in vivo. - Validate combinatorial approach of depleted uranium-induced damage to cellular epigenetic machinery using an in vivo model. - Initiate investigation, using depleted uranium-implanted laboratory rodents, into early biomarkers of depleted uranium-induced renal neoplasia.			
Accomplishments/Planned Programs Subtotals	0.376	0.127	0.129

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

By FY 2013
- Continue characterization of depleted uranium-associated rat renal tumors.
- Evaluate ability of molecularly imprinted polymers to bind potential internal contamination risks.

By FY 2014
-Complete assessment of combinatorial approach for assessing depleted uranium-induced damage.
-Conclude evaluation of molecularly imprinted polymers as decorporation agents.

By FY 2015
- Initiate in vivo study into early biomarkers of depleted uranium-induced renal tumors.
-Complete in vivo study on the mechanism of depleted uranium-induced leukemia.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241C: *Radiation Countermeasures (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
241C: *Radiation Countermeasures (USUHS)*	-	2.456	0.822	0.839	-	0.839	0.856	0.886	0.900	0.916	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Radiation Countermeasures (USUHS): For the Uniformed Services University of the Health Sciences (USUHS), this program supports developmental, mission-directed research to investigate new concepts and approaches that will lead to advancements in biomedical strategies for preventing, treating, assessing and predicting the health effects of human exposure to ionizing radiation as well as combined with injuries(burns, wounds, hemorrhage). Research ranges from exploration of biological processes likely to form the basis of technological solutions, to initial feasibility studies of promising solutions. Program objectives focus on mitigating the health consequences from exposures to ionizing radiation that represent the highest probable threat to U.S. forces in current tactical, humanitarian and counterterrorism mission environments. New protective and therapeutic strategies will broaden the military commander's options for operating within nuclear or radiological environments by minimizing both short-and long-term risks of adverse health consequences.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Radiation Countermeasures (USUHS)	2.456	0.822	0.839
FY 2012 Accomplishments: - Determined that in the bone marrow microenvironment, cell-cell communication is critical to development of radiation leukemia, providing evidence of a new target for radiation-leukemia prevention. - Determined that epigenetic mechanisms are dysregulated during radiation-induced leukemia and may be a target for new therapies. - Determined that chromosomal instability (genetic change) is associated with radiation-induced leukemia. - Determined that Phenylbutyrate treatment can prevent neoplastic transformation and genomic instability of bronchial airway cells. - Demonstrated that delta-tocotrienol (DT3) has significant radioprotective effects on survival of mice hematopoietic and gastrointestinal (GI) system. - DT3 protected mouse and human hematopoietic progenitors from gamma-irradiation through extracellular signal-regulated kinase and mammalian target of rapamycin signaling. - Demonstrated that DT3 protected intestinal mucosal barrier from high dose radiation damage and blocked sepsis and bacterial translocation in high dose-irradiated mice. - Demonstrated that Genistein, a naturally occurring isoflavone, protects hematopoietic system from gamma radiation and prevents radiation-induced elevation of pro-inflammatory factors in mouse model			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241C: *Radiation Countermeasures (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
- Investigated mechanisms of self-defense in radiation-injured human hematopoietic microenvironment cells and demonstrated the role of REDDI1 (regulated in development and DNA damage responses), a novel survival factor, in human osteoblasts after gamma radiation. - Examined and compared radiation-induced microRNA profiles in human hematopoietic progenitor cells and hematopoietic niche cells. - Tocopheral succinate (TS) mobilizes large numbers of progenitor cells in the peripheral blood by inducing high levels of Granulocyte Colony-Stimulating Factor (G-CSF). - TS-mobilized progenitors significantly protect mice when administered as late as 48h post-irradiation with 11 Gy and also mitigates radiation injury in gut. - Demonstrated that human primary lung epithelial cells produce colony stimulating factors in response to TS stimulation. - Developed procedure for quantifying whole transcriptomic signatures associated with G-CSF transcript upregulation after TS exposure. - Initiated ex vivo culture of murine bone marrow endothelial cells (BMEC) for in vivo studies of their efficacy as a radiation countermeasure. - Showed human endothelial cells (EC) support bone marrow hematopoietic function after irradiation in vitro. - Demonstrated significant radioprotective effects of 17-DMAG on bone marrow, mediated by increasing hematopoietic cells and mesenchymal stem cells. A manuscript was contingently accepted by International Journal of Radiation Biology for publication. - Demonstrated radioprotective effects of 17-DMAG on ileum and lung, mediated by reducing epithelial apoptosis and crypt autophagy. - Found that Alxn4100TPO displayed significant therapeutic efficacy after radiation combined injury by increasing the platelet formation. - Found that ciprofloxacin displayed significant therapeutic efficacy after radiation combined injury by increasing erythrocyte generation and cellular ATP production. Manuscripts are in preparations. - Established an animal model of radiation combined with hemorrhage, which showed that hemorrhage enhanced radiation damage to the bone formation and maintenance.			
FY 2013 Plans: - Determine whether Phenylbutyrate-induced suppression of neoplastic transformation of bronchial tissue is radiation quality- or dose-dependent and whether epigenetic or genetic processes are predominant. - Evaluation the mitigative and therapeutic effects of DT3 (24h post-irradiation) in gamma-irradiated mice. - Evaluate the radioprotective and mitigative/therapeutic effects of tilorone hydrochloride in in vivo animal model. - Evaluate intracellular signaling pathways in mechanisms of efficacy of tilorone hydrochloride. - Analysis of progenitor cell engraftment in bone marrow and blood after whole body irradiation followed by transfusion with blood products from TS-treated mice.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241C: *Radiation Countermeasures (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
- By analyzing transcriptomic signatures after TS stimulation and modulation of colony-stimulating factor production using functional genomics, we plan to determine the mechanism and necessary molecular components by which TS mediates colony-stimulating factor production. - Determine role of Wnt signaling pathway in hematopoietic recovery in bone marrow and spleen from sub-lethally irradiated mice. - Show effect of GT3 in Wnt signaling pathway regulation during hematopoietic recovery after radiation in mouse hematopoietic tissues (bone marrow and spleen). - Establish 3 dimensional coculture in vitro model. - Initiate ex vivo culture of murine BMEC for in vivo studies. - Test hypothesis that EC/EPC improves animal survival after gamma irradiation. - Test hypothesis that Ang/Tie2 pathway is involved in animal survival after gamma irradiation. - Test functional roles of Ang/Tie2 pathway in hematopoietic support after irradiation. - Evaluate eleven novel radiation countermeasure candidates in mice. - Evaluate intracellular signaling pathways in mechanisms of efficacy of GT3 and DT3. - The mechanisms of 17-DMAG as a countermeasure against radiation combined with hemorrhage will be elucidated in GI system. - Bone pathophysiology will be evaluated in radiation combined with hemorrhage in presence of absence of 17-DMAG. - The efficacy of a combined pharmaceutical regimen against radiation combined with hemorrhage will be evaluated. - Determine effectiveness of combined therapy of G-CSF and Alxn4100TPO, to prevent, mitigate, or inhibit the long-term deleterious responses to radiation combined injury. - Elucidate the underlying mechanisms of therapeutic effects of G-CSF and Alxn4100TPO after radiation combined injury. - Evaluate the micro-RNA profile in mouse serum after radiation alone and combination with wound trauma.			
FY 2014 Plans: - Determine whether protection of the bone marrow environment epigenetic changes following radiation can prevent radiation leukemia. - Evaluate radioprotective and mitigative/therapeutic effects of tilorone hydrochloride in an in vivo animal model. - Evaluate intracellular signaling pathways in mechanisms of efficacy of tilorone hydrochloride in different mouse tissues after radiation. - Evaluate intracellular signaling pathways in mechanisms of efficacy of DT3 in different mouse tissues after radiation. - Determine role of niche and hedgehog signaling in hematopoietic recovery following sub-lethal dose of radiation (in vitro and in vivo study). - Evaluation of radioprotective efficacy of GT3-Lipid nanocarriers in mice. - Test hypothesis that EC and endothelial progenitor cells (EPC) from Gottingen minipig are altered after radiation. - Test functions of irradiated EC and EPC from Gottingen minipig.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241C: *Radiation Countermeasures (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
- Continue to evaluate intracellular signaling pathways and cytokine profiles in mechanisms of efficacy of G-CSF and Alxn4100TPO in irradiated wounded mice. - Continue to evaluate micro-RNA profiles in mouse serum after both radiation alone and combination with wound trauma with treatment with countermeasures.			
Accomplishments/Planned Programs Subtotals	2.456	0.822	0.839

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

By FY 2012

- Screen a minimum of two additional promising new countermeasures.
- Use newly purchased linear accelerator to open new areas of inquiry in partial body and organ-specific pathophysiology and countermeasure response.
- Complete toxicological comparison of tocols to identify lead candidate.
- Characterized levels of radiation biomarkers using a large cohort of healthy human adults to establish a multivariate biomarker baseline.
- Develop at least one new candidate model/method for high throughput drug screening.
- Develop at least one new countermeasure for radiation combined injury.
- Complete establishing the animal model of radiation combined with hemorrhage.

By FY 2013

- Complete elucidation of mechanisms of 17-DMAG as a countermeasure in radiation injury combined with trauma, burns, or hemorrhagic shock.
- Complete tocol mechanistic studies focused on lead candidate.
- Continue partial body and organ specific model development.
- Continue refinement of identified new candidate drug screening model/method.
- Unfold part of underlying mechanisms of therapeutic effects of G-CSF and Alxn4100TPO after radiation combined injury.
- Complete evaluation of the micro-RNA profile in mouse serum after radiation alone and combination with wound trauma.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0602787HP: *Medical Technology (AFRRI)*	241C: *Radiation Countermeasures (USUHS)*

By FY 2014

- Determine whether protection of bone marrow environment epigenetic changes following radiation can prevent radiation leukemia.
- Evaluate radioprotective and mitigative/therapeutic effects of tilorone hydrochloride in in vivo animal model.
- Complete evaluation of intracellular signaling pathways and cytokine profiles in mechanisms of efficacy of G-CSF and Alxn4100TPO in irradiated wounded mice.
- Complete partial evaluation of micro-RNA profiles in mouse serum after both radiation alone and combination with wound trauma and treatment with countermeasures.

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APPROPRIATION/BUDGET ACTIVITY
0130: *Defense Health Program*
BA 2: *RDT&E*

R-1 ITEM NOMENCLATURE
PE 0603002HP: *Medical Advanced Technology (AFRRI)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	0.739	0.298	0.304	-	0.304	0.310	0.321	0.326	0.332	Continuing	Continuing
242A: *Biodosimetry (USUHS)*	-	0.444	0.179	0.183	-	0.183	0.186	0.193	0.195	0.199	Continuing	Continuing
242B: *Radiation Countermeasures (USUHS)*	-	0.295	0.119	0.121	-	0.121	0.124	0.128	0.131	0.133	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Uniformed Services University of the Health Sciences/ Armed Forces Radiobiology Research Institute (USUHS/AFRRI), this program supports applied research for advanced development of biomedical strategies to prevent, treat and assess health consequences from exposure to ionizing radiation. It capitalizes on findings under PE 0602787HP, Medical Technology, and from industry and academia to advance novel medical countermeasures into and through pre-clinical studies toward newly licensed products. Program objectives focus on mitigating the health consequences from exposures to ionizing radiation(alone or in combination with other injuries) that represent the highest probable threat to US forces in current tactical, humanitarian and counterterrorism mission environments. Findings from basic and developmental research are integrated into focused advanced technology development studies to produce the following: (1) protective and therapeutic strategies; (2) novel biological markers and delivery platforms for rapid, field-based individual medical assessment; and (3) experimental data needed to build accurate models for predicting casualties from complex injuries involving radiation and other battlefield insults. The AFRRI, because of its multidisciplinary staff and exceptional laboratory and radiation facilities, is uniquely positioned to execute the program as prescribed by its mission.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.748	0.298	0.304	-	0.304
Current President's Budget	0.739	0.298	0.304	-	0.304
Total Adjustments	-0.009	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.009	-			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603002HP: *Medical Advanced Technology (AFRRI)*

Change Summary Explanation

FY 2012: Realignment from DHP RDT&E, PE 0603002-Advanced Technology (AFRRI) (-$0.009 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$0.009 million).

FY 2013: No Change

FY 2014: No Change

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603002HP: *Medical Advanced Technology (AFRRI)*	242A: *Biodosimetry (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
242A: *Biodosimetry (USUHS)*	-	0.444	0.179	0.183	-	0.183	0.186	0.193	0.195	0.199	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Biodosimetry (USUHS): For the Uniformed Services University of the Health Sciences (USUHS), this program supports applied research for advanced development of biomedical and biophysical strategies to assess health consequences from exposure to ionizing radiation. It capitalizes on findings under PE 0602787HP, Medical Technology, and from industry and academia to advance novel biological markers and delivery platforms for rapid, field-based individual dose assessment and experimental data needed to build accurate models for predicting casualties from complex injuries involving radiation and other battlefield insults.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Biodosimetry (USUHS)	0.444	0.179	0.183

FY 2012 Accomplishments:

- Expanded the panel of radiation-responsive protein biomarkers using non-human primate (NHP) radiation model; Demonstrated for the 1st time in NHP model, with potential applications in humans that "Serum Amyloid A" (SAA) is a new extremely sensitive early-phase biodosimeter of radiation injury and dose assessment and prognostic indicator of acute radiation sickness (ARS) outcome.
- Continued efforts to establish an ARS Severity scoring system using NHP radiation model.
- Establish a serum blood chemistry and hematology data base involving NHP response to 6.5 Gy radiation dose.
- Initiated efforts to evaluate healthy human cohort for baseline inter-individual variation in candidate radiation biomarkers.
- Sustained efforts to develop prototype radiation casualty management software applications for transitioning to DoD medical information platforms.
- Initiated efforts to deploy beta version of rapid dose assessment algorithms (WinFRAT) on Institute's website for evaluation.
- AFRRI contributions provided to HJF Joint Office of Technology (JOTT) on provisional patent application entitled: "BIODOSIMETRY PANELS AND METHODS".
- New radiation-responsive biomarkers were discovered. Invention disclosure has been submitted to the HJF JOTT.

FY 2013 Plans:

- Continue the further evaluation of discovered new radiation-responsive biomarkers using NHP radiation model.
- Contribute to the preparation of the package to FDA to get approval for transition diagnostic utility of combined hematological and proteomic approach concept in triage biodosimetry applications devices (i.e., hand-held, field deployable).
- Initiate efforts to establish protocol for analysis of samples from humans accidentally exposed to radiation.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603002HP: *Medical Advanced Technology (AFRRI)*	242A: *Biodosimetry (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
- Sustain efforts to develop prototype radiation casualty management software applications for transitioning to DoD medical information platforms. - Create the ARS category score system based on multiple biodosimetric endpoints (i.e., peripheral blood cell counts and radiation-responsive protein expression profile). - Continue to provide necessary proof-of-concept dose-response data to transition combined proteomic and hematological concept for further development of diagnostic devices (i.e., hand-held, field deployable) and obtain necessary FDA approval. - Perform single dose discrimination for hematology and urine chemistries for animal models. ***FY 2014 Plans:*** - Continue the further evaluation of discovered new radiation-responsive biomarkers in animal models. - Prepare report for FDA on combined utility of hematological and protein biomarkers for biodosimetry applications in two FDA-required animal models. - Continue to provide necessary proof-of-concept dose-response data to transition combined proteomic and hematological concept for further development of diagnostic devices (i.e., hand-held, field deployable) and obtain necessary FDA approval. - Begin to develop the protocol on evaluated and newly developed protein biomarkers for use in human radiation accident cases. - Begin to develop the protocol on evaluated and newly developed protein biomarkers for use in human radiation accident cases. -Continue to figure out the fraction of radiation-responsive biomarkers contributed by physical trauma other than irradiation. -Complete NHP ARS severity scoring system. - Develop a radiation dose response algorithm for animal models. - Validate a radiation dose algorithm using independent samples.			
Accomplishments/Planned Programs Subtotals	0.444	0.179	0.183

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

By FY 2012

- Initiated efforts to characterize levels of radiation biomarkers using a large cohort of healthy human adults to establish a multivariate biomarker baseline.

By FY 2013

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603002HP: *Medical Advanced Technology (AFRRI)*	242A: *Biodosimetry (USUHS)*

- Continue the further evaluation of discovered new radiation-responsive biomarkers for ARS sub-syndromes in animal models.
- Demonstrate accurate radiological detection from biological samples into quartiles of doses 0-1 Gy, 1-3 Gy, 3-6 Gy, 6-10 Gy, and greater than 10 Gy.
- Create the ARS category score system based on multiple biodosimetric endpoints (i.e., peripheral blood cell counts and radiation-responsive protein expression profile).
- Investigate combines utility of hematological and protein biomarkers for biodosimetry applications high (mixed field of neutrons and photons) LET total-body irradiations in TBI animal models.

By FY 2014
- Provide necessary proof-of-concept dose-response data to transition combined proteomic and hematological concept for further development of diagnostic devices (i.e., hand-held, field deployable) and obtain necessary FDA approval.
- Prepare preliminary report for FDA on combined utility of hematological and protein biomarkers for biodosimetry applications in two animal models.
- Begin to develop the protocol on evaluated and newly developed protein biomarkers for use in human radiation accident cases.
- Complete protein biomarkers panel for either physical trauma before or after total-body irradiation.
- Initiate study with partial-body irradiation combined with physical trauma.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603002HP: *Medical Advanced Technology (AFRRI)*	242B: *Radiation Countermeasures (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
242B: *Radiation Countermeasures (USUHS)*	-	0.295	0.119	0.121	-	0.121	0.124	0.128	0.131	0.133	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Radiation Countermeasures (USUHS): For the Uniformed Services University of the Health Sciences (USUHS), this program supports applied research for advanced development of biomedical strategies to prevent, treat and assess health consequences from exposure to ionizing radiation. It capitalizes on findings under PE 0602787HP, Medical Technology, and from industry and academia to advance novel medical countermeasures into and through pre-clinical studies toward newly licensed products. Program objectives focus on mitigating the health consequences from exposures to ionizing radiation alone or in combination with other injuries that represent the highest probable threat to US forces in current tactical, humanitarian and counterterrorism mission environments. Findings from basic and developmental research are integrated into highly focused advanced technology development studies yielding protective and therapeutic strategies.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Radiation Countermeasures (USUHS)	0.295	0.119	0.121
FY 2012 Accomplishments: - Determined dose reduction factor for intramuscularly administered genistein nanosuspension is 1.16. - Determined effect of new IM injectable nanosuspension genistein formulation accelerated recovery of hematological parameters following high doses of ionizing radiation. - Determined that intramuscularly administered genistein suppressed interleukin1-beta, a radiation-induced pro-inflammatory cytokine.			
FY 2013 Plans: - Assess protective effects of genistein before irradiation in combination with best available mitigating agent to determine if a synergistic countermeasure agent regimen can be developed. - Determine whether estrogen plays a role in the radioprotective efficacy of genistein, which is a phytoestrogen.			
FY 2014 Plans: - Determine the role of intramuscularly administered genistein metabolites on radioprotection. - Determine serum blood levels of genistein at radiation protective doses.			
Accomplishments/Planned Programs Subtotals	0.295	0.119	0.121

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603002HP: *Medical Advanced Technology (AFRRI)*	242B: *Radiation Countermeasures (USUHS)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

By FY 2012

- Determined effect of new IM injectable nanosuspension genistein formulation accelerated recovery of hematological parameters following high doses of ionizing radiation.

By FY 2013

- Assess protective effects of genistein before irradiation in combination with best available mitigating agent to determine if a synergistic countermeasure agent regimen can be developed.

By FY 2014

- Determine the role of intramuscularly administered genistein metabolites on radioprotection.
- Determine serum blood levels of genistein at radiation protective doses.

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APPROPRIATION/BUDGET ACTIVITY 0130: *Defense Health Program* BA 2: *RDT&E*					**R-1 ITEM NOMENCLATURE** PE 0603115HP: *Medical Technology Development*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	713.880	239.110	290.852	-	290.852	298.948	300.714	301.475	304.782	Continuing	Continuing
300A: *CSI - Congressional Special Interests*	-	540.100	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
238C: *Enroute Care Research & Development (Budgeted) (AF)*	-	3.261	6.000	4.800	-	4.800	4.500	4.200	4.400	4.479	Continuing	Continuing
243A: *Medical Development (Lab Support) (Navy)*	-	33.555	35.453	37.434	-	37.434	38.198	39.558	40.222	40.942	Continuing	Continuing
284B: *USAF Human Physiology, Systems Integration, Evaluation & Optimization Research (Budgeted) (AF)*	-	2.421	4.400	3.800	-	3.800	3.800	5.700	5.871	5.977	Continuing	Continuing
285A: *Operational Medicine Research & Development (Budgeted) (AF)*	-	8.005	5.267	5.049	-	5.049	3.965	3.376	3.277	3.336	Continuing	Continuing
307B: *Force Health Protection, Advanced Diagnostics/ Therapeutics Research & Development (Budgeted) (AF)*	-	14.335	12.120	15.796	-	15.796	16.648	17.852	18.991	19.333	Continuing	Continuing
308B: *Expeditionary Medicine Research & Development (Budgeted) (AF)*	-	2.796	5.736	4.906	-	4.906	6.229	5.271	4.474	4.554	Continuing	Continuing
309A: *Regenerative Medicine (USUHS)*	-	6.877	7.365	7.504	-	7.504	7.657	7.929	8.062	8.207	Continuing	Continuing
373A: *GDF - Medical Technology Development*	-	48.595	107.248	150.166	-	150.166	161.729	161.320	160.683	163.575	Continuing	Continuing
378A: *CoE-Breast Cancer Center of Excellence (Army)*	-	9.722	10.458	10.636	-	10.636	10.830	11.229	11.418	11.624	Continuing	Continuing

APPROPRIATION/BUDGET ACTIVITY 0130: *Defense Health Program* BA 2: *RDT&E*					R-1 ITEM NOMENCLATURE PE 0603115HP: *Medical Technology Development*							
379A: *CoE-Gynecological Cancer Center of Excellence (Army)*	-	8.494	9.138	9.293	-	9.293	9.463	9.811	9.977	10.157	Continuing	Continuing
381A: *CoE-Integrative Cardiac Health Care Center of Excellence (Army)*	-	3.584	3.857	3.921	-	3.921	3.993	4.141	4.210	4.285	Continuing	Continuing
382A: *CoE-Pain Center of Excellence (Army)*	-	2.715	2.921	2.971	-	2.971	3.025	3.137	3.190	3.247	Continuing	Continuing
383A: *CoE-Prostate Cancer Center of Excellence (USUHS)*	-	7.164	7.978	8.294	-	8.294	8.634	8.943	9.093	9.256	Continuing	Continuing
398A: *CoE-Neuroscience Center of Excellence (USUHS)*	-	1.822	1.948	1.981	-	1.981	2.017	2.053	2.088	2.126	Continuing	Continuing
429A: *Hard Body Armor Testing (Army)*	-	0.813	0.607	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
431A: *Underbody Blast Testing (Army)*	-	14.544	13.142	11.614	-	11.614	5.353	2.977	2.077	0.000	Continuing	Continuing
448A: *Military HIV Research Program (Army)*	-	0.000	0.000	7.111	-	7.111	7.216	7.321	7.445	7.579	Continuing	Continuing
830A: *Deployed Warfighter Protection (Army)*	-	5.077	5.472	5.576	-	5.576	5.691	5.896	5.997	6.105	Continuing	Continuing

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

[##] The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Guidance for Development of the Force - Medical Technology Development provides funds for promising candidate solutions that are selected for initial safety and effectiveness testing in animal studies and/or small scale human clinical trials regulated by the US Food and Drug Administration prior to licensing for human use. Research in this PE is designed to address the following: Secretary of Defense areas of interest regarding Wounded Warriors, capabilities identified through the Joint Capabilities Integration and Development System, and the strategy and initiatives described in the Quadrennial Defense Review. Program development and execution is peer-reviewed and fully coordinated with all of the Military Services, appropriate Defense Agencies or Activities and other federal agencies, to include the Department of Veterans Affairs, the Department of Health and Human Services, and the Department of Homeland Security. This coordination occurs through the planning and execution activities of the Joint Program Committees (JPCs), established for the Defense Health Program, Research Development Test and Evaluation (RDT&E) funding. Research supported by this PE includes polytrauma and blast injury, diagnosis and treatment of brain injury, environmental health and performance,

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*

For the Army Medical Command, the Hard Body Armor project focuses on scientific study and evaluation of injuries related to blunt trauma events on cadavers. Preventing blunt trauma injury is one of the critical components of body armor design.

For the Army Medical Command, the Underbody Blast Testing medical research project provides funds to establish a scientific and statistical basis for evaluating skeletal injuries to vehicle occupants during ground vehicle Underbody Blast (UBB) events. Areas of interest to the Secretary of Defense are medical research that provides an understanding of the human tolerance limits and injury mechanisms needed to accurately predict skeletal injuries to ground combat vehicle occupants caused by UBB events.

For the Navy Bureau of Medicine and Surgery, this program element includes funds for research management support costs. The Outside Continental US (OCONUS) laboratories conduct focused medical research on vaccine development for Malaria, Diarrhea Diseases, and Dengue Fever. In addition to entomology, HIV studies, surveillance and outbreak response under the Global Emerging Infections Surveillance (GEIS) program and risk assessment studies on a number of other infectious diseases that are present in the geographical regions where the laboratories are located. The CONUS laboratories conduct research on Military Operational Medicine, Combat Casualty Care, Diving and Submarine Medicine, Infectious Diseases, Environmental and Occupational Health, Directed Energy, and Aviation Medicine and Human Performance.

For the Army Medical Command, beginning in FY14, military human immunodeficiency virus (HIV) research program funding is transferred from the Army to the Defense Health Program. This project funds research to develop candidate HIV vaccines, to assess their safety and effectiveness in human subjects, and to protect the military personnel from risks associated with HIV infection. In addition, the research is designed to find ways to protect the blood supply from contamination with HIV virus.

For the Army Medical Command, the Armed Forces Pest Management Board (AFPMB) Deployed Warfighter Protection project provides for the development of new or improved protection of ground forces from disease carrying insects.

For the Army Medical Command, four Centers of Excellence (CoE) receive Medical Technology Development funds. The Breast Cancer Center of Excellence (Army) provides a multidisciplinary approach as the standard of care for treating breast diseases and breast cancer. The Gynecologic Center of Excellence (Army) focuses on characterizing the molecular alterations associated with benign and malignant gynecologic disease and facilitates the development of novel early detection, prevention and novel biologic therapeutics for the management of gynecologic disease. The Cardiac Health Center of Excellence (Army) provides evidence-based personalized patient engagement approaches for comprehensive cardiac event prevention through education, outcomes research and technology tools, as well as molecular research to detect cardiovascular (CV) disease at an early stage to ultimately discover a signature for CV health, to find new genes that significantly increase risk for heart attack in Service members and other beneficiaries, and identify molecular markers of obesity and weight loss. The Pain Center of Excellence (Army) examines the relationship between acute and chronic pain and focuses on finding, implementing, and evaluating the most effective methods of relieving the acute pain caused by combat trauma and the effect this has throughout the continuum to rehabilitation and reintegration.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*

For the Air Force Medical Service, funding in this program element supports the Air Force Surgeon General's vision for medical modernization through a robust research & development program. It funds advanced technology development within the following research thrust/project areas: Expeditionary Medicine, En-Route Care, Force Health Protection, Operational Medicine, and Human Performance, with the intent to support solutions that answer Air Force specific needs. During this process, the efforts of other government agencies in those areas will be assessed to avoid redundancy.

For the Uniformed Services University of the Health Sciences (USUHS), Medical Development programs include the Neuroscience CoE, the Prostate Cancer CoE, and the Center for Neuroscience and Regenerative Medicine. The Neuroscience Center of Excellence (CoE), formerly a Congressional Special Interest program, was chartered in 2002 to conduct basic, clinical and translational research studies of militarily relevant neurological disorders affecting US service members and military medical beneficiaries. The Center's mission is to improve prevention, diagnosis and treatment of neurological disorders that directly affect warfighters through a multi-site research program that collaborates broadly with military, civilian and federal medical institutions. The Prostate CoE, formerly a Congressional Special Interest program, was chartered in 1992 to conduct basic, clinical and translational research programs to combat diseases of the prostate. The program's mission is fulfilled primarily through its three principal programs- the Clinical Translational Research Center, the Basic Science Research Program and the Tri-Service Multicenter Prostate Cancer Database which encompasses its clinical research work with other participating military medical centers. These affiliated sites contribute data and biospecimens obtained from prostate cancer patients and participate in clinical trials. The Center for Neuroscience and Regenerative Medicine (CNRM) brings together the expertise of clinicians and scientists across disciplines to catalyze innovative approaches to traumatic brain injury (TBI) research. CNRM Research Programs emphasize aspects of high relevance to military populations, with a primary focus on patients at the Walter Reed National Military Medical Center.

In FY12, DHP funded the following Congressional Special Interest (CSI) peer-reviewed directed research: Amyotrophic Lateral Sclerosis (ALS); Autism; Bone Marrow Failure Disease; Ovarian Cancer; Multiple Sclerosis; Cancer; Lung Cancer; Orthopedic Research; Spinal Cord Research; Vision; Traumatic Brain Injury and Psychological Health; Breast Cancer; Prostate Cancer; Gulf War Illness; Alcohol and Substance Use Disorders; Medical Research; Alzheimer Research; Pain Management Task Force; Blast Recovery Monitors; Armed Forces Institute of Regenerative Medicine; Hemorrhage Control; Joint Warfighter Medical Research; Restorative Transplantation; Global HIV/AIDS Prevention; Tuberous Sclerosis Complex; and Duchenne Muscular Dystrophy. Because of the CSI annual structure, out-year funding is not programmed.

APPROPRIATION/BUDGET ACTIVITY	**R-1 ITEM NOMENCLATURE**
0130: *Defense Health Program*	PE 0603115HP: *Medical Technology Development*
BA 2: *RDT&E*	

B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	703.313	239.110	283.741	-	283.741
Current President's Budget	713.880	239.110	290.852	-	290.852
Total Adjustments	10.567	0.000	7.111	-	7.111
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	10.567	-			
• New Project - Military HIV Research Program	-	-	7.111	-	7.111

Congressional Add Details ($ in Millions, and Includes General Reductions)	**FY 2012**	**FY 2013**
Project: 300A: *CSI - Congressional Special Interests*		
Congressional Add: *245A - Amyotrophic lateral Sclerosis (ALS) Research*	6.400	-
Congressional Add: *293A - Autism Research*	5.100	-
Congressional Add: *296A - Bone Marrow Failure Disease Research*	3.200	-
Congressional Add: *310A - Ovarian Cancer Research*	16.000	-
Congressional Add: *328A - Multiple Sclerosis Research*	3.800	-
Congressional Add: *335A - Peer-Reviewed Cancer Research*	12.800	-
Congressional Add: *336A - Peer-Reviewed Lung Cancer Research*	10.200	-
Congressional Add: *337A - Peer-Reviewed Orthopedic Research*	30.000	-
Congressional Add: *338A - Peer-Reviewed Spinal Cord Research*	9.600	-
Congressional Add: *339A - Peer-Reviewed Vision Research*	3.200	-
Congressional Add: *352A - Traumatic Brain Injury/ Psychological Health Research*	86.000	-
Congressional Add: *380A - Peer-Reviewed Breast Cancer Research*	120.000	-
Congressional Add: *390A - Peer-Reviewed Prostate Cancer Research*	80.000	-
Congressional Add: *392A - Gulf War Illness Peer-Reviewed Research*	10.000	-
Congressional Add: *396A - Research in Alcohol and Substance Use Disorders*	4.500	

APPROPRIATION/BUDGET ACTIVITY	**R-1 ITEM NOMENCLATURE**
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*

Congressional Add Details ($ in Millions, and Includes General Reductions)	**FY 2012**	**FY 2013**
Congressional Add: *400A - Peer-Reviewed Medical Research*	50.000	-
Congressional Add: *417A - Peer-Reviewed Alzheimer Research*	12.000	-
Congressional Add: *438A - Peer-Reviewed Hemorrhage Control Research*	6.000	-
Congressional Add: *439A - Joint Warfighter Medical Research*	40.000	-
Congressional Add: *443A - Peer-Reviewed Restorative Transplantation Research*	15.000	-
Congressional Add: *540A - Global HIV/AIDS Prevention (Navy)*	8.000	-
Congressional Add: *660A - Tuberous Sclerosis Complex (TSC)*	5.100	-
Congressional Add: *790A - Duchenne Muscular Dystrophy*	3.200	-
Congressional Add Subtotals for Project: 300A	540.100	0.000
Congressional Add Totals for all Projects	540.100	0.000

Change Summary Explanation

FY 2012: Restore FY 2013 President's Budget decrease to Congressional Special Interest from DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (-$13.302 million) to DHP RDT&E, PE 0603115- Medical Technology Development (+$13.302 million).

Realign DHP RDT&E, PE 0603115-Medical Technology Development (-$2.735 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$2.735 million).

FY 2013: No Change

FY 2014: Change Proposal increase to DHP RDT&E, PE 0603115-Medical Technology Development (+$7.111 million) for the Military HIV Research Program (MHRP) from RDT&E, Army, appropriation.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	300A: *CSI - Congressional Special Interests*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
300A: *CSI - Congressional Special Interests*	-	540.100	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

In FY12, the Defense Health Program funded Congressional Special Interest (CSI) directed research. The strategy for the FY12 Congressionally directed research is to stimulate innovative research through a competitive, peer-reviewed research program, and focused medical research at intramural and extramural research sites. Specific peer-reviewed research efforts include the following: Amyotrophic Lateral Sclerosis (ALS); Autism; Bone Marrow Failure Disease; Ovarian Cancer; Multiple Sclerosis; Cancer; Lung Cancer; Orthopedic Research; Spinal Cord Research; Vision; Traumatic Brain Injury and Psychological Health; Breast Cancer; Prostate Cancer; Gulf War Illness; Alcohol and Substance Use Disorders; Medical Research; Alzheimer Research; Hemorrhage Control; Joint Warfighter Medical Research; Restorative Transplantation; Global HIV/AIDS Prevention; Tuberous Sclerosis Complex; and Duchenne Muscular Dystrophy. Because of the CSI annual structure, out-year funding is not programmed.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
Congressional Add: 245A - Amyotrophic lateral Sclerosis (ALS) Research	6.400	-
FY 2012 Accomplishments: This Congressional Special Interest was directed toward research on Amyotrophic Lateral Sclerosis (ALS), also known as Lou Gehrig's disease. The ALS Research Program is a broadly competed, peer-reviewed research program. Its focus is to investigate new drugs to control and/or cure this disease. Two award mechanisms were offered in 2012, the Therapeutic Development Award and the Therapeutic Idea Award. Proposals were received in July 2012, followed by peer review in September 2012, and the funding/programmatic review in December 2012. Awards will be finalized no later than September 2013.		
Congressional Add: 293A - Autism Research	5.100	-
FY 2012 Accomplishments: This Congressional Special Interest research initiative for Autism Research sought to improve treatment outcomes of Autism Spectrum Disorders (ASD), led to a better understanding of ASD; and integrated basic science and clinical observations by promoting innovative research. Two award mechanisms were offered in FY12: Idea Development Award and the Pilot Award. The Autism Research Program has funded research at universities, hospitals, nonprofit and for-profit institutions, as well as private industry. Proposals were received in September 2012, peer review was conducted in November 2012, and		

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	300A: *CSI - Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
programmatic review for funding recommendations will be done in January 2013. Award(s) will be made by September 2013.		
Congressional Add: 296A - Bone Marrow Failure Disease Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative was for bone marrow failure diseases. The mission of the program was to sponsor innovative research that will advance the understanding of inherited and acquired bone marrow failure diseases; to improve the health and life of individuals living with these diseases, with the ultimate goal of prevention and/or cure. This effort has solicited research proposals focused on bone marrow failure syndromes and their long-term effects from the basic science and clinical research sectors. In Fiscal Year 2012, applications were accepted through two funding opportunities, the Idea Award and the Post-doctoral Fellowship Training Award. Application receipt was completed in July 2012, peer review was conducted in September 2012, and funding recommendations were made during programmatic review in November 2012. Nine awards were approved for funding and will be made by September 2013.	3.200	-
Congressional Add: 310A - Ovarian Cancer Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative was for studying Ovarian Cancer. The overall goal of the program was to eliminate ovarian cancer by supporting high impact, innovative research. In striving to achieve this goal, the Fiscal Year 2012 Ovarian Cancer Research Program (OCRP) was supporting innovative ideas that will provide new paradigms, leveraging critical resources, facilitating synergistic, multidisciplinary partnerships, and cultivating the next generation of investigators in ovarian cancer. Five award mechanisms were offered: Ovarian Cancer Academy Award, Outcomes Consortium Development Award, Pilot Award, Synergistic Translational Leverage Award, and Teal Innovator Award. Applications were due in July/August 2012; scientific peer review took place in September 2012 with programmatic review being held in November 2012. 21 awards were recommended for funding and will be made by September 2013.	16.000	-
Congressional Add: 328A - Multiple Sclerosis Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative was for Multiple Sclerosis (MS). The mission of the program was to support pioneering concepts and high impact research relevant to the etiology, pathogenesis, assessment and treatment of MS with the vision of preventing the occurrence, curing, reversing or slowing the progression, and lessening the personal and societal impact of MS. This effort solicited research proposals from the basic science and clinical research sectors. Applications were accepted through one funding opportunity; the Idea Development Award mechanism. Applications receipt was complete in July 2012; scientific peer review was conducted in September 2012; and funding recommendations were made	3.800	-

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	300A: *CSI - Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
during programmatic review in November 2012. Six awards were recommended for funding and will be made by September 2013.		
Congressional Add: 335A - Peer-Reviewed Cancer Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative was for the study of cancers designated by Congress. The goal of the Peer Reviewed Cancer Research Program was to improve the quality of life by significantly decreasing the impact of cancer on service members, their families, and the American public. The funds appropriated by Congress are directed for research in the following areas: blood cancers, colorectal cancer, genetic cancer research, kidney cancer, Listeria vaccine for cancer, melanoma and other skin cancers, mesothelioma, pancreatic cancer, and pediatric brain tumors. Two award mechanisms to support these topic areas were released: the Career Development Award and the Visionary Postdoctoral Fellowship Award. Receipt was in September 2012, scientific peer review took place in November 2012 and funding recommendations will be made at the programmatic review in January 2013. Awards will be made by 30 September 2013.	12.800	-
Congressional Add: 336A - Peer-Reviewed Lung Cancer Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative was for studying Lung Cancer. It seeked to eradicate deaths from lung cancer to better the health and welfare of the military and the American public. As such, the Lung Cancer Research Program (LCRP) will support and integrate research from multiple disciplines for risk assessment, early detection, diagnosis, prevention, cure and control of lung cancer. Three award mechanisms were offered in 2012, the Idea Development Award, the Translation Research Partnership Award, and the Concept Award. Proposals were received in August/September 2012; scientific peer review was conducted in October/November 2012; and programmatic review for funding recommendations will be made in January 2013. Award(s) will be made by September 2013.	10.200	-
Congressional Add: 337A - Peer-Reviewed Orthopedic Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative was to support orthopaedic research that will advance optimal treatment and rehabilitation from musculoskeletal injuries sustained during combat or combat-related activities. The vision was to provide all warriors affected by orthopaedic injuries sustained in defense of our Constitution the opportunity for optimal recovery and restoration of function. The effort solicits innovative, high impact and clinically-relevant research, with a focus on collaborations between military and non-military researchers and clinicians. Three award mechanisms have been offered in Fiscal Year 2012: Clinical Trial, Translational Research Partnership, and Idea Development Awards. Pre-applications were due in June 2012 and applications were due in September 2012; scientific peer review took place in November	30.000	-

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	300A: *CSI - Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
2012; and programmatic review for funding recommendations will be held in January 2013. Award(s) will be made by September 2013.		
Congressional Add: 338A - Peer-Reviewed Spinal Cord Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative was to support Spinal Cord Injury (SCI) research. Within this context, this initiative focuses its funding on innovative projects that have the potential to make a significant impact on the health and well-being of military service members, Veterans, and other individuals living with SCI. This research effort offered three award mechanisms in Fiscal Year 2012 to support SCI research: Clinical Trial, Investigator-Initiated Research, and Translational Research Awards. Pre-applications were due in July 2012 and applications were due in October 2012; scientific peer review took place in November 2012; and programmatic review for funding recommendations will be held in January 2013. Award(s) will be made by September 2013.	9.600	-
Congressional Add: 339A - Peer-Reviewed Vision Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research effort for Peer Reviewed Vision Research targeted the causes, effects and treatments of eye damage, visual deficits due to traumatic brain injury (TBI) and diseases that, despite their different pathogenesis (mechanisms that occur during disease development), all have a common end result: degeneration of the critical components of the eye and impairment or loss of vision. The results of this research are intended to be used for restoration and maintaining of visual function to ensure and sustain combat readiness. Basic, translational and clinical research efforts are sought to ensure that results of scientific research will be used to directly benefit the lives of military, veteran and civilian populations. Critical areas to be researched include: inadequate vision rehabilitation strategies and quality of life measures; inadequate vision restoration; inadequate mitigation and treatment of traumatic injuries, war-related injuries, and diseases to ocular structures and the visual system; inadequate mitigation and treatment of visual dysfunction associated with traumatic brain injury (TBI); inadequate ocular and visual systems diagnostic capabilities and assessment strategies; and inadequate war fighter vision readiness and enhancement related to refractive surgery. To meet the goals of the program, two award mechanisms were developed to support vision research. These included the Investigator Initiated Research Award and the Hypothesis Development Award. The Investigator Initiated Research Awards had a total cost not to exceed $1.0M and a period of performance up to four years. The Hypothesis Development Awards had a total not to exceed $250K and a period of performance up to two years. One hundred and fifty one pre-proposals were received in September 2011 and 45 full proposals underwent scientific peer review in January 2012. A total of 22 proposals were recommended for funding in March 2012.	3.200	-
Congressional Add: 352A - Traumatic Brain Injury/ Psychological Health Research	86.000	

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	300A: *CSI - Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
FY 2012 Accomplishments: The Traumatic Brain Injury and Psychological Health (TBI/PH) Congressional Special Interest project funding was divided into applied research, technology development and concept development efforts. The project aims to prevent, mitigate, and treat the effects of combat-relevant traumatic stress and TBI on function, wellness, and overall quality of life, including interventions across the deployment lifecycle for warriors, Veterans, family members, caregivers, and communities. A key priority of the TBI/PH Research Program is to complement ongoing DoD efforts to ensure the health and readiness of our military forces by promoting a better standard of care for PTSD and TBI in the areas of prevention, detection, diagnosis, treatment, and rehabilitation. Program Announcements, programmatic reviews, Service requested nominations, and ongoing studies that would benefit from program acceleration have been incorporated to address these priorities and gather proposals. In the area of TBI, researchers performed clinical trials to treat mild TBI with an oral drug, a trial using diffusion tensor imaging to diagnose mild TBI in service members, and a trial performed in partnership with the NIH looking for better ways to image TBI. Program announcements were released for proposals looking for advanced neurotrauma imaging techniques and for a new VA/DoD Trauma consortium which will be a five-year, multi-university consortium to discover mechanisms of treatment and the long-term effects of TBI and its relationship to Chronic Traumatic Encephalopathy (CTE). The VA will essentially match the funding supplied by DoD in this consortium.		
Congressional Add: 380A - Peer-Reviewed Breast Cancer Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative was to study Breast Cancer. The vision for this effort was to end breast cancer. Through a partnership between scientists and consumers, the Breast Cancer Research Program (BCRP) strives to fill important gaps in breast cancer research by funding innovative and potentially high-impact research ideas, by providing opportunities to pursue new research ideas that are early in development, by promoting collaborations and partnerships, and by supporting future innovators and leaders in the breast cancer field. To support this vision for Fiscal Year 2012, eight award mechanisms were developed to support meritorious breast cancer research: Clinical Translational Research Award, Collaborative Scholars and Innovators Award, Era of Hope Scholar Award, Idea Award, Impact Award, Innovator Award, Postdoctoral Fellowship Award, and Transformative Vision Award. Proposal receipt was completed in August 2012. Peer review was completed in October 2012, and funding recommendations will be made at programmatic reviews in August, November, and December 2012 and in January 2013. Award(s) will be made by September 2013.	120.000	-
Congressional Add: 390A - Peer-Reviewed Prostate Cancer Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research was for Prostate Cancer. The vision for this effort was to conquer prostate cancer by funding research to end suffering and death from	80.000	-

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	300A: *CSI - Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
prostate cancer. To address the most critical current needs in prostate cancer research and clinical care, the Prostate Cancer Research Program (PCRP) developed two overarching challenges to be addressed by the research community: (1) develop effective treatments for advanced disease, and (2) distinguish aggressive from indolent disease. In addition, research projects are solicited in the areas of biomarker development, genetics, imaging, mechanisms of resistance, survivorship and palliative care, therapy, and tumor and microenvironment biology. To meet these goals for Fiscal Year 2012, eleven award mechanisms were developed to support significant prostate cancer research. These included: Biomarker Development Award, Clinical Exploration Award, Collaborative Undergraduate HBCU Student Summer Training Program Award, Exploration-Hypothesis Development Award, Health Disparity Research Award, Idea Development Award, Laboratory-Clinical Transition Award, Physician Research Training Award, Postdoctoral Training Award, Synergistic Idea Development Award, and Transformative Impact Award. Application submission deadline occurred in June-August 2012; peer review took place in August and October 2012; and programmatic review for funding recommendations will be held in December 2012. Award(s) will be made by September 2013.		
Congressional Add: 392A - Gulf War Illness Peer-Reviewed Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative was for Gulf War Illness Research. The program's vision of improving the health and lives of veterans who have the complex symptoms known as Gulf War Illness is being addressed through the funding of innovative research to identify effective treatments, to improve its definition and diagnosis, and to better understand its pathobiology and symptoms. Applications were accepted for Fiscal Year 2012 through four award mechanisms: the Consortium Award, Clinical Trial Award, Innovative Treatment Evaluation Award, and Investigator-Initiated Research Award. Program announcements were released in March 2012, scientific peer review took place in July and September 2012, and funding recommendations will be made at programmatic review in September and December 2012. Awards will be made by September 2013.	10.000	-
Congressional Add: 396A - Research in Alcohol and Substance Use Disorders ***FY 2012 Accomplishments:*** This Congressional Special Interest research effort on Research in Alcohol and Substance Use Disorders has established a competitive program to create translational research addressing alcohol and substance abuse issues. The goal of this project was to develop new treatments for those struggling with alcohol and substance abuse who also suffer from post-traumatic stress disorder and/or traumatic brain injury. This comes at a crucial time as alcohol and substance abuse continues to rise among service members. The Programs are comprised of collaborative, multidisciplinary teams of leading scientists and individual investigators from a group of world-class research institutions. The objective is to ultimately bring together multidisciplinary teams and investigators, including basic, translational, and clinical scientists, into cooperative	4.500	-

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	300A: *CSI - Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
and synergistic working groups. In this fiscal year the program released its initial call for proposals. Submitted proposals came from a representation of the leading alcohol research institutional partners from around the country and underwent a rigorous scientific peer review. Based on the review in July of 2012 the top 10 proposal were awarded. The 10 awarded projects span from basic science work exploring novel targets and pharmacological (drug) treatment to medication trials. Additionally in this fiscal year the program developed and began implementation of a translational coordinating core. The core's purpose is to guide, direct, and accelerate the exploitation of the discoveries of the research consortium and funded awards in identifying the most promising pharmacological targets, validating their usefulness for substance disorder treatment in the context of common mental health challenges found in service members and veterans.		
Congressional Add: 400A - Peer-Reviewed Medical Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research addressed peer reviewed medical research. The vision of the program is to identify and fund the best medical research to protect and support warfighters, veterans, and other beneficiaries and to eradicate diseases that impact these populations. Research proposals submitted to the Fiscal Year 2012 (FY12) program must focus on at least one of the 22 Congressionally-directed topics. These topic areas are: arthritis; composite tissue transplantation; drug abuse; dystonia; epilepsy; food allergies; fragile X syndrome; hereditary angioedema; inflammatory bowel disease; interstitial cystitis; Listeria vaccine for infectious disease; lupus; malaria; nanomedicine for drug delivery science; neuroblastoma; osteoporosis and related bone disease; Paget's disease; polycystic kidney disease; post-traumatic osteoarthritis; scleroderma; tinnitus; and tuberculosis. In FY12, applications were accepted through four funding opportunities: the Investigator-Initiated Research Award, Technology/Therapeutic Development Award, Concept Award, and Clinical Trial Award mechanisms. Application receipt was completed in May and June 2012; scientific peer review was conducted in July-September 2012; and funding recommendations will be made during programmatic review in December 2012. Award(s) will be made by September 2013.	50.000	-
Congressional Add: 417A - Peer-Reviewed Alzheimer Research ***FY 2012 Accomplishments:*** The goal of the Militarily Relevant Peer Reviewed Alzheimer's (MRPRA) Congressional Special Interest Research Program was to gain an understanding of the genesis of Traumatic Brain Injury (TBI)-associated neurodegenerative disease. Equally important, the MRPRA Research Program also sought to invest in new strategies dedicated to improving the quality of life for those affected by Alzheimer's disease. The MRPRA employs a 2-tiered review of scientific and programmatic review. The programmatic review was completed by the MRPRA's Program Steering Committee, comprised of governmental, military, and not for profit experts. To date, the MRPRA has received FY11 and FY12 funding ($15M and $12M, respectively). Fifteen projects were funded with FY11 dollars, including the Vietnam Veterans Alzheimer's	12.000	-

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	300A: *CSI - Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
Disease Neuroimaging Initiative study. Funding recommendations for the FY12 program will be finalized by Spring of 2013. Two FY12 award mechanisms were available on Grants.gov; one of which is intended to support studies with military cohorts. The mechanisms are the Convergence Science Research Award, and the Military Risk Factors Research Award. The MRPRA anticipates funding roughly 10 projects with FY12 funds.		
Congressional Add: 438A - Peer-Reviewed Hemorrhage Control Research ***FY 2012 Accomplishments:*** The Congressional Special Interest for Peer-Reviewed Hemorrhage Control Research was intended to seek solutions to uncontrolled bleeding without clotting resulting from severe trauma. A major international trial found that use of Tranexamic Acid (TXA) for hemorrhage (bleeding) reduced trauma deaths by 15% but subsequent analysis showed increased deaths in certain populations. Research and clinical studies are being initiated to clarify the exclusion criteria for using this drug in combat wounded patients.	6.000	-
Congressional Add: 439A - Joint Warfighter Medical Research ***FY 2012 Accomplishments:*** The Joint Warfighter Medical Research Program Congressional Special Interest was intended to provide continuing support for promising previously CSI-funded projects, and to augment and accelerate high priority DoD and Service medical requirements that are close to achieving their objectives and yielding a benefit to military medicine. Project funding is divided into technology development and concept development efforts. The technology development efforts support military medical research in combat casualty care, military operational medicine, medical training and health information sciences, and clinical rehabilitative medicine to include pain management, regenerative medicine, and sensory system (hearing and sight) rehabilitation and restoration. Through an iterative process of recommendations, several prior years of CSI-funded projects nominated by the Services, CSI managers, and execution activities were invited to submit augmented preproposals through the US Army Medical Research and Materiel Command Broad Agency Announcement. Based on these preproposals a programmatic review committee prioritized the research initiatives and the prioritization was approved by DoD Health Affairs in early September. Full proposals were received through the Broad Agency Announcement in late September and peer reviewed by the contracting officer representative and then evaluated through a second tier review and approved for funding in early November in accordance with the prioritization plan. Contract awards will be completed during the latter part of the first quarter and the second quarter of FY 13.	40.000	-
Congressional Add: 443A - Peer-Reviewed Restorative Transplantation Research ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative for Restorative Transplantation Research was to fund research to accelerate and improve methods related to hand and face transplants through multi-institutional and multi-disciplinary partnership award(s). The Program Announcement	15.000	-

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	300A: *CSI - Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
focus areas are: (1) Applied research to prevent immune rejection, (2) Clinical monitoring of transplant recipients, and (3) Standardization of processes and protocols. In FY 2012, a program announcement was developed. The announcement was released in October 2012 and closes in December 2012. Scientific peer review is scheduled to occur in February 2013. Funding recommendations will be made at programmatic review in 2013 and awards will be made by 30 September 2013.		
Congressional Add: 540A - Global HIV/AIDS Prevention (Navy) ***FY 2012 Accomplishments:*** Program emphasis is placed on (1) building a national research infrastructure by funding large, multidisciplinary program projects focused on detection; (2) encouraging innovative approaches to research by funding new ideas and technology with or without supporting preliminary data; and (3) recruiting new, independent investigators for careers in research, as well as more senior investigators new to the research field. The strategy for the FY 2011 Congressionally directed research identified above is to stimulate innovative research through a competitive, peer reviewed research program, as well as focused medical research at intramural and extramural research sites. Specific research efforts include HIV/AIDS. The HIV/AIDS Prevention program conducts on-site visits to determine eligible areas for technical assistance and resource support. HIV/AIDS provides support to defense forces in the following areas: (1) HIV prevention, which includes training of medical personnel and peer educators, education of military members, provision of condoms and other prevention materials, provision of educational materials such as brochures, posters, and booklets (2) care for HIV-infected individuals and their families to include provision of electronic medical record programs, medications to treat HIV-related issues, physician education, and clinic infrastructure support, (3) treatment services including provision of laboratory services such as HIV test kits, and other laboratory equipment, and (4) Strategic Information including systems to collect information on the effectiveness of HIV treatment and prevention programs and generate databases of such information to guide treatment and prevention programs. The HIV/AIDS Prevention Program provided technical assistance and resource support for 35 foreign defense forces in FY 2011. Accomplishments include over 49,500 individuals that received testing and counseling services for HIV and received their test results, 97,800 military members and their dependents targeted with HIV prevention interventions, more than 950 health care workers successfully completing an in-service training program, and 4,053 pregnant women knew their HIV status based on testing and counseling services provided to them. Accomplishments for FY 2012 will be reported after the end of the 2012 fiscal year once annual program result data is collected. Because of the CSI annual structure, out-year funding is not programmed.	8.000	-
Congressional Add: 660A - Tuberous Sclerosis Complex (TSC) ***FY 2012 Accomplishments:*** The Congressional Special Interest research initiative for Tuberous Sclerosis Complex (TSC) focused on promoting innovative research focused on decreasing the clinical impact of TSC.	5.100	-

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	300A: *CSI - Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
Within this context, this initiative encouraged applications that address a number of vital focus areas. This research effort offered three award mechanisms to support TSC research: Idea Development, Exploration-Hypothesis Development, and Clinical Trial Awards. Proposals were received in May 2012, peer review was conducted in July 2012, and funding recommendations were made at programmatic review in September 2012. Nine awards were recommended for funding and will be made by September 2013.		
Congressional Add: 790A - Duchenne Muscular Dystrophy ***FY 2012 Accomplishments:*** This Congressional Special Interest research initiative was for research focused on Duchenne Muscular Dystrophy (DMD). The vision for this effort is to extend and improve the function, quality of life, and lifespan for all individuals diagnosed with DMD by supporting research to accelerate the development and clinical testing of new therapeutics and increase the understanding of successes and failures of clinical trials. Two award mechanisms were offered in 2012, the Investigator-Initiated Research Award and the Therapeutic Idea Award. Applications were due in November 2012; scientific peer review will take place in January 2013; and programmatic review will be held in February 2013. Award(s) will be made by September 2013.	3.200	-
Congressional Adds Subtotals	540.100	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Work under this PE will be solicited by traditional Program Announcements resulting in contracts or other transactions.

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	238C: *Enroute Care Research & Development (Budgeted) (AF)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
238C: *Enroute Care Research & Development (Budgeted) (AF)*	-	3.261	6.000	4.800	-	4.800	4.500	4.200	4.400	4.479	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Enroute Care Research & Development (Air Force): This project area seeks to advance aeromedical transport capabilities through the research and development of rapid, more efficient, and safer patient transport from the point of injury to definitive care and to understand the effects of altitude on seriously injured war fighters. Efforts will focus on translating technological advancements and groundbreaking clinical research into transitionable products. The sub-project areas include: Physiological Effects of Aeromedical Evacuation on patients and crew, impact of transport times on En-Route Trauma and Resuscitative Care, and En-Route Patient Safety. Because patients experience multiple handoffs between teams of caregivers during transport between austere environments and definitive care, efforts in this sub-project area examine human factors considerations in en-route patient safety in order to develop new and enhance existing methods to mitigate risk in all en-route care environments.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Enroute Care Research & Development (Budgeted) (AF)	3.261	6.000	4.800
Description: Enroute Care Research & Development (Air Force): This project area seeks to advance aeromedical transport capabilities through the research and development of rapid, more efficient, and safer patient transport from the point of injury to definitive care and to understand the effects of altitude on seriously injured war fighters. Efforts will focus on translating technological advancements and groundbreaking clinical research into transitionable products. The sub-project areas include: Physiological Effects of Aeromedical Evacuation on patients and crew, impact of transport times on En-Route Trauma and Resuscitative Care, and En-Route Patient Safety. Because patients experience multiple handoffs between teams of caregivers during transport between austere environments and definitive care, efforts in this sub-project area examine human factors considerations in en-route patient safety in order to develop new and enhance existing methods to mitigate risk in all en-route care environments.			
FY 2012 Accomplishments: Transitioned simulator mannequins to Center for Sustainment of Trauma and Readiness Skills/CSTARS-Cincinnati, USAF School of Aerospace Medicine and Critical Care Air Transport Team (CCATT) Pilot Units for use in ground training of AE and CCATT staff, and continued testing for Air Worthiness certification. Worked with Air Mobility Command and the joint Enroute Care community to finalize materiel and research priorities. Initiated research to enhance the care of acutely injured AE trauma patients through the assessment of closed loop technology for autonomous control of oxygenation and ventilation, and the evaluation of			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	238C: *Enroute Care Research & Development (Budgeted) (AF)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
a miniaturized extracorporeal membrane oxygenation system/ECMO device which serves as an external lung. Initiated research assessing the clinical effect of prolonged hypobaria during AE, how AE affects blood volume responsiveness, pain assessment during AE, and factors impacting patient safety during AE. ***FY 2013 Plans:*** Complete Air Worthiness certification for simulator mannequin and initiate use on AE and CCATT training flights. Continue research to enhance the care of acutely injured AE trauma patients though projects assessing closed loop technology for autonomous control of oxygenation and ventilation and evaluating a miniaturized extracorporeal membrane oxygenation system/ ECMO device which serves as an external lung. Initiate Air Worthiness certification on the miniaturized ECMO device and investigate FDA requirements. Analyze initial results of research assessing the clinical effect of prolonged hypobaria during AE, how AE affects blood volume responsiveness, pain assessment during AE, and factors impacting patient safety during AE. Assess how the transport of psychiatric patients impacts AE crew protocols. Perform a retrospective study on the effectiveness of AE life saving interventions during OIF/OEF. Investigate advanced development options for AE material solutions such as a portable power source, and in conjunction with the Expeditionary Medicine Thrust Area, a multi-channel negative pressure wound therapy device. ***FY 2014 Plans:*** Finalize FDA requirements and plan for transition of the miniaturized ECMO device to AMC for AE and CCATT use. Make recommendations regarding way-ahead on closed loop ventilation and oxygenation. Complete research assessing the clinical effect of prolonged hypobaria during AE, how AE affects blood volume responsiveness, pain assessment during AE, and factors impacting patient safety during AE. Apply the results of the effectiveness of life saving interventions study to modifying clinical practice guidelines. Identify FDA requirement and transition dates for AE material solutions.			
Accomplishments/Planned Programs Subtotals	3.261	6.000	4.800

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, PE 0807714HP: *Other Consolidated Health Support*	12.300	12.669	13.049		13.049	13.441	13.844	14.259	14.655	Continuing	Continuing

Remarks

D. Acquisition Strategy

Broad Area Announcement (BAA) and Intramural calls for proposal are used to award initiatives in this program and project following determinatinons of scientific and technical merit, validation of need, prioritization, selection and any necessary legal and/or regulatory approvals (IRB, etc)

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	238C: *Enroute Care Research & Development (Budgeted) (AF)*

E. Performance Metrics

Individual initiatives are measured through a quarterly annual project performance reporting system and program management review process -- performance is measured against standardized criteria for cost, schedule and performance (technical objectives) and key performance parameters. Variances, deviations and/or breaches in key areas are reviewed and a decision is rendered on any adjustments through a formalized process of S&T governance.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	243A: *Medical Development (Lab Support) (Navy)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
243A: *Medical Development (Lab Support) (Navy)*	-	33.555	35.453	37.434	-	37.434	38.198	39.558	40.222	40.942	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Navy Bureau of Medicine and Surgery, this program element (PE) includes RDT&E,HP funds for costs related to laboratory management and support salaries of government employees that are not paid from science/research competitively awarded funding. The Outside Continental U.S. (OCONUS) laboratories conduct focused medical research on vaccine development for Malaria, Diarrhea Diseases, and Dengue Fever. In addition to entomology, HIV studies, surveillance and outbreak response under the Global Emerging Infections Surveillance (GEIS) program and risk assessment studies on a number of other infectious diseases that are present in the geographical regions where the laboratories are located. The CONUS laboratories conduct research on Military Operational Medicine, Combat Casualty Care, Diving and Submarine Medicine, Infectious Diseases, Environmental and Occupational Health, Directed Energy, and Aviation Medicine and Human Performance.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Medical Development (Lab Support) (Navy)	33.555	35.453	37.434
Description: RDT&E funds for operating and miscellaneous support costs at RDT&E laboratories, including facility and civilian personnel costs that are not directly chargeable to RDT&E projects. Excludes military manpower and related costs, non-RDT&E base operating costs, and military construction costs which are included in other appropriate programs.			
FY 2012 Accomplishments: Provided operating and miscellaneous support costs at the Navy Bureau of Medicine and Surgery research laboratories. Provided support for technologically advanced cutting edge research equipment for research and data acquisition, automated sampling and real time statistical analysis of biomedical research data utilizing data information systems integral with new equipment. Replaced obsolescent general purpose research equipment.			
FY 2013 Plans: Continue to provide operating and miscellaneous support costs at BUMED research laboratories. Continue to provide support for technologically advanced cutting edge research equipment for research and data acquisition, automated sampling and real time statistical analysis of biomedical research data utilizing data information systems integral with new equipment. Continue to provide replacement of obsolescent general purpose research equipment.			
FY 2014 Plans:			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	243A: *Medical Development (Lab Support) (Navy)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continue to provide operating and miscellaneous support costs at BUMED research laboratories. Continue to provide support for technologically advanced cutting edge research equipment for research and data acquisition, automated sampling and real time statistical analysis of biomedical research data utilizing data information systems integral with new equipment. Continue to provide replacement of obsolescent general purpose research equipment. Additional Funding received will be used will be use for 64 administrative civilian FTE's that had to be reprogrammed from the overhead account, due to new financial model. Funding will also be used for existing government inherent civilian vacancies that are not in the current manpower controls.			
Accomplishments/Planned Programs Subtotals	33.555	35.453	37.434

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	284B: *USAF Human Physiology, Systems Integration, Evaluation & Optimization Research (Budgeted) (AF)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
284B: *USAF Human Physiology, Systems Integration, Evaluation & Optimization Research (Budgeted) (AF)*	-	2.421	4.400	3.800	-	3.800	3.800	5.700	5.871	5.977	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Human Performance (Human Physiology, Evaluation & Optimization) Research & Development (Air Force): This project area seeks to enhance, optimize & sustain performance of Air Force personnel through the evaluation and alleviation of health effects associated with carrying out assigned missions. This work addresses unique Air Force operational environments such as the mitigation of stress on personnel involved in remote piloted aircraft operations. The sub-project areas include: Cognitive Performance which includes fatigue management, Physiological Performance and Targeted Conditioning which includes training techniques for optimal performance, and identification of solutions related to Operational and Environmental Challenges to Performance.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: USAF Human Physiology, Systems Integration, Evaluation & Optimization Research (Budgeted) (AF)	2.421	4.400	3.800
Description: Human Performance (Human Physiology, Evaluation & Optimization) Research & Development (Air Force): This project area seeks to enhance, optimize & sustain performance of Air Force personnel through the evaluation and alleviation of health effects associated with carrying out assigned missions. This work addresses unique Air Force operational environments such as the mitigation of stress on personnel involved in remote piloted aircraft operations. The sub-project areas include: Cognitive Performance which includes fatigue management, Physiological Performance and Targeted Conditioning which includes training techniques for optimal performance, and identification of solutions related to Operational and Environmental Challenges to Performance.			
FY 2012 Accomplishments: Completed a comparison of the 1.5 mile run times study; resulted in a change in Air Force policy to increase the run time for Airman stationed at six high altitude bases, as of Jan 2012. Completed imaging studies on 85% of high altitude/U-2 pilots, and initiated baseline studies to establish comparison data. Completed Operationally Based Vision Assessment (OBVA) system testing at Wright Patterson AFB after system move from Mesa, AZ as part of the BRAC.			
FY 2013 Plans:			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	284B: *USAF Human Physiology, Systems Integration, Evaluation & Optimization Research (Budgeted) (AF)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Transition Operationally Based Vision Assessment (OBVA) into sustainment. Continue high altitude/U-2 pilot imaging and comparison baseline studies. Assess fatigue management using non-visual light stimulation, and the effects of Modafinil when used in combination with over-the-counter medications. Monitor ability to reduce injury through changes in training and sustainment physical training programs for Battlefield Airman. ***FY 2014 Plans:*** Complete high altitude/U-2 pilot imaging and comparison baseline studies. Address the use of synthetic tissue models as a viable training alternative to live animal use. Complete high altitude acclimation research. Pursue human systems integration studies.			
Accomplishments/Planned Programs Subtotals	2.421	4.400	3.800

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

SEE OTHER PROGRAM FUNDING SUMMARY FOR PROJECT CODE 238C WHICH IS A SUMMARY OF OTHER PROGRAM FUNDING SUPPORT TO ALL PROJECTS AND PROGRAMS IN THIS PE FOR DHP-AF

D. Acquisition Strategy

Broad Area Announcement (BAA) and Intramural calls for proposal are used to award initiatives in this program and project following determinatinons of scientific and technical merit, validation of need, prioritization, selection and any necessary legal and/or regulatory approvals (IRB, etc)

E. Performance Metrics

Individual initiatives are measured through a quarterly annual project performance reporting system and program management review process -- performance is measured against standardized criteria for cost, schedule and performance (technical objectives) and key performance parameters. Variances, deviations and/or breaches in key areas are reviewed and a decision is rendered on any adjustments through a formalized process of S&T governance.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	285A: *Operational Medicine Research & Development (Budgeted) (AF)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
285A: *Operational Medicine Research & Development (Budgeted) (AF)*	-	8.005	5.267	5.049	-	5.049	3.965	3.376	3.277	3.336	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project area seeks to delineate more definitive patient care and treatment pertaining to Active Duty and beneficiary personnel in non-deployed settings. The sub-project areas include Clinical Patient Safety and Psychological Health and Resilience. The Psychological Health and Resilience sub-project area seeks to identify the sources of stress existing in a high operations tempo in-garrison healthcare staff in order to develop and transition countermeasures that provide or enable resilience. Other areas of interest include: translational research supporting the enhancement of patient education programs promoting healthy lifestyles that could impact the onset/prevention of conditions such as obesity and chronic diseases states and research to identify and validate risk variants impacting diseases such as autism.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Operational Medicine Research & Development (Air Force)	8.005	5.267	5.049

Description: This project area seeks to delineate more definitive patient care and treatment pertaining to Active Duty and beneficiary personnel in non-deployed settings. The sub-project areas include Clinical Patient Safety and Psychological Health and Resilience. The Psychological Health and Resilience sub-project area seeks to identify the sources of stress existing in a high operations tempo in-garrison healthcare staff in order to develop and transition countermeasures that provide or enable resilience. Other areas of interest include: translational research supporting the enhancement of patient education programs promoting healthy lifestyles that could impact the onset/prevention of conditions such as obesity and chronic diseases states and research to identify and validate risk variants impacting diseases such as autism.

FY 2012 Accomplishments:
Continued development of a aortic thoracic balloon occlusion device; finished initial model studies, completed prototype development, and scheduled testing of the prototype. Pursued research on the pathophysiology of corneal scar injury and the ability of photorefractive keratotomy to minimize corneal haze. Implemented Group Lifestyle Balance programs at six Air Force Medical Treatment Facilities (MTFs) using FY09 Congressional dollars. Initiated eight projects aimed at diabetes prevention using FY09 Congressional dollars. Completed FY09 Congressionally funded project on autism; research resulted in the identification of two genes associated with autism, the establishment of autism clinical services at Wright Patterson Air Force Base Medical Center, and enabled the participation of affected families at Wright Patterson in the Central Ohio Registry for Autism. Initiated a Congressionally funded project to test the integration of a FDA cleared diabetes management system using a mobile phone

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	285A: *Operational Medicine Research & Development (Budgeted) (AF)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
application into an electronic health record to assess the impact of real-time decision making on patient outcomes. Initiated follow-on research on autism to advance the work of the FY09 Congressional project. Initiated prevention and treatment research on obesity and asthma as pilot studies to establish a baseline for Patient-Centered Precision Care. ***FY 2013 Plans:*** Complete testing on thoracic aortic balloon occlusion prototype and finalize transition plans. Complete efforts on pathophysiology of corneal scar injury and the ability of photorefractive keratotomy to minimize corneal haze and investigate how results can be applied to revisions to clinical practice guidelines. Complete eight projects aimed at diabetes prevention using FY09 Congressional dollars. Continue university based diabetes research funded by Congressional dollars. Pursue research related to psychological health focusing on return to duty and resilience. Evaluate prevention and treatment outcomes related to Patient-Centered Precision Care. ***FY 2014 Plans:*** Building on previous work, concentrate on the evaluation of prevention and treatment of psychological health conditions and chronic disease initiatives related to Patient-Centered Precision Care.			
Accomplishments/Planned Programs Subtotals	8.005	5.267	5.049

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Broad Area Announcement (BAA) and Intramural calls for proposal are used to award initiatives in this program and project following determinations of scientific and technical merit, validation of need, prioritization, selection and any necessary legal and/or regulatory approvals (IRB, etc)

E. Performance Metrics

Individual initiatives are measured through a quarterly annual project performance reporting system and program management review process -- performance is measured against standardized criteria for cost, schedule and performance (technical objectives) and key performance parameters. Variances, deviations and/or breaches in key areas are reviewed and a decision is rendered on any adjustments through a formalized process of S&T governance.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	307B: *Force Health Protection, Advanced Diagnostics/Therapeutics Research & Development (Budgeted) (AF)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
307B: *Force Health Protection, Advanced Diagnostics/ Therapeutics Research & Development (Budgeted) (AF)*	-	14.335	12.120	15.796	-	15.796	16.648	17.852	18.991	19.333	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project area seeks to deliver an improved Force Health Protection capability across the full spectrum of operations. Under Force Health Protection, sub-project areas include: Directed Energy and Occupational and Environmental Health. Research in the Directed Energy sub-project area seeks to develop technologies to "detect to warn" and "detect to protect" AF operators such that they can take appropriate actions to prevent or minimize exposure leading to adverse health effects. Research in the Occupational and Environmental Health sub-project area involves the assessment and implementation of innovative new technologies that not only give Air Force Medical Service personnel battlefield situational awareness of Occupational and Environmental Health Hazards, but which also enables effective surveillance, detection and mitigation. Other areas of interest include infectious disease and food and water surveillance. Under Advanced Diagnostics/Therapeutics Research and Development, sub-project areas include Personalized Medicine/Genomic Medicine and the Simple Situational Awareness Widget. The Personalized Medicine/Genomic Medicine sub-project area supports the development of systems advancing the delivery of 'Omic-informed personalized medicine and emphasizes targeted prevention, diagnosis, and treatment. The field of 'Omic medicine includes genomics, epigenetics, transcriptomics, proteomics, metabolomics, and gene-environment interaction. The delivery of pro-active, evidence-based, personalized medicine will improve health in warfighters and beneficiaries by providing care that is specific to the situation and patient, to include preventing disease or injury, early and accurate diagnosis, and selection of appropriate and effective treatment. Personalized medicine will reduce morbidity, mortality, mission impact of illness/injury, and healthcare costs while increasing health and wellness of the AF population and efficiency of the healthcare system. This supports systems development in multiple focus areas.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Force Health Protection, Advanced Diagnostics/Therapeutics Research & Development (Budgeted) (Air Force)	14.335	12.120	15.796
Description: This project area seeks to deliver an improved Force Health Protection capability across the full spectrum of operations. Under Force Health Protection, sub-project areas include: Directed Energy and Occupational and Environmental Health. Research in the Directed Energy sub-project area seeks to develop technologies to "detect to warn" and "detect to protect" AF operators such that they can take appropriate actions to prevent or minimize exposure leading to adverse health effects. Research in the Occupational and Environmental Health sub-project area involves the assessment and implementation of innovative new technologies that not only give Air Force Medical Service personnel battlefield situational awareness of Occupational and Environmental Health Hazards, but which also enables effective surveillance, detection and mitigation. Other			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	307B: *Force Health Protection, Advanced Diagnostics/Therapeutics Research & Development (Budgeted) (AF)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
areas of interest include infectious disease and food and water surveillance. Under Advanced Diagnostics/Therapeutics Research and Development, sub-project areas include Personalized Medicine/Genomic Medicine and the Simple Situational Awareness Widget. The Personalized Medicine/Genomic Medicine sub-project area supports the development of systems advancing the delivery of 'Omic-informed personalized medicine and emphasizes targeted prevention, diagnosis, and treatment. The field of 'Omic medicine includes genomics, epigenetics, transcriptomics, proteomics, metabolomics, and gene-environment interaction. The delivery of pro-active, evidence-based, personalized medicine will improve health in warfighters and beneficiaries by providing care that is specific to the situation and patient, to include preventing disease or injury, early and accurate diagnosis, and selection of appropriate and effective treatment. Personalized medicine will reduce morbidity, mortality, mission impact of illness/injury, and healthcare costs while increasing health and wellness of the AF population and efficiency of the healthcare system. This supports systems development in multiple focus areas. ***FY 2012 Accomplishments:*** Demonstrated that inhalation exposure to jet fuel (JP-8) concurrent with noise exposure can impair hearing at noise levels less than occupational exposure levels; initiated studies of other fuel types. Completed studies supporting the development of an in vitro Toxicity Screening Battery to evaluate occupational health risks associated with jet fuel exposure. Established methods to characterize the properties of nanomaterials that are linked to cellular toxicity. Built a nanomaterial exposure chamber prototype for testing occupational airborne exposures. Completed assessment of the impact of laser exposure to the eye; identified a panel of proteins associated with retinal damage. Performed pilot study on the molecular bioeffects of high power microwave exposure. Developed prototype devices to locate laser energy sources, generate data on the laser parameters, and analyze the data in order to characterize the associated health risk. Continued investigation on smaller/more capable sensors for remote environmental and physiological monitoring. Initiated research on vests to prevent heat stress in extreme environments. Assessed emissions from waste incineration/burnpits; used data to improve predictive models for human exposure from the dispersion of environmental contaminants. Initiated development of technology and methods to analyze soil samples for radionuclide presence to support AF Radiologic Assessment Team, whose mission is DoD-unique. Assessed commercially available Aircrew Ballistic Protective Eyewear for operational use. Initiated research to develop miniaturized sensors to identify hypoxic/toxic aircrew environments. Oversaw operator evaluation of individual blast gauges in a deployed environment. Added four pathogens to the Film Array viral respiratory pathogen test panel and achieved FDA clearance. ***FY 2013 Plans:*** Complete follow-on studies assessing the relationship between inhalation exposure to alternative jet fuels and noise. Using the nanomaterial exposure chamber prototype, test scenarios for testing occupational airborne exposures. Use the panel of proteins identified in laser exposure studies to characterize retinal laser injuries. Expand study of high-powered microwave exposures			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	307B: *Force Health Protection, Advanced Diagnostics/Therapeutics Research & Development (Budgeted) (AF)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
to establish dose-response relationships. Further evaluate the prototype devices to locate laser energy sources against additional laser challenges. Perform field testing of smaller/more capable sensors for remote environmental and physiological monitoring. Continue to evaluate vests to prevent heat stress in extreme environments in field conditions. Complete development of technology and methods to analyze soil samples for radionuclide presence and transition to AF Radiologic Assessment Team, whose mission is DoD-unique. Recommend, to the line of the Air Force, a list of commercially available Aircrew Ballistic Protective Eyewear for use in operational environments. Continue research to develop miniaturized sensors to identify hypoxic/ toxic aircrew environments. ***FY 2014 Plans:*** Develop a retinal injury atlas database for use by clinicians, and further apply data to perform a bioinformatics-based analysis of retinal injury treatment alternatives. Integrate the health risk assessments produced from the prototype devices to locate laser energy sources into command and control. Work with MAJCOMS to test smaller/more capable sensors for remote environmental and physiological monitoring in an operational setting. Apply smaller/more capable sensors to enable data transfer. Test miniaturized sensors to identify hypoxic/toxic aircrew environments in representative environments.			
Accomplishments/Planned Programs Subtotals	14.335	12.120	15.796

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Broad Area Announcement (BAA) and Intramural calls for proposal are used to award initiatives in this program and project following determinations of scientific and technical merit, validation of need, prioritization, selection and any necessary legal and/or regulatory approvals (IRB, etc)

E. Performance Metrics

Individual initiatives are measured through a quarterly annual project performance reporting system and program management review process -- performance is measured against standardized criteria for cost, schedule and performance (technical objectives) and key performance parameters. Variances, deviations and/or breaches in key areas are reviewed and a decision is rendered on any adjustments through a formalized process of S&T governance.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	308B: *Expeditionary Medicine Research & Development (Budgeted) (AF)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
308B: *Expeditionary Medicine Research & Development (Budgeted) (AF)*	-	2.796	5.736	4.906	-	4.906	6.229	5.271	4.474	4.554	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project area identifies cutting edge techniques and technologies that can be employed by AF medics during contingency operations. Sub-project areas include: Expeditionary Logistics and Expeditionary Casualty Care. Expeditionary Logistics seeks to develop/validate novel procedures, materials, techniques, and tools to reduce size and weight, optimize power requirements, and minimize logistics footprint associated with expeditionary operations. It also examines ways to standardize equipment and supplies used by medical response teams because of the increasing number of missions that find teams from different countries working together. Expeditionary Casualty Care focuses on optimizing existing and developing new casualty care tools and techniques, improving methods and techniques for remote monitoring and triage systems, identifying and mitigating issues related to casualty care in an expeditionary setting, and validation of best-fit technologies in casualty care missions.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Expeditionary Medicine Research & Development (Air Force)	2.796	5.736	4.906

Description: This project area identifies cutting edge techniques and technologies that can be employed by AF medics during contingency operations. Sub-project areas include: Expeditionary Logistics and Expeditionary Casualty Care. Expeditionary Logistics seeks to develop/validate novel procedures, materials, techniques, and tools to reduce size and weight, optimize power requirements, and minimize logistics footprint associated with expeditionary operations. It also examines ways to standardize equipment and supplies used by medical response teams because of the increasing number of missions that find teams from different countries working together. Expeditionary Casualty Care focuses on optimizing existing and developing new casualty care tools and techniques, improving methods and techniques for remote monitoring and triage systems, identifying and mitigating issues related to casualty care in an expeditionary setting, and validation of best-fit technologies in casualty care missions.

FY 2012 Accomplishments:
Supported the development of a next-generation Trauma Specific Vascular Shunt prototype for submission through the FDA approval process. Completed Congressional project to develop a prototype laser device for hemorrhage control and tissue cutting. Completed a Congressionally funded project to develop a Virtual Medical Training program for C-17 loading and unloading, and transitioned it to Air Mobility Command. In conjunction with the Enroute Care Thrust area, completed draft Capability Development Document for multi-channel negative pressure wound treatment system, and addressed advanced development

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	308B: *Expeditionary Medicine Research & Development (Budgeted) (AF)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
issues. Continued research on the development of algorithms for the continuous non-invasive monitoring of patient status in order to predict actionable interventions. Initiated research on a novel technique for infection control of traumatic wounds, predicting blood needs using pre-hospital vital signs, and hemorrhagic shock resuscitation. ***FY 2013 Plans:*** Complete the FDA approval process for the Trauma Specific Vascular Shunt, transition the device, and proceed to fielding and procurement. Apply predictive algorithms for the continuous non-invasive monitoring of patient status in order to predict actionable interventions. Evaluate clinical utility of prototype laser device for hemorrhage control and tissue cutting. Continue research on a novel technique for infection control of traumatic wounds, predicting blood needs using pre-hospital vital signs, and hemorrhagic shock resuscitation. Pursue additional research to mature the multi-channel negative pressure wound treatment system and continue to address advanced development issues. ***FY 2014 Plans:*** Initiate research on therapeutic drugs given by first responders to slow body functions providing more time to transfer of seriously wounded to definitive care. Continue research addressing needs related to Expeditionary Casualty Care.			
Accomplishments/Planned Programs Subtotals	2.796	5.736	4.906

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Broad Area Announcement (BAA) and Intramural calls for proposal are used to award initiatives in this program and project following determinations of scientific and technical merit, validation of need, prioritization, selection and any necessary legal and/or regulatory approvals (IRB, etc)

E. Performance Metrics

Individual initiatives are measured through a quarterly annual project performance reporting system and program management review process -- performance is measured against standardized criteria for cost, schedule and performance (technical objectives) and key performance parameters. Variances, deviations and/or breaches in key areas are reviewed and a decision is rendered on any adjustments through a formalized process of S&T governance.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	309A: *Regenerative Medicine (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
309A: *Regenerative Medicine (USUHS)*	-	6.877	7.365	7.504	-	7.504	7.657	7.929	8.062	8.207	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Uniformed Services University of the Health Sciences (USUHS), the Center for Neuroscience and Regenerative Medicine (CNRM) brings together the expertise of clinicians and scientists across disciplines to catalyze innovative approaches to traumatic brain injury (TBI) research. CNRM Research Programs emphasize aspects of high relevance to military populations, with a primary focus on patients at the Walter Reed National Military Medical Center.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Regenerative Medicine (USUHS)	6.877	7.365	7.504

Description: The Center for Neuroscience and Regenerative Medicine (CNRM) brings together the expertise of clinicians and scientists across disciplines to catalyze innovative approaches to traumatic brain injury (TBI) research. CNRM Research Programs emphasize aspects of high relevance to military populations, with a primary focus on patients at the Walter Reed National Military Medical Center.

FY 2012 Accomplishments:
The CNRM research program is comprised of over 200 investigators that have primary appointments in 16 different academic departments of USUHS, the NIH Clinical Center, seven NIH Institutes, and multiple clinical departments at WRNMMC. The CNRM has established 11 research cores, with the addition of the new Acute Studies Core in 2012.

- An Acute Studies core was developed to focus efforts that had been ongoing at local civilian hospitals for neuroimaging and biomarkers analyses at early time points post-injury that cannot be recruited at NIH or WRNMMC. These early clinical interactions are also directly connected to longitudinal follow up at the NIH CC with potential for recruitment into other CNRM studies.
- The Recruitment and Phenotyping Cores were reorganized for more effective interactions with military sites and to serve as an early clinical interface that supports civilian patient recruitment into CNRM studies at the NIH.
- The Human Imaging core and Image Processing core have been developing scanning protocols for use of the human 3T molecularMR, which was installed in November 2011. This Siemens Biograph mMR system enables simultaneous MR and PET imaging and is one of the first systems in the US with this unique capability.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	309A: *Regenerative Medicine (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
- The Translational Imaging core has been developing novel scanning protocols for rodent microPET, microCT, and 7T MR, especially as relevant to specialized needs for TBI pathologies and with consideration of comparison with the human scanning applications. - The Pre-clinical (Rodent Surgical and Behavioral) Cores use is heavily subscribed. Efforts are ongoing to provide a state-of-the-art blast facility for animal model testing at USU. - The Neuropathology core has developed capabilities for human brain tissue banking to characterize military TBI and associated cases. - The Informatics core has developed the database and policies for CNRM human subjects research that is aligned with the efforts across federal agencies for data acquisition using common data elements acquisition and for data storage in a federal TBI database. CNRM received 69 proposals in response to a FY12 proposal call. After external scientific review and approval by the Programmatic Oversight Committee, 16 two-year projects were funded for FY12. The CNRM has 27 approved human use protocols at 10 different sites, including a biorepository and informatics warehouse and both military and civilian parallel natural history studies, and 30 approved animal use protocols. ***FY 2013 Plans:*** CNRM will accomplish several key objectives in FY13: (1) Fund start-up research of 1-4 new faculty members; (2) Increase innovative human imaging capability at the new WRNMMC campus; (3) Continue operational capability of all Cores and provide a sound research infrastructure; (4) Approve an additional 10 – 15 human use and animal use protocols to move forward beyond the existing research directions; and (5) Obtain data to address the current needs of the medical community to better diagnose and intervene for the prevention of the long term consequences resulting from traumatic brain injury (TBI). ***FY 2014 Plans:*** CNRM will accomplish several key objectives in FY14: (1) Fund start-up research of 1-4 new faculty members; (2) Fund new research projects through a call for proposals; (3) Continue operational capability of all Cores and provide a sound research infrastructure; (4) Approve an additional 10 – 15 human use and animal use protocols to move forward beyond the existing research directions; and (5) Obtain data to address the current needs of the medical community to better diagnose and intervene for the prevention of the long term consequences resulting from traumatic brain injury (TBI).			
Accomplishments/Planned Programs Subtotals	6.877	7.365	7.504

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	309A: *Regenerative Medicine (USUHS)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0806721HP: *Uniformed Services University of the Health Sciences*	8.244	8.495	8.755		8.755	9.022	9.293	9.395	9.555	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Center for Neuroscience and Regenerative Medicine: In FY12 through FY14, identify, design protocols, perform scientific and program reviews, and conduct research in Clinical Core activities such as Phenotyping, Imaging and Imaging Analysis, to aid in patient diagnosis and evaluation.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	373A: *GDF - Medical Technology Development*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
373A: *GDF - Medical Technology Development*	-	48.595	107.248	150.166	-	150.166	161.729	161.320	160.683	163.575	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Guidance for Development of the Force - Medical Technology Development provides funds for promising candidate solutions that are selected for initial safety and effectiveness testing in animal studies and/or small scale human clinical trials regulated by the US Food and Drug Administration prior to licensing for human use. Research in this PE is designed to address the following: areas of interest to the Secretary of Defense regarding Wounded Warriors, capabilities identified through the Joint Capabilities Integration and Development System, and the strategy and initiatives described in the Quadrennial Defense Review. Program development and execution is peer-reviewed and fully coordinated with all of the Military Services, appropriate Defense Agencies or Activities and other federal agencies, to include the Department of Veterans Affairs, the Department of Health and Human Services, and the Department of Homeland Security. This coordination occurs through the planning and execution activities of the Joint Program Committees (JPCs), established for the Defense Health Program, Research Development Test and Evaluation (RDT&E) funding. Research supported by this PE includes polytrauma and blast injury, diagnosis and treatment of brain injury, environmental health and performance, physiological and psychological health, injury prevention and reduction, medical simulation and training, health informatics, and rehabilitation.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: GDF – Medical Technology Development	48.595	107.248	150.166
Description: Funds provide for the development of medical technology candidate solutions and components of early prototype systems for test and evaluation. Promising drug and vaccine candidates, knowledge products, and medical devices and technologies are selected for initial safety and effectiveness testing in small scale human clinical trials.			
FY 2012 Accomplishments: FY 2012 Accomplishments: The most promising technologies arising from the FY11 investment were continued into FY12 and considered for transition to a higher budget activity. Medical training and health information systems aimed to improve healthcare access, availability, continuity, cost effectiveness, and quality. Medical simulation and training efforts have focused on understanding how cognitive and psychomotor skills of healthcare personnel deteriorate and how this can be minimized using a data driven predictive model. Efforts also included out-patient and home rehabilitation and educational simulation technologies specifically for the wounded service members. The			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	373A: *GDF - Medical Technology Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Health Information Technology Committee utilized prototype and strategic projects in order to mature efforts within the focus areas of force health protection and readiness, medical resourcing, healthcare services, and enterprise infrastructure management. For military infectious diseases research, the most promising efforts initiated under Applied Research in FY10 and FY11 transitioned to Medical Technology Development. Areas of research included antibacterial and anti-biofilm agents, biomarker and diagnostic assay technologies for wound infection, detection of multidrug-resistant organisms (MDROs) in wound infection prevention and management, and antimicrobial countermeasures. The military operational medicine efforts are aimed to: determine if administration of an antioxidant can protect against noise-induced hearing loss; integrate the surface mounted clay add-on device prototype into current software that will improve the method for evaluating body armor's protective effectiveness against blunt trauma; determine the impact of load carriage and grade on the energy consumed by individual muscles during locomotion and identify models that predict the energy consumed with and without load carriage; develop and validate self-reporting instruments to assess psychological attributes and constructs of Soldier performance, mental strength and psychological well-being; develop surveys to delineate relationship factors that contribute to the longitudinal progression of combat-related PTSD and enhanced suicide; develop individualized models that will allow for the prediction of the effects of chronic sleep restriction on cognitive performance; and develop models that predict the effects of caffeine in mitigating performance impairment during sleep deprivation. For combat casualty care research, the program conducted studies of enhanced oxygen delivery in acute spinal cord injury that involves analyzing immunohistochemicals (a test that shows specific antigens in tissues by the use of markers that are either fluorescent dyes or enzymes) in spinal cord tissue; a plasma volume expander study looks for toxicity and pharmacokinetics (a branch of pharmacology dedicated to the determination of the fate of substances administered externally to a living organism); and red blood cell storage research examined the effects of storage time increases on the risk of microchimerism (presence of a small number of cells that originate from another individual and therefore genetically distinct from the cells of the host individual). The military medical photonics and smooth-pursuit eye tracking (Eye TRAC) technologies were further developed. A new program announcement was published and research was started in the areas of the control of internal bleeding using catheters, and the effect of perfluorocarbons (chemically reactive compounds composed of carbon and fluorine) used for resuscitation on the body's blood to clot effectively. Clinical and rehabilitative medicine performed studies in the areas of neuromusculoskeletal injury, regenerative medicine and sensory system traumatic injury, including vision, hearing and balance restoration. ***FY 2013 Plans:***			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	373A: *GDF - Medical Technology Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Medical training and health information systems are improving healthcare access, availability, continuity, cost effectiveness, and quality. Specific efforts focus on research investigating the utility of augmented reality training tools towards military healthcare personnel, specifically comparing training techniques that use current training methods versus augmented reality methods. Continue efforts in out-patient or home rehabilitation and educational simulation technologies for the wounded service member Research efforts are exploring emerging technologies to mitigate enterprise risk within health informatics, force health protection and readiness, medical resourcing, healthcare services, and enterprise infrastructure management. For military infectious diseases research, multi-year, first-in-human studies, started during FY11/12, in wound infection prevention and management and antimicrobial countermeasures for antibacterial and/or anti-biofilm agents, biomarker and diagnostic assay technologies for wound infection, and detection of multidrug-resistant organisms (MDROs) will be supported toward down selection and transition into Medical Product Support and Advanced Concept Development. New Medical Technology Development proposals will be supported in rapid screening of fresh whole blood for pathogens, wound infection prevention and management, and antimicrobial countermeasures. Military operational medicine efforts are validating dose response curves for noise induced hearing loss, using animal models to determine protective capabilities within the inner ear using antioxidants and determine the most effective doses and maximum time delays to prevent noise induced hearing loss. This information will result in significant reductions in noise related compensation claims to the Department of Veterans Administration and facilitate the return-to-duty for injured Warfighters. Specific efforts are validating the performance of the surface mounted clay add-on device using live-fire tests of military grade armor systems providing the first biomedically valid behind-body-armor design standard as a replacement to the current Department of Justice standard. This will allow equipment developers to design body armor appropriate to the specific needs of each region of the body. Other efforts entail conducting human clinical trials of the Hydration Status Monitor for diagnostic and biological testing, a device to monitor fluid intake and electrolyte imbalance; field studies to determine the effect of vitamin D and calcium supplements on nutritional status of Warfighters leading to improved bone health and mitigating the potential for bone stress fractures; validating constructs of Warfighters performance, mental strength and psychological well-being using current psychological assessment tools providing a validated portfolio of self-reporting instruments capable of assessing various psychological attributes of military personnel, thereby enhancing psychological resilience. Combat casualty care research is pursuing successful studies, from FY11 and 12, such as the study of enhanced oxygen delivery of oxygen in acute spinal cord injury, the plasma volume expander, red blood cell storage research and will start technology development of platelet-derived agents to stop bleeding and neuromodulation for the repair of traumatic injuries to the brain, and will issue a program announcement in the areas of enroute care and forward surgical and intensive battlefield care.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	373A: *GDF - Medical Technology Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Clinical and rehabilitative medicine is advancing studies in neuromusculoskeletal injury rehabilitation, pain management, and sensory system restoration and rehabilitation after traumatic injury. We are initiating studies to support development and preclinical and pilot/early phase clinical evaluations of candidate technologies for restoration and rehabilitation strategies and medical products. Specific focus areas include neuromusculoskeletal injury rehabilitation strategies and devices, prosthetics, and the prevention of heterotopic ossification (bone formation in soft tissue following injury); novel therapeutics and devices for pain management; regenerative medicine-based approaches for limb and digit salvage, craniomaxillofacial (skull, face and jaw) reconstruction, scarless wound healing, burn repair, genitourinary restoration and addressing compartment syndrome (muscle, nerve and vascular damage due to swelling post-injury); restoration and rehabilitation of sensory system injury, including vision, hearing and balance injury and dysfunction. ***FY 2014 Plans:*** Medical Training and Health Information Sciences will continuework in two primary research portfolios: Medical Simulation and Training, and Health Informatics & Information Technology. Medical Simulation and Training will primarily focus on follow up research opportunities identified by the Combat Casualty Training Consortium (CCTC), which is identifying potential gaps where simulation technology can be utilized in combat medic training with the impact of reducing live tissue training. Specific emphasis is on how nano-technologies may improve sensors, haptics (touch feedback), actuators, and tissue fluidics integrated into simulation training systems. Medical Practice Initiative efforts are aimed at understanding healthcare personnel skill decay through improved data mining and its correlation with skill. Health Informatics & Information Technology looks to conduct research on risk reduction within the Military Health System to identify ways to reduce potential near- and long-term cost of IT technology and systems, as well as the transition of a joint Department of Veterans Affairs (VA) and Department of Defense (DOD) integrated Electronic Health Record (iEHR). The military infectious diseases research program will continue the multi-year, first in human studies started in FY12 in the Wound Infection Prevention and Management and Antimicrobial Countermeasures Programs. Successful Applied Biomedical Technology funded projects will be added to the Medical Technology Development portfolio to further advance the product towards commercialization. A new program announcement is expected for Wound Infection Prevention and Management based on an ongoing gap analysis. Military operational medicine research will continue medical technology development efforts initiated in FY12 and FY13 in nutrition and dietary supplements, warfighter performance and sustainment in extreme environments (such as extreme heat, cold, or altitude), establishment of return to duty/medical standards criteria, blast injury models and performance standards for protections systems, diagnostics and metrics for hearing loss and protection, alcohol and substance abuse, diagnosis and treatment of deployment-related psychological health problems, diagnosis and treatment of PTSD, military family and warfighter resilience, suicide prevention, pulmonary health in the deployed environment, and blast exposure during breaching. The Military Operational			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	373A: *GDF - Medical Technology Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Medicine Joint Program Committee will issue program announcements with topics in the areas of physiological health, injury prevention and reduction, psychological health, and environmental health and protection. Combat casualty care research will pursue successful studies from FY12 and 13, such as the study of enhanced oxygen delivery of oxygen in acute spinal cord injury, the plasma volume expander, red blood cell storage research, platelet-derived agents to stop bleeding and neuromodulation, and will start technology development of agents to improve resuscitation after severe bleeding, foams to stop internal bleeding, and real-time, physiologic monitoring across the battlespace. Clinical and rehabilitative medicine will continue advancing studies in neuromusculoskeletal injury rehabilitation, pain management, and sensory system restoration and rehabilitation after traumatic injury. Clinical and rehabilitative medicine will continue studies started in FY13 to support development and preclinical and pilot/early phase clinical evaluations of candidate technologies for restoration and rehabilitation strategies and medical products. Specific focus areas include: neuromusculoskeletal injury rehabilitation strategies and devices; prosthetics; neural interfaces (electrodes wired into the brain) and the prevention of heterotopic ossification (bone formation in soft tissue following injury); novel therapeutics and devices for pain management; regenerative medicine-based approaches for limb and digit salvage; craniomaxillofacial (skull, face and jaw) reconstruction; scarless wound healing; burn repair; genitourinary restoration and addressing compartment syndrome (muscle, nerve and vascular damage due to swelling post-injury); and restoration and rehabilitation of sensory system injury, including vision, hearing and balance injury and dysfunction.			
Accomplishments/Planned Programs Subtotals	48.595	107.248	150.166

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Mature and demonstrate safety and effectiveness of medical procedures, medical devices, and drug and vaccine candidates intended to prevent or minimize effects from battlefield injuries, diseases, and extreme or hazardous environments. Milestone A packages will be developed to transition promising products into advanced development.

E. Performance Metrics

Principal investigators will participate in In-Progress Reviews, high-level DHP-sponsored review and analysis meetings, submit quarterly and annual status reports, and are subjected to Program Office and/or Program Sponsor Representative progress reviews to ensure that milestones are being met and deliverables will be transitioned

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	373A: *GDF - Medical Technology Development*

on schedule. The benchmark performance metric for transition of research conducted with GDF-Medical Technology Development funding will be the attainment of maturity level that is typical of Technology Readiness Level 6 or the equivalent for knowledge products.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	378A: *CoE-Breast Cancer Center of Excellence (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
378A: *CoE-Breast Cancer Center of Excellence (Army)*	-	9.722	10.458	10.636	-	10.636	10.830	11.229	11.418	11.624	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Breast Cancer CoE (Army) provides a multidisciplinary approach as the standard of care for treating breast diseases and breast cancer. This approach integrates prevention, screening, diagnosis, treatment and continuing care, incorporation of advances in risk reduction, biomedical informatics, tissue banking and translational research. The project is based on a discovery science paradigm, leveraging high-throughput molecular biology technology and our unique clinically well-characterized tissue repository with advances in biomedical informatics leading to hypothesis-generating discoveries that are then tested in hypothesis-driven experiments. The objective of this research is to reduce the incidence, morbidity (illness), and mortality (death) of breast diseases and breast cancer among all military beneficiaries.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Breast Cancer Center of Excellence	9.722	10.458	10.636

Description: Provides a multidisciplinary approach as the standard of care for treating breast diseases and breast cancer.

FY 2012 Accomplishments:

The Breast Cancer CoE (Army), also referred to as the Clinical Breast Care Project (CBCP), relocated in FY12 to the new Walter Reed National Military Medical Center Bethesda (WRNMMC-B) campus as our main military site, accruing over 800 subjects annually to the "core" CBCP protocols. The CBCP acquired through consented protocol acquisitions, over 7,000 specimens (neoplastic and non-neoplastic breast tissues and tumors, lymph nodes, metastatic deposits, blood and its components, bone marrow) on subjects with all types of breast diseases and cancer. The repository is utilized as the basis for all molecular analyses in CBCP labs, as outlined in the CBCP Core Protocols allowing for global expression analysis of the DNA, RNA, and Protein features and as the basis for intramural and extramural collaborations for secondary usage research. CBCP planned to: perform whole genome DNA sequencing on DNA from 60 cases of breast cancer; continued development of and support of a robust laboratory information management system to ensure proper tracking of data acquisition and a clinically relevant and laboratory research-linked prospective, longitudinal computerized data warehouse to support translational research and ultimately support physician decision making; continued development of an analytical system for integrative data analysis and mining, and further refined a breast knowledge base to support clinical and research activities in BC-COE; utilized Clinical Laboratory Workflow System as the data analysis tool and integrated AHLTA data from the military's main electronic medical record; identified and counseled 260 patients at high risk for development of breast cancer, and employed risk reduction strategies; performed targeted

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	378A: *CoE-Breast Cancer Center of Excellence (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
research by conducting DNA and Protein analysis of Stages I, II, and III breast cancer, cancer found in the breast ducts and lobules, and pre-malignant breast lesions; and presented findings in peer-reviewed publications and at national meetings. ***FY 2013 Plans:*** In FY13, the Breast Cancer CoE, also referred to as the Clinical Breast Care Project (CBCP), will enroll subjects seen at the Breast Translational Research Center in the "core" CBCP protocols. The CBCP will acquire specimens according to approved research protocols, and conduct analyses that will include but not be limited to: risk factors for developing breast cancer, effectiveness of various modalities of treatment, and actual risk of developing cancer. The CBCP will enhance the acquisition and banking of breast tissue, lymph nodes, serum/plasma and other blood derivatives from informed and consented donors to be the foundation for their translational research program. Initiatives within the translational research program include generation of a complete genomic DNA sequence from up to 60 breast cancer cases and utilization of antibody tissue staining and analysis to generate clinically relevant profiles of breast tumors to better stratify the disease in terms of prognosis and treatment options. The Biomedical Informatics Group will support the research activities of the Center as well as carry out research into new algorithms and methods to improve the detection and treatment of breast cancer. ***FY 2014 Plans:*** In FY 14, the Breast Cancer CoE (Army), also referred to as the Clinical Breast Care Project (CBCP), at Walter Reed National Military Medical Center (WRNMMC) Bethesda will continue to accrue subjects annually to the "core" CBCP protocols. The CBCP will continue to acquire, through consented protocol specimens (normal and abnormal breast tissues and tumors, lymph nodes, metastatic deposits, blood and its components, bone marrow) annually from subjects with all types of breast diseases and cancer. The repository will continue to be utilized as the basis for all molecular analyses in CBCP labs, as outlined in the CBCP Core Protocols allowing for global expression analysis of the DNA, RNA, and protein features and as the basis for intramural and extramural collaborations for secondary usage research. CBCP plans to perform whole genome DNA sequencing on DNA from 60 cases of breast cancer; continue the development of and support of a robust laboratory information management system to ensure proper tracking of data acquisition and a clinically relevant and laboratory research-linked prospective, longitudinal computerized data warehouse to support translational research and ultimately support physician decision making; continue development of an analytical system for integrative data analysis and mining, and further refine a breast knowledge base to support research activities in CBCP; utilizing Clinical Laboratory Workflow System as the data analysis tool and integrating AHLTA data from the military's main electronic medical record; identify research subjects at high risk for development of breast cancer, and employ risk reduction strategies; complete genomic and proteomic analysis of samples collected at various developmental stages of breast cancer, and present findings in peer-reviewed publications and at national meetings.			
Accomplishments/Planned Programs Subtotals	9.722	10.458	10.636

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	378A: *CoE-Breast Cancer Center of Excellence (Army)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance is judged on the number of active protocols, the number of articles that appear in peer-reviewed journals, and the number of contact hours in support of the training of residents and fellows in the Military Health System.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	379A: *CoE-Gynecological Cancer Center of Excellence (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
379A: *CoE-Gynecological Cancer Center of Excellence (Army)*	-	8.494	9.138	9.293	-	9.293	9.463	9.811	9.977	10.157	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Gynecologic Cancer Center of Excellence (Army) focuses on characterizing the molecular alterations associated with benign and malignant gynecologic disease and facilitates the development of novel early detection, prevention and novel biologic therapeutics for the management of gynecologic disease. The objective of this research is to reduce the incidence, morbidity (illness), and mortality (death) of gynecologic diseases among all military beneficiaries.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Gynecologic Cancer Center of Excellence (Army)	8.494	9.138	9.293

Description: The Gynecologic Cancer Center of Excellence focuses on characterizing the molecular alterations associated with benign and malignant gynecologic disease and facilitates the development of novel early detection, prevention and novel biologic therapeutics for the management of gynecologic disease.

FY 2012 Accomplishments:

For FY12, the Gynecologic Cancer Center of Excellence is externally validating the expression profiles associated with poor prognosis in endometrial cancer using independent retrospectively and prospectively collected sample sets. Discovery work in both endometrial and ovarian cancer integrated data from DNA, RNA, and protein studies is intended to correlate molecular profiles and related environmental behavior or exposure with cancer risk. Early detection studies focused primarily on testing of biomarker panels prospectively in patients at high risk for endometrial or ovarian cancer. The development of novel therapeutics continued aim at elevated biomarkers that were directly correlated with the tumor's behavior. Next generation sequencing of DNA and RNA was initiated to augment more clinically focused projects using gene and protein expression patterns. Molecular expression patterns associated with the chemo preventive affects of hormone and vitamin D regimens in both the mouse and the hen models were identified in an effort to understand the biology underlying risk reduction of endometrial and ovarian cancer respectively and to foster development of therapeutic regimens that have greater chemo preventive effect and reduced toxicity. A proof of concept vaccine trial is underway in endometrial and ovarian cancer. An intervention trial to assess the effects of stress intervention on recurrence of disease and associated changes in molecular expression is under development in patients with advanced endometrial and ovarian cancer.

FY 2013 Plans:

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	379A: *CoE-Gynecological Cancer Center of Excellence (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
In FY13, the Gynecologic Cancer Center of Excellence is extending our previous studies of gynecologic cancer metastasis and recurrence, patient survival, drug resistance and racial disparities in cancer outcome by completing clinical assay and validation studies of the most promising biomarker panels. Molecular based prediction models with the best sensitivity, specificity, as well as positive and negative predictive value are being promoted for specific clinical indications and deployment in independent surgical and/or biopsy specimens and biofluids. Data forthcoming from molecular studies (DNA, RNA, protein) is being integrated utilizing computational biology to elucidate systems level regulatory mechanisms underlying metastasis and recurrence in endometrial cancer along with drug resistance, tumor progression, and survival in primary compared with metastatic and recurrent ovarian cancers. Approximately 600 patients with gynecologic cancer undergoing surgery for primary or recurrent disease as well as additional control patients with benign conditions undergoing a hysterectomy are being enrolled on the Tissue and Data Acquisition Network (TDAN) Protocol to collect various types of tumor and normal tissues, blood for extraction of DNA, RNA and microRNA as well as serum and urine. TDAN specimens are linked with detailed clinical, treatment, outcome and life-style questionnaire data. The prospectively collected TDAN clinical specimens and epidemiologic data are being leveraged for discovery and validation studies associated with the Early Detection and Molecular Profiling Programs in FY14. Preclinical models are being developed to optimize the chemopreventive activity of hormone and vitamin D strategies for deployment in clinical trials of endometrial cancer. Our therapeutics program is continuing to evaluate novel vaccines in ovarian and endometrial cancer, and novel designs for tailored salvage therapy trials to direct endometrial or ovarian cancer patients with specific molecular defects/ alterations to specific classes of molecular targeting agents. An intervention study is being initiated to evaluate the effects of stress intervention on recurrence of disease in ovarian cancer, and to evaluate biomarker changes.			
FY 2014 Plans: In FY14, the Gynecologic Cancer Center of Excellence plans to conduct retrospective longitudinal and prospective validation studies of biomarker candidates from our previous studies of gynecologic cancer metastasis and recurrence, patient survival, drug resistance and racial disparities in cancer outcome. These investigations will rely on collected specimens as well as external biospecimen collections, such as the Gynecologic Oncology Group (GOG)-249 randomized treatment trial and the Prostate, Lung, Ovarian and Colorectal (PLCO) trial. The candidates identified in our preclinical models will be evaluated in human trials as surrogates/predictors of response to progesterone/progestin and vitamin D. Hypotheses generated from systems level integration of molecular studies will be evaluated using models of ovarian and endometrial cancer. These novel hypotheses will establish the framework for the next generation of molecularly targeted therapeutics and diagnostic therapy for gynecologic cancer patient management. Novel molecular candidates will be incorporated into a newly established ensemble of safety and efficacy gynecologic cancer clinical trials aimed at directing endometrial or ovarian cancer patients with specific molecular defects/alterations to tailored molecular targeting regimens, and testing new therapeutics for treatment of newly diagnosed and recurrence/refractory (resistant, unresponsive to surgery or therapy) cancer patients. The intervention trial will remain open			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	379A: *CoE-Gynecological Cancer Center of Excellence (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
to accrual to evaluate the effects of stress intervention on recurrence of disease in ovarian cancer, and to evaluate biomarker changes in serial biofluids.			
Accomplishments/Planned Programs Subtotals	8.494	9.138	9.293

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance of the Gynecological Cancer Center of Excellence is judged on the number of active protocols, the number of articles that appear in peer-reviewed journals, and the number of contact hours in support of the training of residents and fellows in the Military Health System.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	381A: *CoE-Integrative Cardiac Health Care Center of Excellence (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
381A: *CoE-Integrative Cardiac Health Care Center of Excellence (Army)*	-	3.584	3.857	3.921	-	3.921	3.993	4.141	4.210	4.285	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Cardiac Health Center of Excellence (Army), also known as the Integrative Cardiac Health Project (ICHP), the focus is the investigation of cutting edge patient-centric approaches to cardiovascular disease (CVD), risk assessment and risk reduction by incorporating biomolecular research to detect CVD at an early stage, and identifying markers of increased risk for heart attack in service members. Using a systems biology outcomes research approach, ICHP characterizes relationships between CVD, other cardio-metabolic disease states and maladaptive lifestyle behavior patterns unique to service members such as pre-diabetes, stress, overweight and sleep disorders with the aim of targeting these disorders in their pre-clinical phase and achieving ideal/optimal cardiovascular health goals outlined by the American Heart Association. ICHP's ultimate goal is to translate the evidenced-based research findings for application into clinical practice in an effort to achieve the following research aims: (1) improve Force Health by better understanding the CVD risk susceptibility of military specific populations such as Wounded Warriors through leading-edge research using novel tools and technologies, (2) investigate and create transformational models of healthcare delivery through personalized CVD prevention tracks as an adjunct to traditional care, and (3) refine individualized prevention strategies through statistical data modeling to define the most cost-effective and sustainable approaches in promoting cardiovascular health throughout the military lifecycle.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Cardiac Health Center of Excellence (Army)	3.584	3.857	3.921
Description: The focus is the investigation of cutting edge patient-centric approaches to cardiovascular disease (CVD), risk assessment and risk reduction by incorporating biomolecular research to detect CVD at an early stage, and identifying markers of increased risk for heart attack in service members.			
FY 2012 Accomplishments: In FY12, the Cardiac Health Center of Excellence (Army), also known as the Integrative Cardiac Health Project (ICHP), conducted prospective randomized investigations for comprehensive and integrative CVD risk assessment and risk reduction, prevention strategies and tools as a model of care (nutrition, weight reduction, exercise, sleep improvement and stress reduction) to promote warrior wellness and operational fitness; strategic translational research program completing scheduled longitudinal research deliverables; incorporated discovery data from genome expressions, transcriptions and proteomic patterns for early risk detection; utilized advanced data modeling of real time outcomes data to dynamically identify patterns of CVD risk that will guide optimal			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	381A: *CoE-Integrative Cardiac Health Care Center of Excellence (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
evidence-based care; utilized personalized and targeted approaches for more optimal warrior wellness as a force multiplier, and continued to publish scientific results. ***FY 2013 Plans:*** For FY13, the Cardiac Health Center of Excellence (Army), also known as the Integrative Cardiac Health Project (ICHP), is collaborating with Physical Medicine WRNMMC to conduct a comparative cohort study to determine comprehensive CVD risk assessment in Wounded Warriors with traumatic war amputations, the first study of its kind. In another first of its kind, ICHP is performing a randomized prospective study to determine the effectiveness of the ICHP CVD risk reduction model on endothelial, diastolic, and molecular functions in patients with low 10-year CVD risk but high lifetime-risk for CVD. Many active duty members are unaware that they have low short term risk but high lifetime risk. In another study we are testing the feasibility of a novel finger stick point- of- care technology and the ICHP CVD risk reduction model to generate disease maps in pre-diabetic ICHP patients at risk for CVD. In examining a novel scientific process, ICHP is utilizing a modified serum DNA amplification process in samples from the DoD serum repository. If successful, this will be breakthrough technology to be able to obtain DNA from the DoD serum repository samples for future studies. This will be the first step to use this technique to identify young military members at risk for heart attack. ICHP is continuing development of a robust data management system. This enhanced integrative data collection is designed to capture a full picture of the individual to include physiological, behavioral, biochemical and molecular information. Our platform gathers an expansive number of data points that when leveraged can create new tools and refine processes to better define wellness, predict disease, empower patients, transform delivery to improve QOL and deliver personalized CVD prevention in the military population. ICHP's vision of lifelong cardiovascular health supports the Military Health System (MHS) Strategic Plan creating value to the MHS. ***FY 2014 Plans:*** In FY14, the Cardiac Health Center of Excellence (Army), also known as the Integrative Cardiac Health Project (ICHP), will continue research studies initiated in FY 12-13. Data collection from approved FY12-13 protocols will be continued as well as analyzed and synthesized. ICHP will translate and communicate best practices to the services in order to augment clinical practice. Utilizing our Knowledge to Action framework, we will incorporate findings from our studies for new hypothesis generation and development of new protocols for FY 14-18 to expand the use of point of care technology in the ICHP model, whole genome sequencing for early CVD detection, and investigate the use of serum biomarker maps for personalized CVD risk assessment in Wounded Warriors.			
Accomplishments/Planned Programs Subtotals	3.584	3.857	3.921

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	381A: *CoE-Integrative Cardiac Health Care Center of Excellence (Army)*

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance of the Cardiac Health Center of Excellence is judged on the number of active protocols, the number of articles that appear in peer reviewed journals, and the number of contact hours in support of the training of residents and fellows in the Military Health System.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	382A: *CoE-Pain Center of Excellence (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
382A: *CoE-Pain Center of Excellence (Army)*	-	2.715	2.921	2.971	-	2.971	3.025	3.137	3.190	3.247	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Pain Center of Excellence (Army) examines the relationship between acute and chronic pain and focuses on finding, implementing, and evaluating the most effective methods of relieving the acute pain caused by combat trauma and the effect this has throughout the continuum to rehabilitation and reintegration. The Pain Center of Excellence is an integral part of the Defense and Veterans Center for Integrative Pain Management (DVCIPM) whose mission is to become a referral center that supports world class clinical pain services, provides education on all aspects of pain management, coordinates and conducts Institutional Review Board approved clinical research and Institutional Animal Care and Use Committee approved basic laboratory and translational pain research, and serves as the advisory organization for developing enterprise-wide pain policy for the Military Health System.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Pain Center of Excellence (Army)	2.715	2.921	2.971
Description: The Pain Center of Excellence examines the relationship between acute and chronic pain and focuses on finding, implementing, and evaluating the most effective methods of relieving the acute pain caused by combat trauma and the effect this has throughout the continuum to rehabilitation and reintegration.			
FY 2012 Accomplishments: In FY12, the Pain Center of Excellence members of the Defense and Veterans Center for Integrative Pain Management (DVCIPM) remain the subject matter experts on pain in the DoD with an emphasis on improved communication across the tri-services and Veterans Health Administration. The DVCIPM provided the template for a national collaborative research foundation and provided protocol oversight and prioritization and an administrative infrastructure for service-wide pain management standardization. The protocols approved in FY11 continued data collection. The clinical research portion developed and validated best pain practices by actively tracking outcomes and populating new and existing databases.			
FY 2013 Plans: In FY13, the Pain Center of Excellence is reviewing data collected from approved FY11-12 protocols, and the center is writing general management and/or general practice guidelines that can be utilized in treating acute and chronic pain. Findings are being communicated to the tri-services as well as the Veterans Health Administration in an effort to standardize pain management			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	382A: *CoE-Pain Center of Excellence (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
across agencies. Established protocols will continue with data collection and evaluation. Proposed protocols will obtain Institutional Review Board approval and begin data collection. ***FY 2014 Plans:*** In FY14, the Pain Center of Excellence members of the Defense and Veterans Center for Integrative Pain Management (DVCIPM) will continue to validate major lines of effort including the Defense and Veterans Pain Rating Scale (DVPRS), Pain Assessment Screening Tool and Outcomes Registry/Patient Reported Outcome Measurement Information System (PASTOR/PROMIS), and Extension for Community Healthcare Outcomes (ECHO) programs. DVCIPM will continue to explore pain management therapeutic options to develop and optimize best practice guidelines for the treatment of pain. The research program will focus on evaluation of current medications for improved pain management, clinical assimilation study of integrative medicine modalities including yoga and acupuncture, and exploration of the pathophysiology (functional change) and molecular mechanisms of pain with established and new academic partners. DVCIPM will also continue to provide subject matter expertise, coordination, and guidance to all services and Veterans Health Administration regarding pain related issues in support of the Pain Task Force.			
Accomplishments/Planned Programs Subtotals	2.715	2.921	2.971

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance by the Pain Center of Excellence is judged on the number of active protocols, the number of articles that appear in peer reviewed journals, and the number of contact hours in support of the training of residents and fellows in the Military Health System.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	383A: *CoE-Prostate Cancer Center of Excellence (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
383A: *CoE-Prostate Cancer Center of Excellence (USUHS)*	-	7.164	7.978	8.294	-	8.294	8.634	8.943	9.093	9.256	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Uniformed Services University of the Health Sciences (USUHS), the Prostate Cancer Center of Excellence (CoE), formerly a Congressional Special Interest program, was chartered in 1992 to conduct basic, clinical and translational research programs to combat diseases of the prostate. The program's mission is fulfilled primarily through its three principal programs- the Clinical Translational Research Center, the Basic Science Research Program and the Tri-Service Multicenter Prostate Cancer Database which encompasses its clinical research work with other participating military medical centers. These affiliated sites contribute data and biospecimens obtained from prostate cancer patients and participate in clinical trials.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: CoE-Prostate Cancer Center of Excellence (USUHS)	7.164	7.978	8.294

Description: The Prostate Cancer Center of Excellence (CoE), formerly a Congressional Special Interest program, was chartered in 1992 to conduct basic, clinical and translational research programs to combat diseases of the prostate. The program's mission is fulfilled primarily through its three principal programs- the Clinical Translational Research Center, the Basic Science Research Program and the Tri-Service Multicenter Prostate Cancer Database which encompasses its clinical research work with other participating military medical centers. These affiliated sites contribute data and biospecimens obtained from prostate cancer patients and participate in clinical trials.

FY 2012 Accomplishments:

The Prostate Cancer COE provides state-of-the-art translational clinical research care for approximately 8,000 military beneficiaries, including 300 newly diagnosed cases of prostate cancer per year. In FY12, the Prostate Cancer CoE published 21 peer-reviewed publications and 4 invited articles. In addition, researchers at the Prostate Cancer CoE presented 6 podium presentations and 28 poster presentations at major national and international conferences. The research efforts continue to focus on ERG alterations, the most prevalent oncogenic defect for the development of a highly specific detection panel (ERG, AMACR and PCA3) for urine-based diagnosis of prostate cancer, and the therapeutic potential of targeting ERG in a large proportion of patients. Collaborations are currently in place to develop biologically relevant prognostic biomarkers and therapeutic targets for prostate cancer onset/progression. The Prostate Cancer COE is currently utilizing NextGen Sequencing technology and state-of-the-art bio-informatic software analysis via collaborators of constitutional and tumor genomic DNA to compare prostate cancer genomes of Caucasian-American and African-American patients to identify differences in molecular alterations.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	383A: *CoE-Prostate Cancer Center of Excellence (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
The Prostate Cancer COE also utilized its training program to train 3 Urology Residents from the Walter Reed National Military Medical Center, 2 medical students from the USU, 4 postdoctoral fellows, 2 international urology fellows, and 7 undergrad and high school summer interns. ***FY 2013 Plans:*** • Evaluate new treatment strategies through innovative clinical trials to enhance the quality of life of prostate cancer patients, such as, High Frequency Focused Ultrasound, Cyber-knife, Robot-assisted Surgery and new androgen ablative mechanisms along with chemotherapeutic agents. • Develop and enhance ERG-targeted diagnosis and therapy in prostate cancer, by translating the Prostate Cancer COE ERG monoclonal antibody into a routine diagnostic tool with a leading industrial partner for world-wide diagnosis of prostate cancer, and developing innovative strategies to inhibit ERG oncogenesis using tumor targeted nano-liposomes, small molecular inhibitors and ERG vaccine for controlling the most prevalent oncogenic activation in prostate cancer. • Improve non-invasive approaches for detection of prostate cancer in urine or blood specimens by using ERG monoclonal antibody and complementary tools. • Provide solution for the unmet need of prognostic biomarkers that will differentiate between indolent and aggressive disease. • Leverage Prostate Cancer COE discoveries of Cell-specific signatures and develop new strategies of cancer genomics. • Develop effective strategies to transform Prostate Cancer COE database and biospecimen banks to a national center for academic and industrial collaborations to accelerate translational research. • Accelerate prostate cancer-related genome queries by acquiring high-throughput technologies such as Next-generation sequencing and Advanced bioinformatics capability. ***FY 2014 Plans:*** • Continue to conduct long-term comparisons of efficacy, morbidity, mortality and quality-of-life impact for accepted and emerging treatments for early stage prostate cancer to include robot assisted radical prostatectomy, external beam radiotherapy, brachytherapy, cryotherapy, high intensity focused ultrasound, and watchful waiting. Assess the impact of these treatments with or without neoadjuvant and adjuvant hormonal or other novel therapies • Develop accurate prognostic models to predict organ-confined (curable) and outcome (survival) after treatment • Conduct long-term study of the epidemiology of prostate cancer, to include the tracking of changing stage, age at diagnosis, racial makeup, long-term survival, and quality-of-life-adjusted survival • Discover frequent and potentially causal prostate cancer gene alterations utilizing cutting edge technologies and well annotated and precisely processed bio-specimens • Continue to evaluate cancer biology of prostate cancer relevant genes and/or proteins using established new experimental models and technologies			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	383A: *CoE-Prostate Cancer Center of Excellence (USUHS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
• Develop new molecular strategies for improving prostate cancer diagnosis and prognosis (specifically to find replacement for PSA test) • Identify molecular determinants of prostate cancer susceptibility in high-risk groups such as African-Americans • Continue to develop and maintain long-term molecular specimen resources for translational investigations at CPDR and collaborations with other institutions • Educate and train the next generation of basic science and translational researchers in prostate cancer • Continue to enhance the Multi-national Database by building clinical models that will predict probability of prostate cancer in the diagnosis phase, optimal primary treatment in the treatment phase, and optimal recurrence treatment and outcome in the follow-up phase • Integrate clinical and molecular biomarker prognostic variables for evaluating patient diagnosis, progression and treatment outcomes • Create probability models via the Web that can be accessed by patients and physicians as tools for public education, patient self-testing and a physician decision support reference • Develop a structured molecular oncology training program in prostate cancer for physicians and scientists			
Accomplishments/Planned Programs Subtotals	7.164	7.978	8.294

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Prostate Cancer Center of Excellence: Performance is judged on the amount of extramural funding received, the number of active protocols, the number of articles that appear in peer reviewed journals, and the number of contact hours in support of the training of residents and fellows in the Military Health System.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	398A: *CoE-Neuroscience Center of Excellence (USUHS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
398A: *CoE-Neuroscience Center of Excellence (USUHS)*	-	1.822	1.948	1.981	-	1.981	2.017	2.053	2.088	2.126	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Uniformed Services University of the Health Sciences (USUHS), the Neuroscience Center of Excellence (CoE), formerly a Congressional Special Interest program, was chartered in 2002 to conduct basic, clinical and translational research studies of militarily relevant neurological disorders affecting U.S. service members and military medical beneficiaries. The Center's mission is to improve prevention, diagnosis and treatment of neurological disorders that directly affect warfighters through a USUHS led program that collaborates broadly with military, civilian and federal medical institutions.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: CoE-Neuroscience Center of Excellence (USUHS)	1.822	1.948	1.981
Description: The Neuroscience Center of Excellence (CoE), formerly a Congressional Special Interest program, was chartered in 2002 to conduct basic, clinical and translational research studies of militarily relevant neurological disorders affecting U.S. service members and military medical beneficiaries. The Center's mission is to improve prevention, diagnosis and treatment of neurological disorders that directly affect warfighters through a USUHS led program that collaborates broadly with military, civilian and federal medical institutions.			
FY 2012 Accomplishments: The Neuroscience Center of Excellence established an intramural competitive grant program in August 2011. The CoE issued an RFA on 15 November, 2011. The response was excellent and 24 proposals were received. The proposals were sent for external peer scientific quality review in February 2012 and the scores and rankings were received in April 2012. Since then, the proposals have been held at USUHS Office of Research before release to the Scientific Advisory Committee for their programmatic review.			
FY 2013 Plans: (1) Award grants to selected proposals. Support and coordinate implementation of research, and (2) Define priorities for a new RFP to be released as soon as FY13 funding becomes available.			
FY 2014 Plans: (1) Award grants to selected proposals. Support and coordinate implementation of research, and (2) Define priorities for a new RFP to be released as soon as FY13 funding becomes available.			
Accomplishments/Planned Programs Subtotals	1.822	1.948	1.981

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	398A: *CoE-Neuroscience Center of Excellence (USUHS)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance is judged on the number of active protocols, the number of articles that appear in peer reviewed journals, and the amount of extramural funding received.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	429A: *Hard Body Armor Testing (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
429A: *Hard Body Armor Testing (Army)*	-	0.813	0.607	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Hard Body Armor project plans to develop a surface-mounted sensor system that will add critical dynamic data to the current clay test procedure and develops human skull fracture injury criteria for focused blunt impacts to the human head. This research develops and validates a method for assessing body armor performance against blunt trauma and will be fully compatible with the current testing method. The adoption of armor and helmet design standards that estimate injury type and severity based on biomechanics will allow designers to rationally create armor and helmets that protect each body region and allow the development of standards based on true protection outcomes.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Hard Body Armor	0.813	0.607	0.000
Description: Develop a surface-mounted sensor system that will add critical dynamic data to the current clay test procedure and develops human skull fracture injury criteria for focused blunt impacts to the human head. ***FY 2012 Accomplishments:*** The Hard Body Armor project initiated validation of system components of a surface mounted clay add-on device through field testing. The results will determine the success of the sensor system components to the surface mounted clay add-on device, a prerequisite for future live fire system field tests. ***FY 2013 Plans:*** The Hard Body Armor project is validating the performance of the surface mounted clay add-on device using live-fire tests of military grade armor systems. This will provide the first bio-medically valid behind-body-armor design standard allowing equipment developers to design body armor appropriate to the specific needs of each region of the body. Also, the Hard Body Armor project will determine the probability of skull fracture in relation to measured injury metrics such as head acceleration load. A body armor surface sensor working prototype will be developed. In addition, head injury prediction simulations will be conducted to associate observed skull fractures with well-defined loading/injury scenarios. ***FY 2014 Plans:*** No funding is programmed.			
Accomplishments/Planned Programs Subtotals	0.813	0.607	0.000

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	429A: *Hard Body Armor Testing (Army)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Principal investigators will participate in In-Progress Reviews, high-level DHP-sponsored review and analysis meetings, submit quarterly and annual status reports, and/or are subjected to Program Sponsor Representative progress review to ensure that milestones are being met and deliverables will be transitioned on schedule.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	431A: *Underbody Blast Testing (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
431A: *Underbody Blast Testing (Army)*	-	14.544	13.142	11.614	-	11.614	5.353	2.977	2.077	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Underbody Blast Testing medical research project will provide an understanding of the biomechanics of skeletal injuries that occur in a combat vehicle UBB event involving a landmine or IED, and to provide the biomedical basis for the development of a Warrior-representative blast test manikin and associated biomedically-validated injury criteria that can be used to characterize dynamic events and injury risks for live-fire test and evaluation (LFT&E) crew survivability assessments and vehicle development efforts to better protect Warriors from UBB threats. Current test manikins were exclusively designed for the civilian automotive industry and as such are not suitable to the combat environment. Current manikins do not represent the modern Soldier or the vertical acceleration environment associated with UBB events, consequently, current LFT&E crew survivability assessment methodologies are limited in their ability to predict the types and severity of injuries seen in these events. Due to this technology gap, military ground vehicles are being fielded without fully defined levels of injury risk and crew survivability for UBB events. There is a critical need for an enhanced blast test manikin capable of illuminating these injury mechanisms.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Underbody Blast Testing	14.544	13.142	11.614
Description: Will provide an understanding of the biomechanics of skeletal injuries that occur in a combat vehicle UBB event involving a landmine or IED, and to provide the biomedical basis for the development of a Warrior-representative blast test manikin and associated biomedically-validated injury criteria that can be used to characterize dynamic events and injury risks for live-fire test and evaluation (LFT&E) crew survivability assessments and vehicle development efforts to better protect Warriors from UBB threats.			
FY 2012 Accomplishments: In FY12, the Underbody Blast Testing project awarded cooperative agreements to multiple academic medical research performers to determine and characterize whole body human biofidelic (physical characteristics such as size, shape and mass) and biodynamic responses to loading conditions representative of UBB exposures. Cadaveric studies were begun to determine dynamic response, injury probability curves, and injury assessment reference values after initiation and approval of the Army cadaveric policy. The medical research strategy, integration and synchronization plans were completed to standardize research methodologies, and Jumpstart cadaveric research and Generic Hull whole body experiments were completed to provide baseline research with releasable data. UBB theater casualty injury analysis was completed to define environment, and incoming research data was evaluated by an orthopedic expert panel of clinicians to prioritize injuries and provide clinical correlation. Data from			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	431A: *Underbody Blast Testing (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
research established a scientific and statistical basis for evaluating skeletal injuries to occupants during UBB events and helped finalize initial Anthropomorphic Test Device specifications. ***FY 2013 Plans:*** In FY13, the Underbody Blast Testing project plans to finalize the human response data package, including whole body kinematics, anthropometry, and ATD specifications and instrumentation for development of a prototype Gen1 ATD and accompanying injury criteria. Initial research efforts will focus on human biofidelity (physical characteristics such as size, shape, and mass) response corridors and high rate material properties for the individual body regions, with foot and ankle, lower leg, and upper extremity work completed first. There will be a sequential focus of research within a particular body region, beginning with a nominal whole body position (seated individual, primarily vertical loading for destructive testing), followed by variation in orientation and posture with more complex and/or non-vertical loadings that cause injury, all with the development of biofidelity corridors. ***FY 2014 Plans:*** The Underbody Blast Testing project will complete lower extremities biofidelity (physical characteristics such as size, shape, and mass) and human tolerance research that will enable the development and contractor evaluation phase of the Gen 1 ATD. Research data collected during FY14 will be used to begin the design of the Gen2 ATD and will focus on human injury risk curves, with work continuing on upper leg, pelvis, spine, neck and head. Medical research will add variations in boundary conditions and other initial condition, including the effect of personal protective equipment.			
Accomplishments/Planned Programs Subtotals	14.544	13.142	11.614

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Principal investigators will participate in In-Progress Reviews, high-level DHP-sponsored review and analysis meetings, submit quarterly and annual status reports, and are subjected to Program Sponsor Representative progress review to ensure that milestones are being met and deliverables will be transitioned on schedule. An external peer review of the medical research strategy will be scheduled to ensure the medical research plan is on course to yield the best acceptable results.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	448A: *Military HIV Research Program (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
448A: *Military HIV Research Program (Army)*	-	0.000	0.000	7.111	-	7.111	7.216	7.321	7.445	7.579	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project funds research to develop candidate HIV vaccines, to assess their safety and effectiveness in human subjects, and to protect the military personnel from risks associated with HIV infection. In addition, it is designed to find ways to protect the blood supply from contamination with HIV virus. All HIV technology development is conducted in compliance with US Food and Drug Administration (FDA) regulations. Evaluations in human subjects are conducted to demonstrate safety and effectiveness of candidate vaccines, as required by FDA regulation. Studies are conducted stepwise: first, to prove safety; second, to demonstrate the desired effectiveness of the drug, vaccine, or device for the targeted disease or condition in a small study; and third, to demonstrate effectiveness in large, diverse human population trials. All results are submitted to the FDA for evaluation to ultimately obtain approval (licensure) for medical use. This project supports studies for effectiveness testing on small study groups after which they transition to the next phase of development for completion of effectiveness testing in larger populations. This program is jointly managed through an Interagency Agreement by USAMRMC and the National Institute of Allergy and Infectious Diseases (NIAID). This project contains no duplication with any effort within the Military Departments or other government organizations. The cited work is also consistent with the Assistant Secretary of Defense, Research and Engineering Science and Technology focus areas.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Military HIV Research Program	0.000	0.000	7.111
Description: The Military HIV Research Program aims to develop candidate HIV vaccines, to assess their safety and effectiveness in human subjects, and to protect the military personnel from risks associated with HIV infection. ***FY 2012 Accomplishments:*** No DHP funding programmed. ***FY 2013 Plans:*** No DHP funding programmed. ***FY 2014 Plans:*** The Military HIV Research Program will conduct safety and effectiveness studies with a combination vaccine in human volunteers at clinical trial sites world-wide and will down-select best candidates for further testing in human volunteers to study the ability of HIV vaccine candidates to provoke an immune response that can protect against HIV.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	7.111

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	448A: *Military HIV Research Program (Army)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance of the HIV research program will be monitored and evaluated through an external peer review process, with periodic reviews by the HIV Program Steering Committee and the Military Infectious Diseases Research Program Integrating Integrated Project Team to include Health Affairs representation.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	830A: *Deployed Warfighter Protection (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
830A: *Deployed Warfighter Protection (Army)*	-	5.077	5.472	5.576	-	5.576	5.691	5.896	5.997	6.105	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Armed Forces Pest Management Board (AFPMB), the Deployed Warfighter Protection project plans to develop new or improved protection for ground forces from disease-carrying insects. The focus of this program is to develop new or improved systems for controlling insects that carry disease under austere, remote, and combat conditions; understand the physiology of insecticidal activity to develop new compounds with greater specific activity and/or higher user acceptability; examine existing area repellents for efficacy and develop new spatially effective repellent systems useful in military situations; develop new methods or formulations for treating cloth to prevent vector biting; and expand the number of active ingredients and formulations of public health pest pesticides, products and application technologies available for safe, and effective applications.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Deployed Warfighter Protection	5.077	5.472	5.576

Description: The Deployed Warfighter Protection Program will develop new or improved protection for ground forces from disease-carrying insects.

FY 2012 Accomplishments:
The Deployed Warfighter Protection project continued to explore plans that began in FY11, such as the development of new control methods for mosquitoes, sand flies, filth flies and other insects of military importance; evaluations of equipment and pesticide efficacy trials in desert, temperate and tropical environments; improved control methods for mosquitoes and sand flies, considered the main disease-bearing insect threats to deployed forces; and the modification of insecticide application technology to better target disease carrying insects impacting military readiness. Specifically, DWFP produced 8 market-ready or near market-ready products for use by deployed military members in FY12. Several of these products are now available through the military stock system and are now in operational use. These include the Florida Fly Baiter® (FFB) filth fly killing device. The FFB and the insecticide used on the device were both produced through DWFP funding. Another killing device called the Honey Trap® received Environmental Protection Agency (EPA) registration for use against sand flies and mosquitoes. The Honey Trap® will soon be available commercially. Other significant advancements include a rodent feed-through insecticidal bait registration (Kaput®) now available to military members through the stock system and registered for use against OCONUS sand flies. This is the first known example of an EPA registered product that can be used to control pests not found in the United States. Significant advances were also made toward commercial development of another feed-through insecticide project using

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	830A: *Deployed Warfighter Protection (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
a different insecticide active ingredient. Numerous commercially available and experimental insecticides and sprayers were tested, with the best performers added to the military stock system. These include a new insecticide for killing adult mosquitoes and other flies and a new thermal fog sprayer that outperformed the equipment currently available to the military. A patent and licensing agreement with a commercial partner was signed for a "attract and kill" device for mosquitoes using a technique called autodissemination. Likewise, licensing agreements were signed with a commercial partner for a repellent and tick toxicant called nootkatone. Two new smart phone applications are now available to the military and civilian sector for aerial and ground insecticides (Vectorspray®). ***FY 2013 Plans:*** The Deployed Warfighter Protection project will continue 2012 efforts to add resources and develop products for the military stock system allowing deployed forces to protect themselves and control militarily important insects that bite, sting and transmit force degrading diseases. This will be accomplished through continued research, development, patent submissions, licensing and EPA registrations for new insecticides, application technologies and repellent systems. The DWFP will (1) actively pursue EPA product label changes for use against disease-carrying insects threatening deployments outside the United States; (2) continue field trials and develop reduced risk pesticides such as targeted "Sugar Baits" and other insecticides found to be effective for desert sand fly, filth and biting fly control; (3) continue cooperative work and formal agreements with industry that promotes insecticide development and EPA registration; (4) evaluate insect control materials and application technology in collaboration with military and other labs in Africa, Asia, and other global locations; (5) field next generation "lethal ovitraps" designed to attract and kill disease carrying mosquitoes; (6) continue field trials and perfect formulation of molecular (RNAi), highly specific insecticides; (7) continue field evaluations of experimental and military stock listed equipment and insecticides against CONUS and OCONUS medically important insects; (8) continue to evaluate new commercial sprayers, with best performing sprayers added to the military stock system; (9) continue assessments of how insecticide aerosols kill insects in desert, temperate and tropical environments; continue CONUS and OCONUS evaluations of spatial repellents and insecticides as barriers for sand flies and other medically important arthropods; (10) evaluate prototype of hybrid insecticide sprayers that use best attributes of existing technology; (11) continue to evaluate repellent and insecticide effectiveness for protection of military personnel wearing insecticide treated uniforms; (12) continue to validate efficacy of military issue repellents against insects that are infected with disease causing pathogens; (13) conduct field evaluations of military uniform attachments impregnated with volatile insecticide to kill and repel insects; (14) continue to identify sensory structures on mosquitoes that detect DEET and other repellent active ingredients, a basic finding that can lead to custom blends and molecular designs of new repellents; (15) continue to screen and develop plant-derived insecticides and repellents with high potential for military use; (16) continue to develop and field new insecticides and improved formulations to treat military uniforms and other military textiles used in a variety of climates; (17) develop and field new stock-listed insecticide sprayers; (18) and continue to screen chemicals for insecticidal and repellency properties. ***FY 2014 Plans:***			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0603115HP: *Medical Technology Development*	830A: *Deployed Warfighter Protection (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
The Deployed Warfighter Protection project will continue 2012 and 2013 efforts to add resources and develop products for the military stock system allowing deployed forces to protect themselves and control militarily important insects that bite, sting and transmit force degrading diseases. This will be accomplished through continued research, development, patent submissions, licensing, and EPA registrations for new insecticides, application technologies and repellent systems. In addition to the Middle East and Africa, DWFP will prioritize research efforts that focus on militarily important arthropods (mosquitoes, sand flies, fleas, mites, ticks, and spiders), insecticides and application technologies for use in the Pacific Theater. The DWFP will (1) actively research, develop and then pursue EPA product label changes for use against disease-carrying insects threatening deployments outside the United States; (2)continue field trials and development of reduced risk pesticides; (3) continue cooperative work and formal agreements with industry that promotes development, and EPA registration; (4) evaluate insect control materials and application technology in collaborations with military and other labs in Africa, Asia and the Middle East; (5) continue field trials and perfect formulation and target sites of molecular insecticides; (6) continue field evaluations of experimental and military stock listed equipment and insecticides against medically important insects not found in the United States; (7) continue to evaluate new commercial sprayers, with best sprayers to be included in military stock system; (8)continue assessments of how insecticidal aerosols kill insects in desert, temperate and tropical environments; (9) continue overseas evaluations of spatial repellents and insecticides as barriers for sand flies and other medically important arthropods; (10) continue to develop bite resistance military uniforms; (11) conduct field evaluations of military uniform attachments impregnated with volatile insecticide to kill and repel insects; (11) continue to screen and develop plant-derived insecticides and repellents with high potential for military use; (12) continue to develop and field new insecticides and improved formulations to treat military uniforms and other military textiles used in hot, desert, temperate and tropical climates; (13) develop and field new stock-listed insecticide sprayers; (14) and continue to screen thousands of chemicals for insecticidal and repellency properties.			
Accomplishments/Planned Programs Subtotals	5.077	5.472	5.576

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance for the Deployed Warfighter Protection Program is measured by the insecticides and other products given EPA registration and added to the military stock system, pest management techniques or technologies used by the military to control biting/disease causing insects, patents, and peer-reviewed scientific manuscripts.

APPROPRIATION/BUDGET ACTIVITY
0130: *Defense Health Program*
BA 2: *RDT&E*

R-1 ITEM NOMENCLATURE
PE 0604110HP: *Medical Products Support and Advanced Concept Development*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	191.536	144.403	132.430	-	132.430	146.610	116.973	133.255	139.115	Continuing	Continuing
374A: *GDF-Medical Products Support and Advanced Concept Development*	-	159.890	144.403	132.430	-	132.430	146.610	116.973	133.255	139.115	Continuing	Continuing
400Z: *CSI - Congressional Special Interests*	-	27.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
434A: *AF-Medical Products Support and Advanced Concept Development*	-	3.896	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Guidance for Development of the Force (GDF) - Medical Products Support And Advanced Concept Development: funding is for product support and advanced concept development of medical products that are regulated by the US Food and Drug Administration (FDA); the accelerated transition of FDA-licensed and unregulated products and medical practice guidelines to the military operational user, through clinical and field validation studies; prototyping, risk reduction and product transition efforts for medical information technology applications; and medical training systems' technologies.

The resulting advanced development portfolio is designed to address the following: areas of interest to the Secretary of Defense regarding Wounded Warriors, capabilities identified through the Joint Capabilities Integration and Development System and the strategy and initiatives described in the Quadrennial Defense Review. Program development and execution is peer-reviewed and fully coordinated with all of the Military Services, appropriate Defense Agencies or Activities and other federal agencies, to include the Department of Veterans Affairs, the Department of Health and Human Services, and the Department of Homeland Security. This coordination occurs through the planning and execution activities of the Joint Program Committees, established for the Defense Health Program Research, Development, Test and Evaluation funding. Research supported by this program element includes accelerated transition of medical training and health information sciences, to include efforts at the Pacific Based Joint Information Technology Center, advanced development of rapid pathogen detection in fresh whole blood, field assessment of intervention tools for post traumatic stress disorder (PTSD), and clinical trials on biomarkers for traumatic brain injury (TBI) and spinal cord injury, combat casualty care advanced product development and rehabilitative medicine clinical trials.

The Army Medical Command received DHP Congressional Special Interest (CSI) research funding focused on Peer-Reviewed Traumatic Brain Injury and Psychological Health Research, and Peer-Reviewed Joint Warfighter Medical Research. Because of the CSI annual structure, out-year funding is not programmed.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	189.844	144.403	132.430	-	132.430
Current President's Budget	191.536	144.403	132.430	-	132.430
Total Adjustments	1.692	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-2.308	-			
• Reprogramming - Rapid Product Integration and Transition (AF)	4.000	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2012	FY 2013
Project: 400Z: *CSI - Congressional Special Interests*		
Congressional Add: *427A - Traumatic Brain Injury/ Psychological Health*	17.750	-
Congressional Add: *441A - Joint Warfighter Medical Research Program*	10.000	-
Congressional Add Subtotals for Project: 400Z	27.750	0.000
Congressional Add Totals for all Projects	27.750	0.000

Change Summary Explanation

FY 2012: Restore FY 2013 President's Budget decrease to Congressional Special Interest from DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (-$0.694 million) to DHP RDT&E, PE 0604110- Medical Products Support and Advanced Concept Development (+$0.694 million).

Realignment from DHP RDT&E, PE 0604110-Medical Products Support and Advanced Concept Development (-$3.002 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$3.002 million).

Prior Approval Reprogramming (FY 12-18 PA) from DHP O&M, Budget Activity Group: Private Sector Care (-$4.000 million) to DHP RDT&E, PE 0604110-Medical Products Support and Advanced Concept Development (+$4.000 million) for Rapid Product Integration and Transition (AF).

FY 2013: No Change

APPROPRIATION/BUDGET ACTIVITY	**R-1 ITEM NOMENCLATURE**
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*

FY 2014: No Change

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*	374A: *GDF-Medical Products Support and Advanced Concept Development*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
374A: *GDF-Medical Products Support and Advanced Concept Development*	-	159.890	144.403	132.430	-	132.430	146.610	116.973	133.255	139.115	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Guidance for Development of the Force (GDF)-Medical Products Support and Advanced Concept Development: Advanced development efforts are intended to support clinical trials of promising technologies that may provide solutions for the most pressing medical needs of the Warfighter, acceleration of the transition of those technologies to the operators in the field, and promulgation of new, evidence-based approaches to the practice of medicine as clinical practice guidelines. Research will be conducted in four specific areas: trials for accelerated transition of modeling and simulation technology for medical training/education/treatment; trials for accelerated transition of medical technology, practice guidelines, and standards; advanced component development of medical products; and medical information technology development. Within the research areas of health informatics, research efforts will include force health protection and readiness, medical resourcing, healthcare services, and enterprise information management. Future efforts will provide long term efficiencies by defining processes to grow and improve the electronic healthcare record and other medical related systems, and to implement new trends and advancements in technology. The efforts will help improve healthcare access, availability, continuity, cost effectiveness, and quality. Initial candidates will be selected from those funded by other medical research sponsors in the Department, and from external sources such as academia and industry, including efforts funded with prior year Congressional special interest funding. Research supported by this program element includes medical simulation and training, health informatics, advanced development of rapid pathogen detection in fresh whole blood, field assessment of intervention tools for PTSD, and clinical trials on biomarkers for TBI and spinal cord injury, combat casualty care advanced product development and rehabilitative medicine clinical trials.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: GDF – Medical Product Support and Advanced Concept Development	159.890	144.403	132.430
Description: Product support and advanced concept development of medical products that are regulated by the US Food and Drug Administration (FDA); the accelerated transition of FDA-licensed and unregulated products and medical practice guidelines to the military operational user, through clinical and field validation studies; prototyping, risk reduction and product transition efforts for medical information technology applications; and medical training systems' technologies.			
FY 2012 Accomplishments: Medical training and health information sciences (MTHIS) research has identified multiple prototypes and strategic project areas that support force health protection & readiness, medical resourcing, healthcare services, and enterprise infrastructure management. Defined processes to develop and integrate capabilities into the Defense Medical Research and Development			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*	374A: *GDF-Medical Products Support and Advanced Concept Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Program through projects to improve healthcare access, availability, continuity, cost-effectiveness, and quality. MTHIS has supported efforts to study military healthcare provider skill degradation following prolonged absence from their usual specialty practice (i.e., deployment) with the goal to reestablish provider specialty skills as soon as possible. Research in cross-functional areas such as open source physiology research platforms and virtual characters are underway through the Developer Tools for Medical Education Initiative. These efforts enable simulation technologies to be used by a much broader group and promote simulation training technology. Preliminary results from the Combat Casualty Training Consortium are beginning to identify gaps in the comparative research between using live-tissue versus simulation system training. The Medical Practice Initiative is researching technology based training flow processes to improve curricula and identify common training metrics for all services. Effective in FY12, the Pacific Joint Information Technology Center (JITC) is managed by the MTHIS program. FY12 accomplishments include continuing the following programs/projects: MSAT, Web-based Equipment Resources and Training, Theater Blood Management and Integration (3 phase project), Standardization of Legacy MHS platforms to the new EHR architecture, Pacific JITC Innovation Center Services and the new National Integrated Catastrophic Health Event Preparedness and Response prototype. High priority, critical Warfighter requirements were processed though the validation and prioritization committees (Theater Functional Work Group and Force Health Protection Council) in order to continually gather and re-evaluate the priority assigned to potential projects. The military infectious diseases research focused on the development of FDA-approved clinical assays for pathogen detection in the area of rapid screening of fresh whole blood. The product will be a multiplexed test device for the detection of antibody to Human Immunodeficiency Virus (HIV), Hepatitis C Virus (HCV) and Hepatitis B Virus (HBV) Core Antigen (Anti-HBc total) and Hepatitis B Surface Antigen(HBsAg), which meets the requirement for FDA-cleared tests for prescreening deployed military forces for Transfusion Transmitted Diseases (TTDs) in emergency blood collection operations (no currently FDA-licensed tests available). The Materiel Development Decision was approved in the first quarter of FY12, and a Milestone B (a formal acquisition designation) is anticipated in FY13-FY14. Military operational medicine efforts initiated clinical trials for data analyses of a telephone training and intervention tool for PTSD; women's post-deployment intervention designed to address family re-integration coping skills; optimum interventions to mitigate or control the effects of PTSD; conduct field assessments of the long-term effects of non-pharmacological therapy for the treatment of PTSD; and bio-feedback therapy for the treatment of heart-rate variability as an intervention for PTSD. Also initiated was an integration of physiologic status monitoring capability into Spartan Sensor Network (SPARNET) system to demonstrate 2-way voice messaging capabilities that allows for constant monitoring of the physiological status of Soldiers across the spectrum of field operations. Clinical trials were initiated to determine if an antioxidant can protect against noise-induced hearing loss during weapons training; study the neurobiological mechanism (genetics, brain function) of PTSD in Operation Enduring Freedom/			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*	374A: *GDF-Medical Products Support and Advanced Concept Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Operation Iraqi Freedom (OEF/OIF) veterans; develop an online mental health assessment tool; and evaluate the effectiveness of web-based interventions to reduce alcohol use and associated problems within a post-deployment military population. Combat casualty care research further developed spray-dried plasma. Clinical trials on the pre-hospital use of plasma were initiated. Advanced development was initiated on a device that uses smooth-pursuit eye tracking to diagnose concussions, a system that kills infectious organisms in whole blood, and a clinical trial for a drug to treat concussions. Studies to use infrared goggles in the treatment of severe trauma were also conducted. Clinical and rehabilitative medicine conducted clinical trials through the Armed Forces Institute of Regenerative Medicine in burn repair, scarless wound healing to improve appearance, mobility and function, facial reconstruction, nerve repair, development of bone repair devices and biological materials. A program announcement was released for pilot and early phase clinical trials. Areas of interest included strategies for promoting tissue repair, regenerative and reconstruction for burns, limb, and digit (fingers and toes) injury, and scarless wound healing; novel pharmaceuticals and devices for the management of acute and chronic pain; and strategies for restoring and rehabilitating vision loss, hearing loss and balance disorders. ***FY 2013 Plans:*** For medical training and health information sciences, the combat casualty training initiative continues to further improve fidelity of simulation systems to minimize live tissue usage. Initial funding for the advanced modular manikin core technology for which future peripherals may attach and communicate will be solicited in an announcement. Medical practice initiative research will continue follow up funding for efforts currently underway. MTHIS and Pacific JITC coordinate with the functional end-users (Warfighter) and the Program Offices to map proposals and initiatives critical to the Warfighter. Additionally, MTHIS and Pacific JITC are working with the Integrated Electronic Health Record way-ahead offices of the Department of Defense Military Health System and Veteran's Affairs for requirements identification and collaboration/coordination with the new Development and Test Center in Richmond and Telemedicine and Advanced Technology Research Center Test Lab. Pacific JITC also maintains the test and evaluation lab (Independent Verification and Validation Center) for testing and integration of departmental/Warfighter projects in the Sensitive Compartment Information Facility lab. Military infectious disease research efforts are field testing diagnostic capabilities and systems across operational echelons, and continue multiyear efforts for the development of FDA cleared tests to be used in prescreening deployed military forces for Transfusion Transmitted Diseases (TTDs) in emergency blood collection operations within the Task Area for Rapid Screening of Fresh Whole Blood.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*	374A: *GDF-Medical Products Support and Advanced Concept Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Military operational medicine efforts are determining a time-course for antioxidant delivery after steady-state noise or impulse-noise to provide Warfighters with the best method to prevent hearing loss. Efforts are enhancing medical monitoring and alerting capabilities of the Spartan Sensor Network (SPARNET) system; continuing clinical trials for improved pharmacotherapy for deployment-related PTSD, evaluating the efficacy of prolonged exposure therapy plus sertraline or hydrocortisone (antidepressants) for OEF/OIF veterans with PTSD, conducting focus groups to evaluate an online mental health assessment tool, and evaluating factors that may mediate or moderate responses to brief interventions to reduce alcohol use and associated problems. Combat casualty care is continuing development efforts initiated in FY11 and FY12 to include further development of spray-dried plasma, smooth-pursuit eye tracking to diagnose concussions, a system that kills infectious organisms in whole blood, studies using infrared goggles in the treatment of severe trauma, clinical trials on the pre-hospital use of plasma, and a clinical trial for a drug to treat concussions. Clinical and rehabilitative medicine is advancing the clinical studies initiated in FY12 in the area of pain management, regenerative medicine, and sensory system restoration and rehabilitation after traumatic injury. Additional studies are beginning in FY13 for the areas of regenerative medicine and sensory system restoration and rehabilitation after traumatic injury to support the development and clinical evaluation of restoration and rehabilitation strategies and medical products. Specific focus areas include: regenerative medicine-based approaches for limb and digit salvage, craniomaxillofacial (skull, face and jaw) reconstruction, scarless wound healing, burn repair, genitourinary restoration and addressing compartment syndrome (muscle, nerve and vascular damage due to swelling post-injury), and restoration and rehabilitation of sensory system injury, including vision, hearing and balance injury and dysfunction. ***FY 2014 Plans:*** Medical Training and Health Information Sciences (MTHIS) will further its research in the Medical Simulation and Training portfolio through continued emphasis on the modular manikin core technology as well as anticipated release of a solicitation for low, mid, and high fidelity peripherals that connect with and communicate to the core manikin system. Anticipate a research announcement for methods to promote pre-deployment psychological resilience training. Efforts are planned to increase the presence of virtual standardized patients (avatars) into a National collaboration to accelerate research, development, validation, and verification of this promising technology. MTHIS's Health Informatics & Information Technology, in coordination with Pacific JITC, will conduct research on risk reduction within the Military Health System and identify IT needs of the Warfighter. MTHIS will identify ways to reduce potential near- and long-term risk of IT technology development and legacy systems, as well as the transition to the joint Department of Veterans Affairs and Department of Defense integrated Electronic Health Record.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*	374A: *GDF-Medical Products Support and Advanced Concept Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Military infectious diseases efforts will continue in the areas of Diagnostic Systems for Infectious Diseases to support field testing of diagnostic capabilities and systems across operational echelons (a request for proposal will be executed in FY14 to support the requirement, and continue multi-year efforts for the development of FDA-cleared tests to be used in prescreening deployed military forces for Transfusion Transmitted Diseases (TTDs) in emergency blood collection operations within the task entitled Rapid Screening of Fresh Whole Blood. Military operational medicine advanced development efforts will continue to support clinical trials for the validation of improved psychotherapies, improved pharmaceuticals for the treatment of PTSD, development and integration of the physiologic status monitor, trials on alcohol and substance abuse, suicide prevention, and nutrition and dietary supplement studies. Combat casualty care will continue development efforts initiated in FY11 and FY12 to include further development of spray-dried plasma, smooth-pursuit eye tracking to diagnose concussions, a system that kills infectious organisms in whole blood, clinical trials on the pre-hospital use of plasma, and a clinical trial for a drug to treat concussions. Advanced development on a system that can bring advanced intensive care capabilities to frontline medics and medical treatment facilities will be initiated. The Clinical and Rehabilitative Medicine Research Program will continue clinical studies in the areas of pain management, regenerative medicine, and sensory system restoration and rehabilitation after traumatic injury. New clinical trials will start for battlefield pain management and regenerative medicine-based approaches for limb and digit (fingers and toes) salvage, craniomaxillofacial (skull, face and jaw) reconstruction, scarless wound healing, burn repair, genitourinary restoration and addressing compartment syndrome (muscle, nerve and vascular damage due to swelling post-injury).			
Accomplishments/Planned Programs Subtotals	159.890	144.403	132.430

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Test and evaluate medical device prototypes, medical procedures, and drug and vaccine candidates in government-managed Phase 1/2 clinical trials to gather data required for military and regulatory requirements prior to production and fielding, to include FDA licensure and Environmental Protection Agency registration.

E. Performance Metrics

Principal Investigators will participate in In-Progress Reviews, high-level DHP-sponsored Review & Analysis meetings, submit quarterly and annual status reports, and are subjected to Program Office or Program Sponsor Representatives progress reviews to ensure that Decision Gate milestones are being met and deliverables will

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*	374A: *GDF-Medical Products Support and Advanced Concept Development*

be transitioned on schedule. In addition, Integrated Product Teams, if established for a therapy or device, will monitor progress in accordance with DoD Regulation 5000 series. The benchmark performance metric for transition of research supported in this PE will be the attainment of a maturity level that is typical of Technology Readiness Level (TRL) 7.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*	400Z: *CSI - Congressional Special Interests*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
400Z: *CSI - Congressional Special Interests*	-	27.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The FY12 DHP Congressional Special Interests (CSI) funded peer-reviewed directed research for Traumatic Brain Injury and Psychological Health, and Joint Warfighter Medical Research. Because of the CSI annual structure, out-year funding is not programmed.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
Congressional Add: 427A - Traumatic Brain Injury/ Psychological Health	17.750	-
FY 2012 Accomplishments: The Traumatic Brain Injury and Psychological Health (TBI/PH) CSI project funding was divided into applied research, technology development and concept development efforts. The project aims to prevent, mitigate, and treat the effects of combat-relevant traumatic stress and TBI on function, wellness, and overall quality of life, including interventions across the deployment lifecycle for warriors, Veterans, family members, caregivers, and communities. For TBI concept development efforts, researchers performed clinical trials that utilize smooth-pursuit eye tracking technology to diagnose concussions and pursued proposals to develop a burr-hole training device to aid in training non-neurosurgeons to do cranial decompression procedures and two clinical trials, one to test the use of low-dose methamphetamine for the treatment of TBI and the other to test Magnesium coupled with polyethylene glycol (a water soluble compound commonly used in medicine) for the treatment of spinal cord injury.		
Congressional Add: 441A - Joint Warfighter Medical Research Program	10.000	-
FY 2012 Accomplishments: The Joint Warfighter Medical Research Program Congressional Special Interest (CSI) is intended to provide continuing support for promising previously funded CSI projects, and to augment and accelerate high priority DoD and Service medical requirements that are close to achieving their objectives and yielding a benefit to military medicine. Project funding is divided into technology development and concept development efforts. The concept development projects are to advance device development, clinical trial support, and other meritorious projects to be selected. Through an iterative process of recommendations, several prior years of CSI-funded projects nominated by the Services, CSI managers, and execution activities were invited to submit augmented preproposals through the US Army Medical Research and Materiel Command		

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*	400Z: *CSI - Congressional Special Interests*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
the research initiatives and the prioritization was approved by DoD Health Affairs in early September. Full proposals were received through the Broad Agency Announcement in late September and peer reviewed by the contracting officer representative and then evaluated through a second tier review and approved for funding in early November in accordance with the prioritization plan. Contract awards will be completed during the latter part of the first quarter and the second quarter of FY 13.		
Congressional Adds Subtotals	27.750	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Work under this PE will be solicited by traditional Program Announcements resulting in contracts or other transactions.

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*	434A: *AF-Medical Products Support and Advanced Concept Development*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
434A: *AF-Medical Products Support and Advanced Concept Development*	-	3.896	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Air Force Medical Products Support and Advanced Concept Development efforts are focused on achieving rapid transition of promising, high TRL commercially-available off-the-shelf products through minor modifications and/or enhancements to address the most pressing medical needs of the Warfighter, accelerating of the transition of those technologies to the operators in the field. Development, Modification and Enhancement projects will emphasize technologies supporting Expeditionary Medicine, Enroute Care, Force Health Protection, Operational Medicine and Human Performance.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Air Force Medical Products Support and Advanced Concept Development	3.896	0.000	0.000

Description: Rapidly transition key COTS and near-COTS based technology solutions to the warfighter through assessment/ evaluation and minor modification or enhancement of solutions to address threshold operational requirements and associated key performance parameters.

FY 2012 Accomplishments:
Transition of non-invasive Patient Warming and Cooling technology to operational use in expeditionary medical and enroute care settings; Transition of expanded pathogen detection, identification and quantification (DIQ) technology to operational use on existing COTS gas chromatograph, mass spectrometer platforms to address harmful and potentially harmful microbial volatile organic compounds (MVOC) and improve Force Health Protection. Transition of expanded multi-lingual voice translation COTS capability to operational use in beyond line of site / comm-out settings requiring on-board hardware based rapid translation capability. Transition of sensor integration platform and situational awareness/decision analytics algorithms and visualization tools needed to aggregate and integrate data from numerous field sensor platforms performing DIQ of air, water, soil, confined space sample analysis data streams throughout an AoR into decision quality information for leadership and enhanced force health protection.

FY 2013 Plans:
Continue transition efforts begun with FY12 funding received September 2012.

FY 2014 Plans:

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0604110HP: *Medical Products Support and Advanced Concept Development*	434A: *AF-Medical Products Support and Advanced Concept Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Complete transition efforts begun with FY12 funding received September 2012.			
Accomplishments/Planned Programs Subtotals	3.896	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Partnership with the US Navy in an inter-agency agreement and use (award of delivery orders and task assignments) to a engineering and manfacturing development IDIQ vehicle awarded under SBIR phase III provisions

E. Performance Metrics

Achievement of required TRL for each advanced concept development/product support project and fulfillment of estabilshed KPPs for same.

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APPROPRIATION/BUDGET ACTIVITY 0130: *Defense Health Program* BA 2: *RDT&E*					**R-1 ITEM NOMENCLATURE** PE 0605013HP: *Information Technology Development*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013[#]**	**FY 2014 Base**	**FY 2014 OCO [##]**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	162.226	145.268	43.135	-	43.135	27.937	26.140	26.499	27.405	Continuing	Continuing
239B: *Health Services Data Warehouse (Air Force)*	-	0.000	0.000	1.209	-	1.209	1.373	1.387	1.411	1.436	Continuing	Continuing
239F: *IM/IT Test Bed (Air Force)*	-	3.800	2.400	2.395	-	2.395	2.501	2.544	2.587	2.634	Continuing	Continuing
283C: *Medical Operational Data System (MODS) (Army)*	-	1.472	3.450	3.519	-	3.519	3.589	3.715	3.826	3.941	Continuing	Continuing
283D: *Army Medicine CIO Management Operations*	-	1.492	4.518	4.628	-	4.628	4.752	4.909	5.054	5.404	Continuing	Continuing
283F: *Army Warrior Care and Transition System (AWCTS)*	-	0.488	0.365	0.365	-	0.365	0.364	0.364	0.300	0.000	Continuing	Continuing
283I: *Workload Management System for Nursing – Internet*	-	0.264	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
283J: *Multi-Drug Resistant Surveillance Network (MRSN)*	-	1.374	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
283K: *Veterinary Services Systems Management (VSSM)*	-	0.000	0.000	0.245	-	0.245	0.000	0.000	0.000	0.000	Continuing	Continuing
385A: *Integrated Electronic Health Record (Tri-Service)*	-	80.837	55.994	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
386A: *Virtual Lifetime Electronic Record (VLER) HEALTH (Tri-Service)*	-	7.006	7.006	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
423A: *Defense Center of Excellence (FHP&RP)*	-	1.177	1.270	1.295	-	1.295	1.323	1.346	1.369	1.395	Continuing	Continuing
435A: *NICOE Continuity Management Tool*	-	2.855	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
446A: *Disability Mediation Service (DMS)*	-	0.000	0.000	0.575	-	0.575	0.587	0.619	0.635	0.654	Continuing	Continuing

APPROPRIATION/BUDGET ACTIVITY 0130: *Defense Health Program* BA 2: *RDT&E*					**R-1 ITEM NOMENCLATURE** PE 0605013HP: *Information Technology Development*							
480B: *Defense Medical Human Resources System (internet) (DMHRSi) (Tri-Service)*	-	0.585	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
480C: *Defense Medical Logistics Standard Support (DMLSS) (Tri-Service)*	-	5.370	4.272	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
480D: *Defense Occupational and Environmental Health Readiness System - Industrial Hygiene (DOEHRS-IH) (Tri-Service)*	-	3.372	8.451	1.550	-	1.550	0.000	0.000	0.000	0.000	Continuing	Continuing
480F: *Executive Information/ Decision Support (EI/DS) (Tri-Service)*	-	3.127	1.479	5.074	-	5.074	3.024	2.731	2.623	3.083	Continuing	Continuing
480G: *Health Artifact and Image Management Solution (HAIMS) (Tri-Service)*	-	0.000	0.000	3.996	-	3.996	0.304	0.000	0.000	0.000	Continuing	Continuing
480K: *integrated Federal Health Registry Framework (Tri-Service)*	-	0.000	0.000	2.666	-	2.666	1.093	0.000	0.000	0.000	Continuing	Continuing
480M: *Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)*	-	28.731	39.803	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
480P: *Other Related Technical Activities (Tri-Service)*	-	4.123	1.523	5.311	-	5.311	0.692	0.000	0.000	0.000	Continuing	Continuing
480R: *TMA E-Commerce (TMA)*	-	2.934	3.493	5.898	-	5.898	3.838	3.951	4.042	4.122	Continuing	Continuing
480Y: *Clinical Case Management (Tri-Service)*	-	2.925	3.100	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
480Z: *Centralized Credentials and Quality Assurance System (CCQAS) (Tri-Service)*	-	1.692	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

APPROPRIATION/BUDGET ACTIVITY 0130: *Defense Health Program* BA 2: *RDT&E*					**R-1 ITEM NOMENCLATURE** PE 0605013HP: *Information Technology Development*							
481A: *Theater Enterprise Wide Logistics System (TEWLS) (Tri-Service)*	-	5.127	3.821	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
490I: *Navy Medicine Chief Information Officer*	-	2.106	4.323	4.409	-	4.409	4.497	4.574	4.652	4.736	Continuing	Continuing
490J: *Navy Medicine Online*	-	1.369	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

[##] The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Army Medical Command received PE 0605013 funding to identify, explore, and demonstrate key information technologies to overcome medical and military unique technology barriers. Programs include Army service level support for the Medical Operational Data System (MODS), the Army Medicine Chief Information Officer's (CIO) Management Operations, the Army Warrior Care and Transition System (AWCTS), the Workload Management System for Nursing – Internet (WMSNi), the Multidrug-Resistant Organism Repository and Surveillance Network (MRSN), and the Veterinary Services Systems Management (VSSM).

The Navy Medical Command RDT&E funding supports the development required for those systems which are integral to Navy Medicine (i.e., Navy Medicine Online (NMO)). Navy Medicine also funds, when appropriate, a number of small-scale, opportunistic business improvements when the technology makes a sudden advance. These projects are generally not in the scope of the TRICARE Management Activity (TMA) Central Programs such as the development/integration of Defense Optical Fabrication Enterprise Management System (DOFEMS) into a fully automated system to support workload distribution, performance metrics, staffing requirements, supply management, calculation of operating costs from the current independently or manually DOFEMS system. This effort will be a web based centralized management tool and provide a standalone standard set of Lab Management software for all 26 Navy labs. Additionally, the re-design of HIV Management System (HMS) will be more user friendly, less time to perform everyday tasks and prevents the need to maintain separate databases. The re-design will also automate and minimize functions that require manual assistance and assist in fulfilling new requirements.

For the Air Force Medical Service (AFMS), this program element supports IM/IT development requirements within four AFMS Chief Information Officer defined core capabilities as essential to Air Force Medical Service IM/IT mission support. Data warehousing, reporting services, systems integration, and custom application development are featured in almost all IM/IT systems and application requests. The information needs of the AFMS are growing in volume, complexity, and delivery formats. In order to meet future requirements, aggregation of more and varied data sources require increasingly complex data warehousing capabilities. Demand for dynamic analytic capability will require investments in business intelligence, predictive analytic tools, open source research data models, and emerging personalized medicine analysis. Information is still largely produced in an ad hoc manner without standard methodologies, mapping of business requirements, transparent analytic models, and distributed by office productivity software. Centralized production of standard reports, balance sheets, and dynamic query tools would relieve many managers and action officer of routine work and increase leadership decision support. AFMS medical readiness reporting and tracking has set the standard in the DoD for over a decade but multiple applications now encompass what has merged into a common process of tracking unit capability and personal health assessments.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*

Consolidation of medical readiness applications would streamline disability, medical readiness, deployment surveillance, and flying status tracking and reporting who currently must move between multiple applications.

For the Air Force, the funding in this program element provides for sustainment of the IM/IT Test Bed (IMIT-TB) capability, which is a dedicated OT location and staff encompassing the entire spectrum of healthcare services and products available in MTFs, to provide risk controlled testing of designated core and interim medical applications in a live environment.

The MHS centrally-managed, Tri-Service IM/IT RDT&E program includes funding for development/integration, test and evaluation for the following initiatives of special interest: 1) Integrated Electronic Health Record (iEHR) which is a new Major Automated Information System (MAIS) program designed to replace/sunset the current portfolio of systems providing initial Electronic Health Record (EHR) capability, such as AHLTA (which is DoD´s current EHR and one of the world's largest clinical information systems that provides worldwide online access to patients medical records) and the Composite Health Care System (CHCS) (which is the military's legacy computerized provider order entry (CPOE) system used for ordering/documenting lab tests, radiology exams, prescription transactions, and for documenting outpatient appointments as well as other care that is administered). iEHR will establish a comprehensive, longitudinal, electronic health record that will also support the Virtual Lifetime Electronic Record (VLER) HEALTH initiative; 2) Theater Medical Information Program-Joint (TMIP-J) integrates components of the military medical information systems to ensure interoperable medical support for all Theater and deployed forces; 3) Defense Medical Logistics Standard Support (DMLSS) provides integrated supply chain and life cycle management for pharmaceuticals, medical supplies, equipment, health facilities, and services; 4) Executive Information/Decision Support (EI/DS) receives, stores, processes data from MHS systems used for managing the business of health care; 5) Defense Occupational and Environmental Health Readiness System – Industrial Hygiene (DOEHRS-IH) assembles, evaluates and stores data on occupational personnel exposure information, workplace environment monitoring, personnel protective equipment usage, and observation of work practices. The Central IM/IT Program also provides RDT&E funding for mission essential initiatives such as: Theater Enterprise Wide Medical Logistics System (TEWLS); funding for other related technical activities such as ICD-10 upgrades; and for various Wounded, Ill and Injured (WII) Warrior initiatives like Health Artifact and Image Management Solution (HAIMS), Federated Registry Framework and a solution for clinical case management.

The DHP RDT&E appropriation includes the following TMA initiatives: Electronic Commerce System (E-Commerce): This system was developed for centralized collection, integration, and reporting of accurate purchased care contracting and financial data. It provides an integrated set of data reports from multiple data sources to management, as well as tools to control the end-to-end program change management process. E-Commerce is composed of several major applications including: Contract Management (CM), utilizing Prism software to support contract action development and documentation; Resource Management (RM), employing Oracle Federal Financials and TED interface software to support the budgeting, accounting, case recoupment, and disbursement processes; Document Management, utilizing Documentum software to provide electronic storage, management, and retrieval of contract files; Management Tracking and Reporting, utilizing custom software to provide reports to assist in the management and tracking of changes to the managed care contracts as well as current and out year liabilities; the Purchased Care and Contractor's Resource Center web sites that provide up-to-date financial information for both TMA and the Services concerning the military treatment facilities (MTFs), and expenditures for MTF enrollee purchased care and supplemental care. E-Commerce includes an infrastructure of over 60 servers supporting development, test, and production. E-Commerce is employed by several hundred users in more than 7 different organizations. Project oversight and coordination must be provided to ensure that the needs of the disparate organizations are met without influencing system performance or support to any individual user. Server configurations must

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*

remain current with respect to security policies, user authorizations, and interactions with other systems and functions. All of these activities must be managed and coordinated on a daily basis.

Disability Mediation Service (DMS): The VTA (Veteran's Tracking Application) has been the primary system to track, record, and report data for the IDES (Integrated Disability Evaluation System) process. The VTA is scheduled to sun-set, by VA (Veterans Affairs), and the data is being moved to another application. Migration of VTA to another application creates the requirement to allow data exchange between Service non-medical case management and new VA DES (Disability Evaluation System) IT application. The BEC (Benefits Executive Council) is looking to create a DMS (Disability Mediation Service), which is an integrator between the Services and VA.

The DMS will facilitate the improvement of non-medical case management tracking and IDES data/information management. It will eliminate redundant data entry within DoD (Department of Defense), improving data quality by capturing more data for operational reporting from the Services and WCP, decrease backlog by eliminating data entry duplication, and minimize impact to DoD Services by allowing the Services to continue using their existing/planned systems without requiring retraining on a new applications.

The DMS will be created from existing technology. It will provide a mediation service to help isolate each system from changes and uniqueness in the other systems and allow the Services and WCP to report and drill down on data that we capture during the exchange. This IT solution will not replace current DoD systems, but will require some modifications and enhancements to those systems to support the date exchange. WCP will support development costs for these efforts. Services will assume responsibility and POM costs for modifications, enhancements, and maintenance in the out years."

APPROPRIATION/BUDGET ACTIVITY	**R-1 ITEM NOMENCLATURE**
0130: *Defense Health Program*	PE 0605013HP: *Information Technology Development*
BA 2: *RDT&E*	

B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	171.936	145.268	142.123	-	142.123
Current President's Budget	162.226	145.268	43.135	-	43.135
Total Adjustments	-9.710	0.000	-98.988	-	-98.988
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-11.360	-			
• Reprogramming - Information Technology Interface for Aeromedical Evacuation (AF)	1.650	-	-	-	-
• Realignment - Disability Mediation Service (DMS) (TMA)	-	-	0.575	-	0.575
• Realignment - Electronic Health Record (EHR) Way Ahead	-	-	-64.100	-	-64.100
• Realignment - Theater Medical Information Program (TMIP)	-	-	-35.463	-	-35.463

Congressional Add Details ($ in Millions, and Includes General Reductions)	**FY 2012**	**FY 2013**
Project: 435A: *NICOE Continuity Management Tool*		
Congressional Add: **** PLEASE ENTER CONGRESSIONAL ADD TITLE ****	0.000	-
Congressional Add Subtotals for Project: 435A	0.000	0.000
Congressional Add Totals for all Projects	0.000	0.000

Change Summary Explanation

FY 2012: Realignment from DHP RDT&E, PE 0605013-Information Technology Development (-$11.360 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$11.360 million).

Prior Approval Reprogramming (FY 12-18 PA) from DHP O&M, Budget Activity Group: Private Sector Care (-$1.650 million) to DHP RDT&E, PE 0605013-Information Technology Development (+$1.650 million) for Information Technology interface with Aeromedical Evacuation equipment (AF).

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*

FY 2014: Change Proposal to DHP RDT&E, PE 0605013-Information Technology Development (+$0.575 million) for Wounded Warrior – Disability Mediation Services (DMS) from RDT&E, Defense-Wide appropriation, Wounded Warrior Care Program Office.

Realignment from DHP RDT&E, PE 0605013-Information Technology Development (-$64.100 million) to DHP RDT&E, PE 0605023-Integrated Electronic Health Record (iEHR) (+$64.100 million) for Integrated Electronic Health Record (iEHR).

Realignment from DHP RDT&E, PE 0605013-Information Technology Development (-$35.463 million) to DHP RDT&E, PE 0605025-Theater Medical Information Program – Joint (TMIP-J) (+$35.463 million) for Theater Medical Information Program – Joint (TMIP-J).

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	239B: *Health Services Data Warehouse (Air Force)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
239B: *Health Services Data Warehouse (Air Force)*	-	0.000	0.000	1.209	-	1.209	1.373	1.387	1.411	1.436	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Previously known as Assessment Demonstration Center (ADC), Health Services Data Warehouse (HSDW) addresses and focuses on Air Force Medical Service (AFMS) Data Strategy under the DoD and AF Net Centric Enterprise Services. HSDW will develop an Enterprise Data Warehouse (EDW) and Data Marts consolidating databases and transition to a SOA architecture. Program will improve data collection, aggregation, analysis, and data visualization of medical information. New data models will allow rapid development of enterprise-wide reports utilizing Business Intelligence tools.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: 239B - Health Services Data Warehouse	0.000	0.000	1.209
Description: AFMS will purchase COTS software/licenses and build custom scripts for development of the data warehouse. The COTS software will expedite consolidation and cleansing of data, measure data quality, merge and organize data for reporting tools. These efforts will be used to complete the transition of CDM data into the HSDW. ***FY 2012 Accomplishments:*** No funding programmed. ***FY 2013 Plans:*** No funding programmed. ***FY 2014 Plans:*** For FY14, AFMS will purchase COTS software/licenses and build custom scripts for development of the data warehouse. The COTS software will expedite consolidation and cleansing of data, measure data quality, merge and organize data for reporting tools. These efforts will be used to complete the transition of CDM data into the HSDW.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	1.209

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	239B: *Health Services Data Warehouse (Air Force)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807781HP: *Non-Central Information Management/ Information Technology*	3.215	3.386	10.900		10.900	11.267	11.435	11.398	11.569	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	239F: *IM/IT Test Bed (Air Force)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
239F: *IM/IT Test Bed (Air Force)*	-	3.800	2.400	2.395	-	2.395	2.501	2.544	2.587	2.634	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Dedicated operational test (OT) location and staff encompassing the entire spectrum of healthcare services and products available in Military Treatment Facilities (MTFs), to provide realistic, risk controlled testing of designated core and interim medical applications in an operationally realistic environment. Critical component of ongoing capability development & fielding efforts, ensuring that each is supported by an independent, unbiased assessment of effectiveness, suitability, security, and survivability in a realistic operational environment as required by the FAR 46.103, DoD 5000, and AFI 99-103. The AFMISTB is a complementary service to existing MHS developmental, integration, interoperability, and security testing facilities, forming a logical test process continuum leading to effective deployment decisions. Outcomes include decreasing life-cycle costs of IM/IT products by catching errors early in the acquisition process where they are less costly to fix, and increasing patient safety by fielding operationally tested medical information systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: 239F IM/IT Test Bed (Air Force)	3.800	2.400	2.395
Description: Provide realistic, risk controlled testing of designated core and interim medical applications in an operationally realistic environment. Critical component of ongoing capability development & fielding efforts, ensuring that each is supported by an independent, unbiased assessment of effectiveness, suitability, security, and survivability in a realistic operational environment as required by the FAR 46.103, DoD 5000, and AFI 99-103. The AFMISTB is a complementary service to existing MHS developmental, integration, interoperability, and security testing facilities, forming a logical test process continuum leading to effective deployment decisions. Outcomes include decreasing life-cycle costs of IM/IT products by catching errors early in the acquisition process where they are less costly to fix, and increasing patient safety by fielding operationally tested medical information systems.			
FY 2012 Accomplishments: Continue to provide realistic, risk controlled testing of designated core and interim medical applications in an operationally realistic environment. Critical component of ongoing capability development & fielding efforts, ensuring that each is supported by an independent, unbiased assessment of effectiveness, suitability, security, and survivability in a realistic operational environment as required by the FAR 46.103, DoD 5000, and AFI 99-103. The AFMISTB is a complementary service to existing MHS developmental, integration, interoperability, and security testing facilities, forming a logical test process continuum leading to effective deployment decisions. Outcomes include decreasing life-cycle costs of IM/IT products by catching errors early in the acquisition process where they are less costly to fix, and increasing patient safety by fielding operationally tested medical			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	239F: *IM/IT Test Bed (Air Force)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
information systems. FY12 also includes one time funding for forms enhancement and fielding of the Aeromedical Evacuation Electronic Health Record capability and integration with AHLTA-Theater (A/E EHR). ***FY 2013 Plans:*** Continue to provide realistic, risk controlled testing of designated core and interim medical applications in an operationally realistic environment. Critical component of ongoing capability development & fielding efforts, ensuring that each is supported by an independent, unbiased assessment of effectiveness, suitability, security, and survivability in a realistic operational environment as required by the FAR 46.103, DoD 5000, and AFI 99-103. The AFMISTB is a complementary service to existing MHS developmental, integration, interoperability, and security testing facilities, forming a logical test process continuum leading to effective deployment decisions. Outcomes include decreasing life-cycle costs of IM/IT products by catching errors early in the acquisition process where they are less costly to fix, and increasing patient safety by fielding operationally tested medical information systems. ***FY 2014 Plans:*** Continue to provide realistic, risk controlled testing of designated core and interim medical applications in an operationally realistic environment. Critical component of ongoing capability development & fielding efforts, ensuring that each is supported by an independent, unbiased assessment of effectiveness, suitability, security, and survivability in a realistic operational environment as required by the FAR 46.103, DoD 5000, and AFI 99-103. The AFMISTB is a complementary service to existing MHS developmental, integration, interoperability, and security testing facilities, forming a logical test process continuum leading to effective deployment decisions. Outcomes include decreasing life-cycle costs of IM/IT products by catching errors early in the acquisition process where they are less costly to fix, and increasing patient safety by fielding operationally tested medical information systems.			
Accomplishments/Planned Programs Subtotals	3.800	2.400	2.395

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• N/A: *N/A*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	239F: *IM/IT Test Bed (Air Force)*

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283C: *Medical Operational Data System (MODS) (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
283C: *Medical Operational Data System (MODS) (Army)*	-	1.472	3.450	3.519	-	3.519	3.589	3.715	3.826	3.941	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Army Medical Command received PE 0605013 funding to identify, explore, and demonstrate key information technologies to overcome medical and military unique technology barriers. The Medical Operational Data System (MODS) program includes development projects for Army service level support. Specifically, the MODS provides a responsive and reliable human resource and readiness information management data system for all categories of military and civilian medical and support personnel.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Medical Operational Data System (MODS)	1.472	3.450	3.519

Description: Information management system to provide responsive and reliable human resource and readiness data for all categories of military and civilian medical and support personnel.

FY 2012 Accomplishments:
For FY12 the Medical Operational Data System (MODS) Robust Business Intelligence (RBI) certification and funding was utilized to support incorporation of a robust business intelligence capability into MODS applications thereby enabling users to perform ad-hoc business queries efficiently and quickly when the need arises. The RBI initiative was built upon the data warehouse foundation with ability to easily pull data from across the various MODS applications. The Enterprise Service Bus (ESB) has positioned MODS to broker information to not only its current users but other users within the military with the need to know medical operational data whether through metrics or other means. The ESB built upon the combined foundation of the data warehouse and the three-tier extensible framework. Further application modernization of individual applications within multiple functional groups was implemented. Coding structure of existing applications and subordinate modules was enhanced to facilitate use by other military services. This leverages the MODS software investment to serve as an information broker across DoD for Medical Operational Data. Modernization includes new applications or modules that share significant commonality with existing MODS capabilities, but which required separate tailoring for other service unique requirements.

FY 2013 Plans:
For FY13 the MODS is developing final increments for Data Warehouse (DW), Three Tier Object-Oriented Architectural Design, RBI, and ESB. Development work includes extensive data privacy protection and auditing. DW development also

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283C: *Medical Operational Data System (MODS) (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
enterprise structure in place, software development is focusing on using the ESB framework to build new customer web services. Service capability for cross functional query is being strengthened by building data cubes to capture information among various applications. Data cubes reside within the modernized Data Warehouse Data Marts. Software development maps data cube capabilities through the RBI for use by MODS customers. In its role as an information broker, MODS customer web services enable assembly, rapid extraction, and certification/funding of data tailored to specific information needs of commanders and staff. Efforts are modernizing and significantly enhancing existing individual, or adding new, MODS applications to support the US Army Medical Command, Army, Joint Force and/or Military Health System emerging capabilities and requirements. ***FY 2014 Plans:*** For FY14 the MODS certification/funding will be utilized to expand the data warehouse data collection mechanisms to extrapolate prescriptive data sets that can be used to render data inference-supported courses of action based on MODS operational data. This will include analysis and augmentation of predictive data models made available in the FY13 RBI and data warehouse efforts. Adaptation of the RBI capability will be executed to best extrapolate data mining and information discovery regarding various levels of DoD readiness including expanded service member population data amid Government and academic cohorts (as deemed appropriate). Three-tier Object Oriented Architectural Design will fully extend its Extensible Development Framework as a source for Army Medical Department related rapid application development.			
Accomplishments/Planned Programs Subtotals	1.472	3.450	3.519

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807781HP: *Non-Central Information Management/ Information Technology*	7.738	9.024	14.338		14.338	12.689	13.326	13.726	14.138	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283D: *Army Medicine CIO Management Operations*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
283D: *Army Medicine CIO Management Operations*	-	1.492	4.518	4.628	-	4.628	4.752	4.909	5.054	5.404	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Army Medical Command received PE 0605013 funding to identify, explore, and demonstrate key information technologies to overcome medical and military unique technology barriers. The Army Medicine CIO Management Operations program includes development projects for Army service level support. Specifically, the Army Medicine CIO Management Operations encompasses the Army Medical CIO's Information Management/Information Technology (IM/IT) development activities to ensure compliance with Congressional, Office of Management and Budget, DoD, and Military Health System requirements.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: 283D - Army Medicine CIO Management Operations	1.492	4.518	4.628
Description: The Army Medicine CIO Management Operations will provide system development, engineering, and testing requirements of interim Army medical applications in an operationally realistic, risk controlled test environment to comply with Congressional, Office of Management and Budget, DoD, and Military Health System requirements. ***FY 2012 Accomplishments:*** For FY12, the Army Medicine CIO Management Operations provided system development, engineering, and testing requirements for Army Medical applications. Development and testing efforts focused on improving Army Medical applications through the insertion of technology and training. ***FY 2013 Plans:*** For FY13, the Army Medicine CIO Management Operations is developing and enhancing a system that will provide system development, engineering, and testing requirements of Army Medical applications, which provides realistic, risk controlled testing of designated core and interim medical applications in an operationally realistic environment. ***FY 2014 Plans:*** For FY14, the Army Medicine CIO Management Operations funding will support system development/ enhancements by providing system development, engineering, and testing requirements of Army medical applications, which will provide realistic, risk controlled testing of designated core and interim medical applications in an operationally realistic environment.			
Accomplishments/Planned Programs Subtotals	1.492	4.518	4.628

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283D: *Army Medicine CIO Management Operations*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807781HP: *Non-Central Information Management/ Information Technology*	50.195	53.326	42.308		42.308	45.187	45.391	43.608	43.518	Continuing	Continuing
• BA-1, 0807793HP: *MHS Tri-Service Information Management/ Information Technology*	0.725	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	0.895	2.374	1.672		1.672	1.434	3.549	1.699	3.975	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283F: *Army Warrior Care and Transition System (AWCTS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
283F: *Army Warrior Care and Transition System (AWCTS)*	-	0.488	0.365	0.365	-	0.365	0.364	0.364	0.300	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Army Medical Command received PE 0605013 funding to identify, explore, and demonstrate key information technologies to overcome medical and military unique technology barriers. The Army Warrior Care and Transition System (AWCTS) program includes development projects for Army service level support. Specifically, the AWCTS is a family of systems that allows the integration of multiple business processes under the consolidated oversight of the Warrior Transition Command.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Army Warrior Care and Transition System (AWCTS)	0.488	0.365	0.365
Description: A family of systems that allows the integration of multiple business processes under the consolidated oversight of the Warrior Transition Command.			
FY 2012 Accomplishments: For FY12, the Army Warrior Care and Transition System (AWCTS) implemented production and deployment efforts, resulting in Initial Operational Capability (IOC) being reached in October 2011. AWCTS supported and consolidated the functionality of several disparate systems into a single integrated system with critical data interfaces to provide an ability to track Soldiers through the Wounded Warrior Lifecycle from the point of injury through medical treatment and transition. The production and deployment of AWCTS resulted in the sunsetting of two disparate IT systems resulting in both cost and efficiency savings.			
FY 2013 Plans: The AWCTS funding supports continued development and deployment of remaining functionality. Automated Comprehensive Transition Plan legacy data is migrating into AWCTS over the course of a 6 week deployment plan. This final migration of data and functionality into AWCTS is encapsulating most of the various organizations and business processes of the Wounded Warrior Life Cycle together providing authoritative information for all stakeholders and users. Additionally, AWCTS is completing the interfaces needed in support of the DoD/VA information sharing initiative.			
FY 2014 Plans: The AWCTS future development efforts include an analysis and a level of effort to add the following functionality within AWCTS: Career, Education Readiness pilot functionality from a business process management platform in Army Knowledge Online into AWCTS, addition of VA information sharing initiative data fields into Warrior Transition Units (WTU) module in accordance with			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283F: *Army Warrior Care and Transition System (AWCTS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
VA/DoD project plans, enhancement of the Soldier portal within the WTU module, referral coordination business practices within the WTU module, and more interoperability between Army Wounded Warrior Program and WTU modules.			
Accomplishments/Planned Programs Subtotals	0.488	0.365	0.365

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807714HP: *Other Health Activities*	1.398	1.440	1.587		1.587	1.666	1.750	1.828	1.930	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283I: *Workload Management System for Nursing – Internet*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
283I: *Workload Management System for Nursing – Internet*	-	0.264	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Army Medical Command received PE 0605013 funding to identify, explore, and demonstrate key information technologies to overcome medical and military unique technology barriers. The Workload Management System for Nursing – Internet (WMSNi) program includes development projects for Army service level support. Specifically, the WMSNi supports clinical staff scheduling, based on known and projected patient care needs, for continuous 24x7 hospital operations.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Workload Management System for Nursing – Internet (WMSNi)	0.264	0.000	0.000
Description: WMSNi supports clinical staff scheduling, based on known and projected patient care needs, for continuous 24x7 hospital operations. ***FY 2012 Accomplishments:*** Workload Management System for Nursing – Internet, Version 2.0 (WMSNi 2.0) provided well-organized and accurate patient classification, improved patient outcomes, more precise and effective forecasting, and enhanced analysis of patient care requirements. Outpatient workload capabilities to include Case Management for the patients reflect current clinical practice for prospective and retrospective planning to support 24 hour continuous hospital operations and compliance with all Federal and Army regulations. ***FY 2013 Plans:*** No funds programmed. ***FY 2014 Plans:*** No funds programmed.			
Accomplishments/Planned Programs Subtotals	0.264	0.000	0.000

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283I: *Workload Management System for Nursing – Internet*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807781HP: *Non-Central Information Management/ Information Technology*	0.421	0.839	0.925		0.925	0.696	0.693	0.684	0.694	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

N/A

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283J: *Multi-Drug Resistant Surveillance Network (MRSN)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
283J: *Multi-Drug Resistant Surveillance Network (MRSN)*	-	1.374	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Army Medical Command received PE 0605013 funding to identify, explore, and demonstrate key information technologies to overcome medical and military unique technology barriers. The Multi-Drug Resistant Surveillance Network (MRSN) program includes development projects for Army service level support. Specifically, the MRSN is the Enterprise effort to collect and characterize bacterial isolates to inform best practice, such as patient management and antibiotic selection.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Multi-Drug Resistant Surveillance Network (MRSN) ***Description:*** MRSN is the Enterprise effort to collect and characterize bacterial isolates to inform best practice, such as patient management and antibiotic selection. ***FY 2012 Accomplishments:*** The Multidrug-Resistant Organism Repository and Surveillance Network (MRSN) received initial funding in 2012 and commenced requirements analysis, system specification, and system design for the new IT system. Hardware requirements and configuration for the software development and testing environments are completed, and procurement actions are underway to establish these environments. ***FY 2013 Plans:*** No funds programmed. ***FY 2014 Plans:*** No funds programmed.	1.374	0.000	0.000
Accomplishments/Planned Programs Subtotals	1.374	0.000	0.000

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283J: *Multi-Drug Resistant Surveillance Network (MRSN)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807781HP: *Non-Central Information Management/ Information Technology*	0.064	0.000	0.488		0.488	0.532	0.544	0.757	0.775	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283K: *Veterinary Services Systems Management (VSSM)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
283K: *Veterinary Services Systems Management (VSSM)*	-	0.000	0.000	0.245	-	0.245	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Army Medical Command received PE 0605013 funding to identify, explore, and demonstrate key information technologies to overcome medical and military unique technology barriers. The Veterinary Services Systems Management (VSSM) program includes development projects for Army service level support. Specifically, the VSSM will capture veterinary health care treatment information in the event of an internet disruption.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Veterinary Services Systems Management (VSSM)	0.000	0.000	0.245
Description: VSSM will capture veterinary health care treatment information in the event of an internet disruption. ***FY 2012 Accomplishments:*** No funding programmed. ***FY 2013 Plans:*** No funding programmed. ***FY 2014 Plans:*** FY14 certification/funding for Veterinary Services Systems Management (VSSM) program will be utilized to provide the additional capability needed to capture minimal critical health care treatment information delivered during an episode of care in the event of internet disruption. The Store and Forward capability will be designed to capture information such as owner identification, animal name, age, gender, breed, color, and weight as well as diagnostic information to include physical exam and differentials, medical plan information to include medications administered, procedures conducted, and follow-up requirements. The capability will also maintain data integrity with main databases and automatically synchronize with the enterprise VSSM database upon internet connectivity restoration. The solution scope will allow Veterinary Services the ability to achieve the business objectives of providing a clinically integrated, secure web-based application to support the Veterinary Services mission.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	0.245

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	283K: *Veterinary Services Systems Management (VSSM)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807781HP: *Non-Central Information Management/ Information Technology*	0.515	0.000	2.068		2.068	1.689	1.717	1.770	1.790	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	0.150	0.000	0.500		0.500	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	385A: *Integrated Electronic Health Record (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
385A: *Integrated Electronic Health Record (Tri-Service)*	-	80.837	55.994	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Integrated Electronic Health Record (iEHR) (a follow on to originally proposed Electronic Health Record Way Ahead) is designed to provide a comprehensive, longitudinal, electronic health record that is available anytime and anywhere for the lifetime of the patient. The overarching goal of the program is to create an authoritative source of health information for the estimated 18 million DoD and VA beneficiaries. The iEHR will deliver a highly flexible, reliable, secure, maintainable and sustainable system. Successful fielding of iEHR will result in enhanced quality of care / patient safety, reduced costs, and improved data visibility. Comprehensive and current health information collected from multiple sources will be readily accessible by DoD and VA providers at Theater, DoD and VA facilities. This readily accessible health information will be directly leveraged to optimize medical care, monitor force health, manage health risks, and to enhance individual performance. It is envisioned that iEHR will eventually replace/sunset existing legacy systems, such as DoD's AHLTA and CHCS, and VA's Veterans Health Information Systems and Technology Architecture (VistA) and Computerized Patient Record System (CPRS).

The iEHR program shall be an integrated, multi-increment effort with the Department of Defense and Department of Veterans Affairs. It shall be bound by a common architecture, common data model, and common presentation layer. iEHR will also include a mix of Commercial Off - The Shelf (COTS), Government Off the Shelf (GOTS) and Open Source capabilities, in addition to reuse of enduring unique capabilities. In October, 2011, the DoD/VA Interagency Program Office (IPO) was chartered, to include program management and execution of iEHR. With the active participation of clinical staff from both Departments, the iEHR program will harmonize healthcare delivery processes and products. The DoD/VA Interagency Clinical Informatics Board (ICIB) and the IPO have jointly prioritized 54 clinical capabilities and grouped them into six planning increments based on functional priority, technical feasibility, and financial viability. To date, iEHR Increments 1 and 2 have been authorized for execution.

iEHR RDT&E is reported under the program element 0605013 through FY 2013 inclusive, but will be reported under new program element 0605023 for FY 2014 and out.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Integrated Electronic Health Record (iEHR) (Tri-Service)	80.837	55.994	0.000
Description: iEHR Increment 1 combines risk reduction and proof of concept activities. It will: (1) deliver two user-facing capabilities, Single Sign-On (SSO) and Context Management (CM); (2) conduct a pilot to inform a path forward to allow the practitioner to record (i.e., write-back) patient data to the electronic record in the authoritative data store, and; (3) include			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	385A: *Integrated Electronic Health Record (Tri-Service)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
supporting activities such as virtualization, a regionalization pilot, establishment of an iEHR Development Test Center/ Environment (DTC/DTE) configuration, and critical Clinical Data Repository (CDR) upgrades. iEHR Increment 2 focuses on architecture, design, infrastructure, and initial clinical capabilities. It will deliver: (1) infrastructure and core services to support clinical capability insertion into the new iEHR baseline (Service Oriented Architecture (SOA) Suite/ Enterprise Service Bus (ESB), Identity Management, Portal Framework, Access Control); (2) new clinical care graphical user interface; (3) Laboratory, Immunization, and Pharmacy clinical capabilities and; (4) Pharmacy "fixes" at the James A. Lovell Federal Health Care Center (JAL FHCC). In support of an Initial Operating Capability (IOC) in September 2014, iEHR Increment 2 Laboratory and Immunization clinical capabilities (e.g., orders and results management) will be deployed to the Hampton Roads and San Antonio DoD and VA treatment facilities, with Pharmacy "fixes" deployed at JAL FHCC, North Chicago, IL. Full deployment of Increment 2 scheduled to occur by Fiscal Year (FY) 2016 to nine regional data centers (two in the initial deployment, seven additional in the full deployment). Laboratory, Immunization, and Pharmacy clinical capabilities will be operationalized at nine VA facilities, nine DoD facilities, and at least one associated satellite facility per region. ***FY 2012 Accomplishments:*** Activities Included, but not limited to: Defining Baseline Requirements, Architecture, Design, Cost; Service-oriented architecture (SOA) Suite/Enterprise Service Bus (ESB); Virtualization; Sign On/Context Management (SSO/CM); Healthcare Data Dictionary (HDD); HDD Data Mapping; Development and Test Center (DTC)/Development and Test Environment (DTE) Initial Operational Capability (IOC); Update Clinical Data Repository (CDR) to stabilize functionality; Requirements documents for Lab, Pharmacy, Identity Management, Access Control, and Presentation Layer; Assessing portal framework solution; Current System Stabilization/Critical Design Review; and Application Virtualization& Hosting Environment (AVHE). ***FY 2013 Plans:*** Complete all activities (e.g. Operational Assessment, IOT&E, deployment support) in order that Increment 1 capability will be operational by end of the fiscal year.Develop, integrate infrastructure and core services to support clinical capability insertion into the new iEHR Increment 2 baseline. This includes, but not limited to: Complete Increment 1 SSO/CM to Tripler, Portsmouth, and Landstuhl, with planning for additional 16 sites; Perform Increment 2 requirements and design, and Design Review of Record in support of Milestone B decision; Provide Increment 2 iEHR Infrastructure – Enabling Capabilities (SOA Suite / ESB, Identity Management, Portal Framework, Access Control, etc.) at DTC for test and integration; Complete HDD Data Mapping in Hampton Roads, San Antonio, and Richmond;			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	385A: *Integrated Electronic Health Record (Tri-Service)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Begin Increment 2 Lab, Pharmacy, Immunization, and Presentation Layer; and Complete DTC / DTE Full Operational Capability (FOC).			
Accomplishments/Planned Programs Subtotals	80.837	55.994	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	123.631	155.977	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	232.645	104.600	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources. Performance metrics for specific major projects may be viewed at the OMB Federal IT Dashboard website.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	386A: *Virtual Lifetime Electronic Record (VLER) HEALTH (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
386A: *Virtual Lifetime Electronic Record (VLER) HEALTH (Tri-Service)*	-	7.006	7.006	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

VLER is an initiative to enable the various elements (DoD, Department of Veterans Affairs (VA), Department of Health & Human Services (HHS), and Private Sector) of the United States health care community to quickly, accurately, and electronically share health information. Currently, funding for VLER is reflected under the 385A: Integrated Electronic Health Record (Tri-Service) initiative for FY 2013 and out.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Virtual Lifetime Electronic Record (VLER) HEALTH (Tri-Service)	7.006	7.006	0.000
Description: Work with Department of Veterans Affairs (VA), Department of Health & Human Services (HHS), and Private Sector to expand VLER. ***FY 2012 Accomplishments:*** Development, integration and testing efforts will support electronic exchange of health information between government and private sectors to facilitate continuity of care for Service Members and Veterans. ***FY 2013 Plans:*** Development, integration and testing efforts will support electronic exchange of health information between government and private sectors to facilitate continuity of care for Service Members and Veterans.			
Accomplishments/Planned Programs Subtotals	7.006	7.006	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*		7.439								Continuing	Continuing

Remarks

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	386A: *Virtual Lifetime Electronic Record (VLER) HEALTH (Tri-Service)*

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources. Performance metrics for specific projects may be viewed at the OMB Federal IT Dashboard website.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	423A: *Defense Center of Excellence (FHP&RP)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
423A: *Defense Center of Excellence (FHP&RP)*	-	1.177	1.270	1.295	-	1.295	1.323	1.346	1.369	1.395	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) is a United States Department of Defense (DoD) organization that provides guidance across DoD programs related to psychological health (PH) and traumatic brain injury (TBI) issues. The organization's mission statement is: "DCoE assesses, validates, oversees and facilitates prevention, resilience, identification, treatment, outreach, rehabilitation, and reintegration programs for PH and TBI to ensure the Department of Defense meets the needs of the USA's military communities, warriors and families." DCoE focuses on education and training; clinical care; prevention; research; and service member, family and community outreach. In collaboration with the Department of Veterans Affairs, the organization supports the Department of Defense's commitment of caring for service members from the time they enter service and throughout the completion of their service. DCoE also seeks to mitigate the stigma that still deters some from reaching out for help for problems such as post-traumatic stress disorder and TBI. The organization has a leadership role in collaborating with a national network of external entities[1] including non-profit organizations,[2] other DoD agencies, academia, Congress,[3] military services and other federal agencies.[4] Public health service and civil service workers, including personnel from the Department of Veterans Affairs and individuals from all the military services as well as contract personnel comprise the staff of DCoE. DCoE's goals include providing the necessary resources to facilitate the care of service members who experience TBI or PH concerns and ensuring that appropriate standards of care exist and are maintained across the Department of Defense. DCoE seeks to create, identify and share best practices, conducting necessary pilot or demonstration projects to better inform quality standards when best practices or evidence based recommendations are not readily available. Other DCoE goals include ensuring that program standards are executed and quality is consistent and creating a system in which individuals across the United States expect and receive the same level and quality of service regardless of their service branch, component, rank or geographic location. DCoE comprises eight directorates and six component centers responsible for TBI/PH issues. These DCoE entities execute programs, provide clinical care, conduct research, identify and share best practices and provide strategic planning for PH and TBI across the DoD.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Defense Center Of Excellence (FHP&RP)	1.177	1.270	1.295
Description: DCoE programs and products are developed to drive innovation across the continuum of care by identifying treatment options and other clinical and research methods that deliver superior outcomes. Products range from tools customized for health care providers to electronic resources for service members and families.			
FY 2012 Accomplishments:			

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	423A: *Defense Center of Excellence (FHP&RP)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Funds continued the development of a Traumatic Brain Injury (TBI) registry of information for the tracking of the diagnosis, interventions or other procedures, medical treatments, and follow-up of TBI injuries incurred by a member of the armed forces. Funds began the development process for suicide and Psychological Health (PH) registries. ***FY 2013 Plans:*** Funds will be utilized to upgrade and redesign the afterdeployment.org website. Launched in August 2008, afterdeployment.org provides self-care tools to assist with a range of adjustment concerns (combat stress, sleep problems, anger management, etc.), with an emphasis on exercise-based interactivity, community support, and multimedia applications. For the T2 Toolkit (T2T), funding would be used for the second phase of development that is focusing on the new generation of PH 3D Games and Mobile Apps that will enhance many area of PH for DoD service members, family, and veterans. ***FY 2014 Plans:*** Funds will be utilized to finalize the multi-phased upgrade and redesign of the afterdeployment.org website. Afterdeployment.org will provide the latest in self-care tools that assist with a range of adjustment concerns (combat stress, sleep problems, anger management, etc.), with an emphasis on exercise-based interactivity, community support, and multimedia applications. For the T2 Toolkit (T2T), funding would be used for the final phase of development focusing on the new generation of PH Mobile Apps that will enhance many area of PH for DoD service members, family, and veterans.			
Accomplishments/Planned Programs Subtotals	1.177	1.270	1.295

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	435A: *NICOE Continuity Management Tool*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
435A: *NICOE Continuity Management Tool*	-	2.855	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The NICoE Continuity Management Tool (NCMT) is a business intelligence tool to perform healthcare modeling and analysis of NICoE activities.

Major capabilities defined by the NICoE in Jun 2009 and refined in Jun 2010 prior to the program procurement in Sep 2010, are subsystems that make up the NCMT end-to-end system, and were prioritized in the following order: Continuity Management Subsystem, Scheduling Subsystem, Clinical Subsystem, Research Subsystem, Training and Education Subsystem, Administration Subsystem.

Continuity Management Subsystem: Records every interaction with a particular Warrior and his or her Family as one entity to manage initial contact, referral, screening, intake, pre-admission, admission, discharge and follow-up processes.

Scheduling Subsystem: Captures, organizes, displays the complex schedules of the NICoE. Used to manage patient appointments, the utilization of facility resources including treatment rooms, modalities, provider staff and support staff.

Clinical Subsystem: A clinical application and clinical database that includes the functions that allow the user to store, classify, analyze, retrieve, interpret, present clinical data. Allows the visualization of all of the various components of the patient's health record: radiology, pathology, lab results, neurological assessments, etc.

Research Subsystem: Consists of the research database and the applications that allow the user to store, classify, analyze, retrieve, interpret, present data. Allows NICoE to aggregate data from disparate systems, both within the NICoE and from partner organizations, helping the research move faster, with more agility, and with purpose and direction supported by validated facts. Allows researchers to address many data challenges from a single system and transforms the way they do research.

Training and Education Subsystem: Provides the ability to share relevant research, diagnosis, treatment information with authorized users.

Administration Subsystem: Provides the ability to manage a portfolio of projects related to continuity of care, clinical operations, research, training and education functions in the NICoE.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	435A: *NICOE Continuity Management Tool*

The NCMT is supported by Three Contracts: Hosting (Provides Hardware, Software, Maintenance), System Integration (Implements NICoE Functional Requirements, Turns NICoE Ideas and Goals into Computer Screens, Templates, Applications – Capabilities) and Decision Support (Acquisition Management, Requirements Definition, Implementation Planning).
The NICoE's missions are to:

1) Explore novel, promising, and futuristic solutions to the complex spectrum of combat brain injury from TBI to posttraumatic stress disorder (PTSD) and other psychological injuries;

2) Ensure – through continuous outreach and high quality health care – that America embraces those who have served and sacrificed so much on its behalf; and

3) Train the next generation of providers in the most effective approaches to prevention, detection, and treatment options.

Currently the established AHLTA specification does not adequately support the specialized care and continuity management integration necessary to support NICoE clinical operations and research. Additionally, AHLTA does not support the data mining and pattern recognition requirements of the NICoE.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: NICOE Continuity Management Tool	2.855	0.000	0.000
Description: The NCMT is a tool designed to perform healthcare modeling and analysis of NICoE activities. Major capabilities include Continuity Management, Scheduling, Clinical Database, Research Database, Training and Education, and Administration. ***FY 2012 Accomplishments:*** The NCMT is an Acquisition Category (ACAT) III program that is currently pre-Milestone B in the Investment Management and Prototyping phase of the Business Capability Lifecycle (BCL). The TMA Component Acquisition Executive (CAE) is the Materiel Decision Authority (MDA). Development for the NCMT is still in the prototyping phase. Development will continue until Milestone B. It is the intent of this action to design, develop, and implement, and maintain an integrated IM/IT solution that supports NICoE operations and meets NICoE required capabilities (Attachment C). This capability will leverage the existing Department of Defense (DoD) and Department of Veterans Affairs (VA) information systems to support prevention, detection, assessment, treatment, and longitudinal care for Psychological Health (PH) and Traumatic Brain Injury (TBI) candidates. The architecture will consist of both clinical and research databases. The system capabilities must be flexible enough to expand and evolve as approaches and treatments for PH and TBI advance. The information management/information technology (IM/IT) capability must be appropriate to address:			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	435A: *NICOE Continuity Management Tool*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Consultation and coordination services, to include outreach, the pre-visit evaluation process, internal NICoE concierge services, and follow-up coordination Comprehensive evaluation based on symptoms, medical records, and response to survey tools and other evaluative instruments, which may be modified based on enrollment in research protocols Individualized treatment planning, to include telehealth, telemedicine, and advanced communication techniques to promote continued follow-up and longitudinal outcome tracking Family-focused intervention Clinical and translational research, clinical data repository, reporting of findings, training, and distance learning Administration and integration of the NICoE. ***FY 2013 Plans:*** All activities and milestones are ongoing. ***FY 2014 Plans:*** No program funding profile.			
Accomplishments/Planned Programs Subtotals	2.855	0.000	0.000

	FY 2012	FY 2013
Congressional Add: *** PLEASE ENTER CONGRESSIONAL ADD TITLE ***	0.000	-
FY 2012 Accomplishments: [*** PLEASE ENTER CONGRESSIONAL ADD TEXT FOR PRIOR YEAR. ***]		
Congressional Adds Subtotals	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• 4187 807783: *NCMT*	7.836	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• 4187 807781: *NCMT*	4.700	3.683	3.819		3.819	3.961	4.107	4.259	4.332	Continuing	Continuing

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	435A: *NICOE Continuity Management Tool*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• 4859 807781: *JMED*	4.397	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• 4940 807781: *JTFCMI*	0.000	0.000	39.170		39.170	40.792	41.610	42.395	43.267	Continuing	Continuing
• 4940 807720: *JTFCMI*	0.000	0.000	0.000		0.000	4.600	0.000	0.000	0.000	Continuing	Continuing
• 4273 807781: *Engineering and Deployment*	2.200	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• 4280 807721: *Engineering and Deployment*	0.000	2.030	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• 4361 807781: *IA Operational Resiliency*	0.500	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• 4126 807781: *Computer Network Defense*	0.250	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• 4111 807781: *Computer Network Defense*	1.390	0.000	0.463		0.463	0.473	0.482	0.492	0.502	Continuing	Continuing
• 4165 807781: *Computer Network Defense*	1.250	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• 4177 807781: *Computer Network Defense*	1.500	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• 4364 807781: *Workforce Development*	0.009	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

This requirement is currently contracted through the USA Medical Research Activity. The vender is Evolvent Technologies Inc.

E. Performance Metrics

This performance metrics or milestones shall include, but is not limited to:

Coordination with Government representatives
Review, evaluation and transition of current support services
Transition of historic data to new contractor system
Government-approved training and certification process
Transfer of hardware warranties and software licenses

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	435A: *NICOE Continuity Management Tool*

Transfer of all System/Tool documentation to include, at a minimum: user manuals, system administration manuals, training materials, disaster recovery manual, requirements traceability matrix, configuration control documents and all other documents required to operate, maintain and administer systems and tools
If another contractor follows this contractor with work related to this work, this contractor will provide any developed source code (compiled and uncompiled, including all versions, maintenance updates and patches) with written instructions for the source code on which this contractor has worked, so that an experienced software engineer, previously not familiar with the source code can understand and efficiently work with the source code. In addition, this contractor will provide for 30 days, a software engineer (or person of comparable work level) with significant experience working with the source code, to assist the new contractor
Orientation phase and program to introduce Government personnel, programs, and users to the Contractor's team, tools, methodologies, and business processes
Disposition of Contractor purchased Government owned assets, including facilities, equipment, furniture, phone lines, computer equipment, etc.
Transfer of Government Furnished Equipment (GFE) and Government Furnished Information (GFI), and GFE inventory management assistance
Applicable TMA debriefing and personnel out-processing procedures
Turn-in of all government keys, ID/access cards, and security codes.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	446A: *Disability Mediation Service (DMS)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
446A: *Disability Mediation Service (DMS)*	-	0.000	0.000	0.575	-	0.575	0.587	0.619	0.635	0.654	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

"Disability Mediation Service (DMS):
The VTA (Veteran's Tracking Application) has been the primary system to track, record, and report data for the IDES (Integrated Disability Evaluation System) process. The VTA is scheduled to sun-set, by VA (Veterans Affairs), and the data is being moved to another application. Migration of VTA to another application creates the requirement to allow data exchange between Service non-medical case management and new VA DES (Disability Evaluation System) IT application. The BEC (Benefits Executive Council) is looking to create a DMS (Disability Mediation Service), which is an integrator between the Services and VA.
The DMS will facilitate the improvement of non-medical case management tracking and IDES data/information management. It will eliminate redundant data entry within DoD (Department of Defense), improving data quality by capturing more data for operational reporting from the Services and WCP, decrease backlog by eliminating data entry duplication, and minimize impact to DoD Services by allowing the Services to continue using their existing/planned systems without requiring retraining on a new applications.
The DMS will be created from existing technology. It will provide a mediation service to help isolate each system from changes and uniqueness in the other systems and allow the Services and WCP to report and drill down on data that we capture during the exchange. This IT solution will not replace current DoD systems, but will require some modifications and enhancements to those systems to support the date exchange. WCP will support development costs for these efforts. Services will assume responsibility and POM costs for modifications, enhancements, and maintenance in the out years."

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Disability Mediation Service (DMS)	0.000	0.000	0.575
Description: The VTA (Veteran's Tracking Application) has been the primary system to track, record, and report data for the IDES (Integrated Disability Evaluation System) process. The VTA is scheduled to sun-set, by VA (Veterans Affairs), and the data is being moved to another application. Migration of VTA to another application creates the requirement to allow data exchange between Service non-medical case management and new VA DES (Disability Evaluation System) IT application. The BEC (Benefits Executive Council) is looking to create a DMS (Disability Mediation Service), which is an integrator between the Services and VA. The DMS will facilitate the improvement of non-medical case management tracking and IDES data/information management. It will eliminate redundant data entry within DoD (Department of Defense), improving data quality by capturing more data for operational reporting from the Services and WCP, decrease backlog by eliminating data entry duplication, and minimize impact			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	446A: *Disability Mediation Service (DMS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
to DoD Services by allowing the Services to continue using their existing/planned systems without requiring retraining on a new applications. The DMS will be created from existing technology. It will provide a mediation service to help isolate each system from changes and uniqueness in the other systems and allow the Services and WCP to report and drill down on data that we capture during the exchange. This IT solution will not replace current DoD systems, but will require some modifications and enhancements to those systems to support the date exchange. WCP will support development costs for these efforts. Services will assume responsibility and POM costs for modifications, enhancements, and maintenance in the out years." ***FY 2012 Accomplishments:*** Realignment in FY 2014 ***FY 2013 Plans:*** Realignment in FY 2014 ***FY 2014 Plans:*** Migration of VTA to another application creates the requirement to allow data exchange between Service non-medical case management and new VA DES (Disability Evaluation System) IT application. The BEC (Benefits Executive Council) is looking to create a DMS (Disability Mediation Service), which is an integrator between the Services and VA. The DMS will be created from existing technology. It will provide a mediation service to help isolate each system from changes and uniqueness in the other systems and allow the Services and WCP to report and drill down on data that we capture during the exchange. This IT solution will not replace current DoD systems, but will require some modifications and enhancements to those systems to support the date exchange. WCP will support development costs for these efforts.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	0.575

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

To be determined when an approach has been determined.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480B: *Defense Medical Human Resources System (internet) (DMHRSi) (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480B: *Defense Medical Human Resources System (internet) (DMHRSi) (Tri-Service)*	-	0.585	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Defense Medical Human Resources System – internet (DMHRSi) enables the Services to standardize and optimize the management of human resource assets across the Military Health System (MHS). DMHRSi is a Web-based system that enables improved decision making by facilitating the collection and analysis of critical human resource data. It standardizes medical human resource information and provides enterprise-wide visibility for all categories of human resources (Active Duty, Reserve, Guard, civilian, contractor, and volunteer medical personnel); improves reporting of medical personnel readiness and; streamlines business processes to improve data quality for management decision making and managing the business; provides Tri-Service visibility of associated labor costs and is source for personnel cost data.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Defense Medical Human Resources System (internet) (DMHRSi) (Tri-Service)	0.585	0.000	0.000
Description: Development of DMHRSi functional enhancements. ***FY 2012 Accomplishments:*** Complete development for several functional enhancements that provide additional capabilities for reporting, security management, and supported joint service human resources and training reporting. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A			
Accomplishments/Planned Programs Subtotals	0.585	0.000	0.000

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480B: *Defense Medical Human Resources System (internet) (DMHRSi) (Tri-Service)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	16.694	17.372	17.285		17.285	16.455	17.812	18.231	18.540	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

*** PLEASE ENTER TEXT ***

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480C: *Defense Medical Logistics Standard Support (DMLSS) (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480C: *Defense Medical Logistics Standard Support (DMLSS) (Tri-Service)*	-	5.370	4.272	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Defense Medical Logistics Standard Support (DMLSS) provides the Military Medical Departments (Army, Navy, and Air Force MilDeps) one standard DoD medical logistics system. DMLSS provides the healthcare driven capability to support the medical logistics needs of the DoD community for critical medical commodities - pharmaceuticals and medical/surgical supplies across the continuum of care from the battlefield to tertiary care at a major DoD medical center. This capability is enabled by the partnership of the Defense Logistics Agency (DLA) Troop Support and the MHS providing an industry to practitioner supply chain for the medical commodity. The DLA DMLSS Wholesale (DMLSS-W) applications are funded by DLA while the garrison medical treatment facilities and theater applications are funded by the Defense Health Program. The current DMLSS system provides full spectrum capability for medical logistics management in a direct care environment. Basic functionality includes stock control, Prime Vendor operations, preparation of procurement documents, research and price comparison for products, property accounting, biomedical maintenance operations, capital equipment, property management, inventory, and a facility management application that supports the operations of a fixed medical treatment facility physical plant and supports Joint Commission on the Accreditation of Healthcare Organizations' (JCAHO) accreditation requirements. DMLSS, in coordination with Defense Health Information Management System (DHIMS), is providing to the Services and the Combatant Commanders the functional logistics capabilities necessary to rapidly project and sustain joint medical capabilities for medical logistics management of theater medical materiel operations. Current applications also deployed to the theater include the DMLSS Customer Assistance Module (DCAM), a medical logistics ordering tool that allows users to view their supplier's catalog and generate electronic orders. Primarily focused on the theater environment, DCAM automates the Class VIII supply process at the lower levels of care, and allows non-logisticians, who maintain their medical supplies as an additional duty, to electronically exchange catalog, order, and status information with their supply activity.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Defense Medical Logistics Standard Support (DMLSS) (Tri-Service)	5.370	4.272	0.000
Description: Development, integration and modernization of DMLSS modules. FY 2012 includes funding for Patient Movement Item Tracking System (PMITS) The Patient Movement Items (PMI) program calls for a designated pool of medical equipment that is necessary to support a patient during the aero-medical evacuation (AE) process. PMITS consists of an integrated network of distribution sites to have an automated system that would track and manage this inventory			
FY 2012 Accomplishments:			

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480C: *Defense Medical Logistics Standard Support (DMLSS) (Tri-Service)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Incorporated enterprise catalog data and synchronized Product Data Bank (PDB) to support Business Intelligence/Decision Support (BI/DS). Incorporated enterprise reference data into the Joint Medical Asset Repository (JMAR) database to support enterprise catalog data construct enabled across the Defense Medical Logistics operational enterprise. Developed functionality to provide the capability for forward deployed units to logistically manage medical products from the Medical Master Catalog (MMC). PMITS: System enhancements to re-engineer and automate the import and update records for patient information ***FY 2013 Plans:*** Improve the ordering and cataloging functionality of the Medical Master Catalog (MMC), including Real-Time Information services to increase the frequency of connections from the DMLSS servers located at each Military Treatment Facility to the central DMLSS database. Continued efforts on Common Operating Picture (COP) dashboard in JMAR to provide a top down visibility of service contract data across the Defense Medical Logistics Enterprise.			
Accomplishments/Planned Programs Subtotals	5.370	4.272	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	24.579	28.914	30.287		30.287	30.787	31.389	31.934	32.483	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	0.142	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480C: *Defense Medical Logistics Standard Support (DMLSS) (Tri-Service)*

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources. Performance metrics for specific projects may be viewed at the OMB Federal IT Dashboard website.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480D: *Defense Occupational and Environmental Health Readiness System - Industrial Hygiene (DOEHRS-IH) (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480D: *Defense Occupational and Environmental Health Readiness System - Industrial Hygiene (DOEHRS-IH) (Tri-Service)*	-	3.372	8.451	1.550	-	1.550	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Defense Occupational and Environmental Health Readiness System - Industrial Hygiene (DOEHRS-IH) is a comprehensive, automated information system that provides a single point for assembling, comparing, using, evaluating, and storing occupational personnel exposure information, workplace environmental monitoring data, personnel protective equipment usage data, observation of work practices data, and employee health hazard educational data. DOEHRS-IH will provide for the definition, collection and analysis platform to generate and maintain a Service Member´s Longitudinal Exposure Record. DOEHRS-IH will describe the exposure assessment, identify similar exposure groups, establish a longitudinal exposure record baseline to facilitate post-deployment follow-up, and provide information to enable exposure-based medical surveillance and risk reduction.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Defense Occupational and Environmental Health Readiness System - Industrial Hygiene (DOEHRS-IH) (Tri-Service)	3.372	8.451	1.550
Description: Configure, enhancement and interface DOEHRS-IH modules.			
FY 2012 Accomplishments: Configured Exposure Characterization (minimizes the impact of worksite hazards and facilitates readiness by providing information to enable exposure-based medical surveillance) in the web application, mobile application, and data warehouse, as well as the completion of the Environmental Health functionality in the Data Warehouse.			
FY 2013 Plans: Enhancements: Data Warehouse; Enhanced Environmental Health, Radiation, and Ventilation Interface Prototype Project			
FY 2014 Plans:			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480D: *Defense Occupational and Environmental Health Readiness System - Industrial Hygiene (DOEHRS-IH) (Tri-Service)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Configure Hazardous Material (HAZMAT) Material Safety Data Sheets (MSDS). MSDS are fundamental and authoritative resources for accessing standardized hazard information related to materials and products used in the workplace. MSDS is mandated by OSHA 29 CFR 1910.120.			
Accomplishments/Planned Programs Subtotals	3.372	8.451	1.550

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	8.121	7.391	9.274		9.274	8.322	8.945	9.169	9.461	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	0.617	0.101	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources. Performance metrics for specific projects may be viewed at the OMB Federal IT Dashboard website.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480F: *Executive Information/Decision Support (EI/DS) (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480F: *Executive Information/ Decision Support (EI/DS) (Tri-Service)*	-	3.127	1.479	5.074	-	5.074	3.024	2.731	2.623	3.083	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

EI/DS is comprised of a central datamart Military Health System Data Repository (MDR) and several smaller datamarts: MHS Management Analysis and Reporting Tool (M2), Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE), and Purchased Care Operations Systems -TRICARE Encounter Data (TED) & Patient Encounter Processing and Reporting (PEPR). Many of these operate within a Business Objects XI (BOXI) environment. EI/DS manages receipt, processing, and storage of over 155 terabytes of data from both Military Treatment Facilities (MTF) and the TRICARE purchased care network systems. These data include inpatient dispositions, outpatient encounters, laboratory, radiology, and pharmacy workload, TRICARE network patient encounter records, TRICARE mail order pharmacy patient encounter records, beneficiary demographics, MTF workload and cost information, eligibility and enrollment, Pharmacy Data Transaction Service data, customer satisfaction surveys, and data associated with the Wounded Warrior care. EI/DS provides centralized collection, storage and availability of data, in various data marts, to managers, clinicians, and analysts for the management of the business of health care.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Executive Inforamtion/Decision Support (EI/DS) (Tri-Service)	3.127	1.479	5.074
Description: Development, modernization, upgrades and testing for various EI/DS modules.			
FY 2012 Accomplishments: Transitioning Clinical Data Mart functionality to the Health Services Data Warehouse. Completed ESSENCE v4 (Block 3) enhancing disposition (inpatient and outpatient) surveillance and analysis; chief compliant surveillance and analysis; and visibility of laboratory results details. Developing the MHS Data Repository (MDR) Query Monitor to track Software Capability Evaluation (SCE) utilization and Protected Health Information (PHI) access. Revised M2 providing capability to build/edit reports, monitor patient participation in programs, and access clinical, demographic and financial data.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480F: *Executive Information/Decision Support (EI/DS) (Tri-Service)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Completed code base changes for Protected Health Information Management Tool that stores information about PHI disclosures, authorizations, and restrictions. In support of the Health Services Data Warehouse (HSDW), the Air Force Medical Service (AFMS) purchased Commercial Off-The-Shelf (COTS) software/licenses and built custom scripts for development of the data warehouse. The COTS software will expedite consolidation and cleansing of data, measure data quality, merge and organize data for reporting tools. These efforts will be used to complete the transition of Clinical Data Mart (CDM) data into HSDW. ***FY 2013 Plans:*** M2 plan to deploy BOXI 4.0 upgrading to new client component--WEBi and WEBi Rich, BOXI provides the platform for accessing and analyzing embedded data from multiple sources – data is presented as reports. Replace COGNOS with Business Objects Common Services (BCS) and business intelligence functions within TED/PEPR in support of new software solution being integrated into existing suite of applications. ***FY 2014 Plans:*** Develop Integrated Dashboard & Fused Detection Algorithm within ESSENCE that 'fuses' signals across all data sources and applies differential weighting and advanced statistical approach Develop Enhanced System Administration to include maintenance of syndrome mapping tables, geographic ID, case-specific definitions to improve the agility of ESSENCE to keep pace with emerging health threats Develop Laboratory Results Analysis within ESSENCE for earlier outbreak detection, reduce number of false alarms, provide prompt characterization of the pathogen causing outbreak, or help recognize a new emerging infectious disease Provide capability to download National Plan and Provider Enumeration System (NPPES) file and to match National Provider Identifier (NPI) and Provider Record within TED			
Accomplishments/Planned Programs Subtotals	3.127	1.479	5.074

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	40.610	41.980	43.353		43.353	44.097	44.799	45.658	46.355	Continuing	Continuing

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480F: *Executive Information/Decision Support (EI/DS) (Tri-Service)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-3, 0807721HP: *Replacement/ Modernization*	0.000	0.000	0.108		0.108	1.142	1.161	1.181	1.202	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources. Performance metrics for specific projects may be viewed at the OMB Federal IT Dashboard website.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480G: *Health Artifact and Image Management Solution (HAIMS) (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480G: *Health Artifact and Image Management Solution (HAIMS) (Tri-Service)*	-	0.000	0.000	3.996	-	3.996	0.304	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Health Artifact and Image Management Solution (HAIMS) enables the DoD and the VA healthcare providers to have global access and awareness of artifacts and images (A&I) generated during the healthcare delivery process. HAIMS will provide the new capability for users throughout the MHS to be aware and have access to A&I that have been registered with the central "system", currently on local workstations and Military Treatment Facility (MTF) Picture Archive and Communications Systems (PACs). As patients move through the continuum of care from Continental United States to Theater and then return to DoD sustaining bases facilities, healthcare A&I moves seamlessly and simultaneously with the patient. This advances several MHS strategy initiatives such as achievement of paperless record, global access of Wounded Warrior scanned documents, and an alternative to finding storage space for paper records of merging MTFs. HAIMS will supply access to VHA and other external A&I both inside and outside the Military Health System (MHS) Electronic Health Record (EHR). Funding has been provided within this program element in prior years for HAIMS before if was identified as its own system in the budget cycle. HAIMS will experience Incremental development as each new requirement is identified for FY 2014 and FY 2015.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Health Artifact and Image Management Solution (HAIMS) (Tri-Service)	0.000	0.000	3.996
Description: Integrate new functionality into HAIMS. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Integration effort to replace two major Commercial Off-The-Shelf (COTS) components within the existing application. Technical integration to support Data-at-Rest requirement and Military Health System (MHS) Joint Active Directory.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	3.996

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480G: *Health Artifact and Image Management Solution (HAIMS) (Tri-Service)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	7.959	14.210	13.555		13.555	15.277	16.410	17.725	19.143	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	0.000	3.286	6.928		6.928	14.591	12.306	13.290	14.355	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480K: *integrated Federal Health Registry Framework (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480K: *integrated Federal Health Registry Framework (Tri-Service)*	-	0.000	0.000	2.666	-	2.666	1.093	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The purpose of an integrated Federal Health Registry capability is to provide a viable solution to fulfill a critical need for improved sharing and exchange of Service member and Veteran health information and data between the Department of Defense - Health Affairs and the Department of Veterans Affairs-Veterans Health Administration communities of interest (COIs) as mandated in Section 1635 of the 2008 National Defense Authorization Act (NDAA, 2008). This ability to share and exchange vital health care data between the respective specialties of care is essential to conduct longitudinal analyses necessary to improve patient care and quality of life outcomes. To maximize efficiencies and most effectively meet the needs of the functional communities, the Centers of Excellence (CoEs) have developed a consolidated framework solution for an integrated Federal Health Registry capability. This effort provides a comprehensive solution that meets the specialty care needs of each of the Services and Veteran Affairs that are represented by the Joint DoD and VA CoEs, (Army-Extremity Trauma and Amputation Center of Excellence; TMA-Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury; Navy-DoD/VA Vision Center of Excellence; Air Force-Hearing Center of Excellence; and JTFCAPMED-National Intrepid Center of Excellence).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Federated Registry Framework (Tri-Service)	0.000	0.000	2.666
Description: Develop, integrate and test a common registry. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Funding to support a consolidated technical approach for the Centers of Excellence, which will provide a repeatable process that includes integration of their registry requirements into federated subspecialty clinical data elements that were determined by representative subject matter experts from the Tri-Services and Veteran's Affairs.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	2.666

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480K: *integrated Federal Health Registry Framework (Tri-Service)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	0.000	0.000	0.898		0.898	1.319	1.503	1.551	1.600	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

To be determined when an approach has been determined.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480M: *Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480M: *Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)*	-	28.731	39.803	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Theater Medical Information Program - Joint (TMIP-J) integrates components of the Military Health System sustaining base systems and the Services´ medical information systems to ensure timely interoperable medical support for mobilization, deployment and sustainment of all Theater and deployed forces in support of any mission. TMIP-J enhances the clinical care and information capture at all levels of care in Theater, transmits critical information to the Theater Commander, the evacuation chain for combat and non-combat casualties, and forges the theater links of the longitudinal health record to the sustaining base and the Department of Veterans Affairs. TMIP-J is the medical component of the Global Combat Support System. TMIP-J provides information at the point of care and to the Theater tactical and strategic decision makers through efficient, reliable data capture, and data transmission to a centralized Theater database. This delivers TMIP-J´s four pillars of information support through the electronic health record, integrated medical logistics, patient movement and tracking, and medical command and control through data aggregation, reporting and analysis tools for trend analysis and situational awareness. TMIP-J fulfills the premise of "Train as you fight" through the integration of components which are identical or analogous to systems from the sustaining base. TMIP-J adapts and integrates these systems to specific Theater requirements and assures their availability in the no- and low- communications settings of the deployed environment through store and forward capture and transmission technology.

TMIP-J RDT&E is reported under the program element 0605013 through FY 2013 inclusive, but will be reported under new program element 0605023 for FY 2014 and out.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)	28.731	39.803	0.000
Description: Develop, integrate, modernize, and test TMIP-J Releases and modules.			
FY 2012 Accomplishments: Completed TMIP-J Increment 2 Release 2 (I2R2) development/integration/testing efforts and commence planning for TMIP-J Increment 2 Release 3 (I2R3). Began requirements decomposition and development efforts and investigate the most appropriate approach to improving five key areas identified by stakeholders: hardware and software agnosticism, ease of fielding, speed of deployment, automating the deployment of software to sites, and reducing the number of configurations to support. Began integration effort of International Classification of Diseases (ICD-10) codes.			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480M: *Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Interface Medical Situation Awareness in Theater (MSAT) with the Combined Information Data Network Exchange (CIDNE) for Blast Exposure Concussion and Injury Report (BECIR). ***FY 2013 Plans:*** Continue I2R3 integration development effort including, extended use of Public Key Infrastructure and Common Access Card (PKI/CAC), and increased use of virtualization technologies. Development effort for Aeromedical Evacuation capabilities. Achieve a Full Deployment Decision for I2R2. Enhance MSAT with the capability to communicate with subject matter experts and all agencies and resources that maintain medical entomology consultation information, with guidance on: arthropod-borne disease; the safe and effective use of pesticides; poisonous plants or animals; and personal or unit-level PM measures for control or avoidance of disease vectors as well as the capability to access Service, coalition, and host nation toxic industrial chemical and toxic environmental chemical sites and locations and information on occupational hazards in those location via Defense Occupational and Environmental Health Readiness – Industrial Hygiene (DOEHRS-IH). The system shall enable users to access information pertaining to U.S. personnel who receive care in non-DoD medical facilities, allow the user to access DoD operations, and provide Patient Movement Crew information (ROTARY WING MEDEVAC). Update Theater Medical Data Store remaining interfaces that are not compliant with ICD-10 code implementation.			
Accomplishments/Planned Programs Subtotals	28.731	39.803	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	42.955	44.941	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	2.286	2.390	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480M: *Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)*

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources. Performance metrics for specific projects may be viewed at the OMB Federal IT Dashboard website.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480P: *Other Related Technical Activities (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480P: *Other Related Technical Activities (Tri-Service)*	-	4.123	1.523	5.311	-	5.311	0.692	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Other Related Technical Activities includes funding for Information Technology activities common to multiple or all Tri-Service systems/programs and can not be associated with any one individual Tri-Service initiative, which includes enterprise Messaging and other common IT services requirements. Funding is included in FY 2012 for International Classification of Diseases and Related Health Problems 10th edition (ICD-10). ICD-10 funding for FY 2013 and out is shown in the appropriate initiative's Accomplishments/Planned Porgram sections within this program element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Other Related Technical Activities (Tri-Service)	4.123	1.523	5.311
Description: Develop, integrate, test of activities common to multiple or all Tri-Service IT activities.			
FY 2012 Accomplishments: Funding programmed for development and testing of planned common services such as single sign on and identity authentication services applications as well as transition of the Military Health System to Common Services being developed in support of messaging components, message level security, service registry, XML firewall/accelerator and common code services.			
FY 2013 Plans: Funding programmed for development and testing of planned common services being developed in support of messaging components, message level security, service registry, XML firewall/accelerator and common code services.			
FY 2014 Plans: Funding programmed for development and testing of planned common services being developed in support of messaging components, message level security, service registry, XML firewall/accelerator and common code services. Additionally funding is to support Wounded Warrior enhancements as they are identified.			
Accomplishments/Planned Programs Subtotals	4.123	1.523	5.311

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480P: *Other Related Technical Activities (Tri-Service)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	2.100	2.134	7.197		7.197	6.798	7.039	7.628	8.262	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

Funding in Para C reflects O&M for actions directly related to RDT&E activities in RTA (e.g. Common Service and WII Enhancements)

Other Program Funding associated with RDT&E in HEIS:

FY12 FY13 FY14 FY15 FY16 FY17 FY18

Common Services
O&M 2.100 2.134 3.403 2.117 2.152 2.188 2.228
PROC

WII
O&M 3.794 4.681 4.887 5.44 6.034
PROC

Total HEIS - RDT&E Other Program Funding
O&M 2.100 2.134 7.197 6.798 7.039 7.628 8.262
PROC

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each activity establishes performance measurements. Program cost, schedule and performance are measured periodically using a systematic approach. Since this is an enterprise initiative which crosses mutliple initiatives, performance metrics of the common activities are part of and/or contributing factors in the measurement of the performacne metrics of the individual initiatives.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480R: *TMA E-Commerce (TMA)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480R: *TMA E-Commerce (TMA)*	-	2.934	3.493	5.898	-	5.898	3.838	3.951	4.042	4.122	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The DHP, RDT&E appropriation includes the following TMA initiatives: Electronic Commerce System(E-Commerce): This system was developed for centralized collection, integration, and reporting of accurate purchased care contracting and financial data. It provides an integrated set of data reports from multiple data sources to management, as well as tools to control the end-to-end program change management process. E-Commerce replaces multiple legacy systems. E-Commerce consists of several major subsystems including: CM subsystem utilizing Prism software to support contract action development and documentation; the RM subsystem utilizing Oracle Federal Financials and TED interface software to support the budgeting, accounting, case recoupment, and disbursement processes; the document management subsystem utilizing Documentum software to provide electronic storage, management, and retrieval of contract files; Management Tracking and Reporting subsystem utilizing custom software to provide reports to assist in the management and tracking of changes to the managed care contracts as well as current and out year liabilities; the Purchased Care Web site that provides up-to-date financial information for both TMA and the Services concerning the military treatment facilities' (MTFs') expenditures for MTF enrollee purchased care and supplemental care. E-Commerce includes 5 major subsystems and over 60 servers supporting development, test, and production. The system will be utilized by several hundred users in more than 7 different organizations. Project oversight and coordination must be provided to ensure that the needs of the disparate organizations are met without impacting the system performance or support to any individual user. Server configurations must be kept current in terms of security policies, user authorizations, and interactions with other systems and functions. All of these activities must be managed and coordinated on a daily basis.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: TMA E-Commerce (TMA)	2.934	3.493	5.898
Description: The DHP, RDT&E appropriation includes the following TMA initiatives: Electronic Commerce System(E-Commerce): This system was developed for centralized collection, integration, and reporting of accurate purchased care contracting and financial data. It provides an integrated set of data reports from multiple data sources to management, as well as tools to control the end-to-end program change management process. E-Commerce replaces multiple legacy systems. E-Commerce consists of several major subsystems including: CM subsystem utilizing Prism software to support contract action development and documentation; the RM subsystem utilizing Oracle Federal Financials and TED interface software to support the budgeting, accounting, case recoupment, and disbursement processes; the document management subsystem utilizing Documentum software to provide electronic storage, management, and retrieval of contract files; Management Tracking and Reporting subsystem utilizing custom software to provide reports to assist in the management and tracking of changes to the managed care contracts as well as current and out year liabilities; the Purchased Care Web site that provides up-to-date financial information for both TMA and the Services concerning the military treatment facilities' (MTFs') expenditures for MTF enrollee			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480R: *TMA E-Commerce (TMA)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014

purchased care and supplemental care. E-Commerce includes 5 major subsystems and over 60 servers supporting development, test, and production. The system will be utilized by several hundred users in more than 7 different organizations. Project oversight and coordination must be provided to ensure that the needs of the disparate organizations are met without impacting the system performance or support to any individual user. Server configurations must be kept current in terms of security policies, user authorizations, and interactions with other systems and functions. All of these activities must be managed and coordinated on a daily basis.

FY 2012 Accomplishments:

- Continue compliance enhancements and modernization of financial processing and reporting. Complete the modernization of health care claims processing. Sunset the contract management application. Modify existing operational software to support a) health care requirements changes, b) the next generation of TRICARE contracts, c) contract performance assessment, deliverable processing, and processing display improvements, d) operational/financial analysis and reporting enhancements, e) contract management analysis and reporting , f) E-Commerce Gateway security and integration improvements, and g) accounting functionality changes for the next generation of TRICARE contracts to enhance contracting interfaces, user GL, AP, AR and PO interface processing and audit support, reporting, and enterprise budgeting functionality; Expand existing capabilities to new users to provide ad hoc reporting to the Contract Operations Division to support health care requirements changes; changes mandated by Congress and the DoD to implement health care policy modifications, IPv6 and DOD DMZ architecture initiatives, and BEA 9.0 SFIS changes.

FY 2013 Plans:

- Continue compliance enhancements and modernization of financial processing and reporting. Complete the modernization of financial processing to provide contractors ERP capability to submit a payment request and receiving report using an electronic form. Sunset the legacy technology for the health care claims processing. Enhance application functionality to respond to changes in health care policy and guidance, to improve operational efficiency, and to continue providing operational personnel with effective financial, contract management, and acquisition support capabilities. Enhance health care claims and financial processing to accommodate changes in health care requirements, and to improve contractor performance assessment and deliverable processing. In addition, in response to changes in pharmacy program management, modernize pharmacy financial processing and reporting using the existing business intelligence infrastructure. Implement accounting improvements to support user interface processing, audit support, financial and audit reporting, and enterprise budget management. Finally, implement software changes, mandated by Congress and the DoD, to accommodate financial application health care policy modifications, IPv6, and BEA SFIS changes.

FY 2014 Plans:

- Continue compliance enhancements and modernization of financial processing and reporting. Enhance application functionality to respond to changes in health care policy and guidance, to improve operational efficiency, and to continue providing operational

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480R: *TMA E-Commerce (TMA)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
personnel with effective financial, contract management, and acquisition support capabilities. Enhance health care claims and financial processing to accommodate changes in health care requirements and to improve contractor performance assessment and deliverable processing. Complete the modernization of pharmacy financial processing and reporting and the implementation of IPV6. Implement accounting improvements to support user interface processing, audit support, financial and audit reporting, and enterprise budget management. Finally, implement software changes, mandated by Congress and the DoD, to accommodate financial application health care policy modifications, and BEA SFIS changes.			
Accomplishments/Planned Programs Subtotals	2.934	3.493	5.898

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807752HP: *Miscellaneous Support Activities*	18.563	16.404	12.857		12.857	13.098	13.425	13.720	14.022	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	0.500	0.500	0.500		0.500	0.500	0.500	0.519	0.539	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

The benchmark performance metric for transition of research supported in this PE will be the attainment of a maturity level that is typical of TRL8.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480Y: *Clinical Case Management (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480Y: *Clinical Case Management (Tri-Service)*	-	2.925	3.100	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Provides a seamless view of the care and the health of the patient from the origin of injury or illness to the end of the need for that episode of care. It will capture relevant events, information, documents and other data to support the overall improvement of the patient's condition utilizing medical Case Management practices. It will provide the ability to collect clinical information in support of the medical Case Manager's mission and will provide information gathered to MTFs and MSCSs.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Clinical Case Management (CCM-ITI) (Tri-Service)	2.925	3.100	0.000
Description: Funding to support requirements completion and development associated with a clinical case management tool. ***FY 2012 Accomplishments:*** Identify IT solution that will fulfill the requirements compatible for all military services. ***FY 2013 Plans:*** Obtain IT solution to fulfill the requirements compatible for all military services.			
Accomplishments/Planned Programs Subtotals	2.925	3.100	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	1.341	0.607	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480Y: *Clinical Case Management (Tri-Service)*

E. Performance Metrics

Performance metrics will be determined when a final IT solution is selected.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480Z: *Centralized Credentials and Quality Assurance System (CCQAS) (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
480Z: *Centralized Credentials and Quality Assurance System (CCQAS) (Tri-Service)*	-	1.692	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Central Credentials Quality Assurance System (CCQAS) enables the military medical community to electronically manage the credentials, risk management, and adverse privileging actions of medical personnel and is hosted at secure Defense Information Systems Agency facility. It is deployed worldwide to over 1,350 professional affairs coordinators in 535 locations and contains nearly 60,000 credentials records for Active Duty, Reserve, Guard, Civil Service, contractors, and volunteers in the Military Health System. CCQAS tracks trends in medical malpractice claims in an effort to improve health care quality, ensure legal due process for clinicians undergoing adverse actions, and assist the Medical Treatment Facilities in meeting Joint Commission on Accreditation of Healthcare Organization´s accreditation standards.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Centralized Credentials and Quality Assurance System (CCQAS) (Tri-Service)	1.692	0.000	0.000
Description: Develop, integrate and test CCQAS modules. ***FY 2012 Accomplishments:*** Complete Credentialing development. Integrate Priviledging and Credentialing development and perform testing activities for CCQAS v2.11 release. Complete Risk Management and Adverse Action development.			
Accomplishments/Planned Programs Subtotals	1.692	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	4.244	4.500	3.702		3.702	3.765	3.831	3.897	3.962	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	0.315	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	480Z: *Centralized Credentials and Quality Assurance System (CCQAS) (Tri-Service)*

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	481A: *Theater Enterprise Wide Logistics System (TEWLS) (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
481A: *Theater Enterprise Wide Logistics System (TEWLS) (Tri-Service)*	-	5.127	3.821	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Theater Enterprise-Wide Logistics System (TEWLS) supports critical medical logistics warfighter requirements in a net-centric environment. It ties the national, regional, and deployed units into a single business environment. It creates the necessary links for planners, commercial partners, and AMEDD logisticians to accomplish essential care in the theater through a single customer facing portal. It removes disparate data and replaces it with a single instance of actionable data. TEWLS supports today´s modern, non-contiguous battlefield at the regional, COCOM, and Service levels by leveraging emerging Medical Materiel Executive Agency and Theater Lead Agent infrastructure concepts to manage the entire medical supply chain from the industrial base to the end user.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Theater Enterprise Wide Logistics System (TEWLS) (Tri-Service)	5.127	3.821	0.000
Description: Modernization, development, enhancement of TEWLS.			
FY 2012 Accomplishments: Added functionality to provide units an assemblage management tool with a net centric capability enterprise framework that provides a single portal/interface to maintain assemblages, manage supplies, manage supply transactions, support enterprise consolidation and standardization of unit-level assembly management functions. Additionally, began work on applying the Item Unique Indentifcation Data (IUID) to applicable end units and components.			
FY 2013 Plans: Complete work on applying Item Unique Identification Data (IUID) to applicable end items and components.			
Accomplishments/Planned Programs Subtotals	5.127	3.821	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	9.700	18.750	13.334		13.334	13.496	13.767	14.004	14.241	Continuing	Continuing

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	481A: *Theater Enterprise Wide Logistics System (TEWLS) (Tri-Service)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	490I: *Navy Medicine Chief Information Officer*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
490I: *Navy Medicine Chief Information Officer*	-	2.106	4.323	4.409	-	4.409	4.497	4.574	4.652	4.736	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Navy Medicine CIO Management Operations - IM/IT RDT&E requests will be vetted through the Bureau of Navy Medicine (BUMED) Governance Process. BUMED IM/IT CIO Governance will monitor progress and milestones every six months.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Navy Medicine Chief Information Officer (CIO) Management Operations	2.106	4.323	4.409
Description: Navy Medicine CIO Management Operations - IM/IT RDT&E requests will be vetted through the Bureau of Navy Medicine (BUMED) Governance Process. BUMED IM/IT CIO Governance will monitor progress and milestones every six months.			
FY 2012 Accomplishments: This is an ongoing activity recently enacted by the Navy Medicine IM/IT process which further defines/transforms future IM/IT Medical Program Enhancements and Medical Capabilities. The development/integration of Defense Optical Fabrication Enterprise Management System (DOFEMS) into a fully automated system to support workload distribution, performance metrics, staffing requirements, supply management, calculation of operating costs from the current independently or manually DOFEMS system. This effort will be a web based centralized management tool and provide a standalone standard set of Lab Management software for all 26 Navy labs			
FY 2013 Plans: This is an ongoing activity recently enacted by the Navy Medicine IM/IT process which further defines/transforms future IM/IT Medical Program Enhancements and Medical Capabilities. The project includes the re-design of HIV Management System (HMS) so that it is user friendly, minimizes the amount of time required to perform everyday tasks and prevents the need to maintain separate databases, automate and minimize functions that require manual assistance and assist in fulfilling new requirements.			
FY 2014 Plans:			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	490I: *Navy Medicine Chief Information Officer*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
This is an ongoing activity recently enacted by the Navy Medicine IM/IT process which further defines/transforms future IM/IT Medical Program Enhancements and Medical Capabilities			
Accomplishments/Planned Programs Subtotals	2.106	4.323	4.409

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807781HP: *Non-Central Information Management/ Information Technology*	153.352	158.954	160.975		160.975	164.499	168.877	172.243	174.963	Continuing	Continuing
• BA-1, PE 0807795HP: *Base Communications - CONUS*	16.467	13.546	16.362		16.362	16.645	16.934	17.234	17.513	Continuing	Continuing
• BA-1, PE 0807995HP: *Base Communications - OCONUS*	2.460	2.448	2.392		2.392	2.434	2.476	2.520	2.563	Continuing	Continuing
• BA-3, PE 0807720HP: *Initial Outfitting*	1.262	0.544	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• BA-3, PE 0807721HP: *Replacement/Modernization*	10.127	6.205	2.782		2.782	2.829	2.876	2.931	2.984	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	490J: *Navy Medicine Online*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
490J: *Navy Medicine Online*	-	1.369	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Navy Medicine Online System (NMO) is the designated data broker for Navy Medicine. NMO collects individual readiness information from legacy Navy Medicine data systems (i.e SAMS,DENCAS, MEDBOLTT, etc.). NMO transmits select information to MRRS to support DoD IMR reporting, DHIMS Force Health Protection, Master CMS, and other Navy systems. NMO also provides the programs used to manage the medical waiver process and to track USNA midshipmen medical issues. The goal of this RDT&E effort is to merge NMKMS into Navy Medicine Online (NMO) as a data broker, to establish a single operational data warehouse for Navy Medicine operational data, as well as to support programs for managing medical staffing planning and operational workload reports.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Navy Medicine Online (NMO)	1.369	0.000	0.000
Description: The Navy Medicine Online System (NMO) is the designated data broker for Navy Medicine. NMO collects individual readiness information from legacy Navy Medicine data systems (i.e SAMS,DENCAS, MEDBOLTT, etc.). NMO transmits select information to MRRS to support DoD IMR reporting, DHIMS Force Health Protection, Master CMS, and other Navy systems. NMO also provides the programs used to manage the medical waiver process and to track USNA midshipmen medical issues. The goal of this RDT&E effort is to merge NMKMS into Navy Medicine Online (NMO) as a data broker, to establish a single operational data warehouse for Navy Medicine operational data, as well as to support programs for managing medical staffing planning and operational workload reports.			
FY 2012 Accomplishments: The project includes development/integration of NMO/NMKMS incorporating the following milestones: Phase I- Develop requirements; Phase II- Hosting, Establish NMO interface; Phase III- NMO/NMKMS Integration, Development, and Testing. Phase IV- Verification and Validation of new system. Phase III and Phase IV is planned for FY12.			
FY 2013 Plans: The project includes the re-design of HIV Management System (HMS) so that it is user friendly, minimizes the amount of time required to perform everyday tasks and prevents the need to maintain separate databases, automate and minimize functions that require manual assistance and assist in fulfilling new requirements.			
Accomplishments/Planned Programs Subtotals	1.369	0.000	0.000

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605013HP: *Information Technology Development*	490J: *Navy Medicine Online*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, PE 0807781HP: *Non-Central Information Management/ Information Technology*	1.679	1.730	1.782		1.782	1.836	1.891	1.948	2.006	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY
0130: *Defense Health Program*
BA 2: *RDT&E*

R-1 ITEM NOMENCLATURE
PE 0605023HP: *Integrated Electronic Health Record (iEHR)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	64.100	-	64.100	42.000	40.299	27.801	28.301	Continuing	Continuing
444A: *Integrated Electronic Health Record (Tri-Service)*	-	0.000	0.000	64.100	-	64.100	42.000	40.299	27.801	28.301	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Integrated Electronic Health Record (iEHR) (a follow on to originally proposed Electronic Health Record Way Ahead) is designed to provide a comprehensive, longitudinal, electronic health record that is available anytime and anywhere for the lifetime of the patient. The overarching goal of the program is to create an authoritative source of health information for the estimated 18 million DoD and VA beneficiaries. The iEHR will deliver a highly flexible, reliable, secure, maintainable and sustainable system. Successful fielding of iEHR will result in enhanced quality of care / patient safety, reduced costs, and improved data visibility. Comprehensive and current health information collected from multiple sources will be readily accessible by DoD and VA providers at Theater, DoD and VA facilities. This readily accessible health information will be directly leveraged to optimize medical care, monitor force health, manage health risks, and to enhance individual performance. It is envisioned that iEHR will eventually replace/sunset existing legacy systems, such as DoD's AHLTA and CHCS, and VA's Veterans Health Information Systems and Technology Architecture (VistA) and Computerized Patient Record System (CPRS).

The iEHR program shall be an integrated, multi-increment effort with the Department of Defense and Department of Veterans Affairs. It shall be bound by a common architecture, common data model, and common presentation layer. iEHR will also include a mix of Commercial Off - The Shelf (COTS), Government Off the Shelf (GOTS) and Open Source capabilities, in addition to reuse of enduring unique capabilities. In October, 2011, the DoD/VA Interagency Program Office (IPO) was chartered, to include program management and execution of iEHR. With the active participation of clinical staff from both Departments, the iEHR program will harmonize healthcare delivery processes and products. The DoD/VA Interagency Clinical Informatics Board (ICIB) and the IPO have jointly prioritized 54 clinical capabilities and grouped them into six planning increments based on functional priority, technical feasibility, and financial viability. To date, iEHR Increments 1 and 2 have been authorized for execution.

iEHR RDT&E is reported under the program element 0605013 through FY 2013 inclusive, but will be reported under new program element 0605023 for FY 2014 and out.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605023HP: *Integrated Electronic Health Record (iEHR)*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	64.100	-	64.100
Total Adjustments	0.000	0.000	64.100	-	64.100
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Integrated Electronic Health Record (Tri-Service)	-	-	64.100	-	64.100

Change Summary Explanation

FY 2012: No Change

FY 2013: No Change

FY 2014: Realignment from DHP RDT&E, PE 0605013-Information Technology Development (-$64.100 million) to DHP RDT&E, PE 0605023-Integrated Electronic Health Record (iEHR) (+$64.100 million) for Integrated Electronic Health Record (iEHR).

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605023HP: *Integrated Electronic Health Record (iEHR)*	444A: *Integrated Electronic Health Record (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
444A: *Integrated Electronic Health Record (Tri-Service)*	-	0.000	0.000	64.100	-	64.100	42.000	40.299	27.801	28.301	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Integrated Electronic Health Record (iEHR) (a follow on to the originally proposed Electronic Health Record Way Ahead) is designed to provide a comprehensive, longitudinal, electronic health record that is available anytime and anywhere for the lifetime of the patient. The overarching goal of the program is to create an authoritative source of health information for the estimated 18 million DoD and VA beneficiaries. The iEHR will deliver a highly flexible, reliable, secure, maintainable and sustainable system. Successful fielding of iEHR will result in enhanced quality of care / patient safety, reduced costs, and improved data visibility. Comprehensive and current health information collected from multiple sources will be readily accessible by DoD and VA providers at Theater, DoD and VA facilities. This readily accessible health information will be directly leveraged to optimize medical care, monitor force health, manage health risks, and to enhance individual performance. It is envisioned that iEHR will eventually replace/sunset existing legacy systems, such as DoD's AHLTA and CHCS, and VA's Veterans Health Information Systems and Technology Architecture (VistA) and Computerized Patient Record System (CPRS).

The iEHR program shall be an integrated, multi-increment effort with the Department of Defense and Department of Veterans Affairs. It shall be bound by a common architecture, common data model, and common presentation layer. iEHR will also include a mix of Commercial Off - The Shelf (COTS), Government Off the Shelf (GOTS) and Open Source capabilities, in addition to reuse of enduring unique capabilities. In October, 2011, the DoD/VA Interagency Program Office (IPO) was chartered, to include program management and execution of iEHR. With the active participation of clinical staff from both Departments, the iEHR program will harmonize healthcare delivery processes and products. The DoD/VA Interagency Clinical Informatics Board (ICIB) and the IPO have jointly prioritized 54 clinical capabilities and grouped them into six planning increments based on functional priority, technical feasibility, and financial viability. To date, iEHR Increments 1 and 2 have been authorized for execution.

iEHR RDT&E is reported under the program element 0605013 through FY 2013 inclusive, but will be reported under new program element 0605023 for FY 2014 and out.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Integrated Electronic Health Record (iEHR) (Tri-Service)	0.000	0.000	64.100
Description: iEHR Increment 1 combines risk reduction and proof of concept activities. It will: (1) deliver two user-facing capabilities, Single Sign-On (SSO) and Context Management (CM); (2) conduct a pilot to inform a path forward to allow the practitioner to record (i.e., write-back) patient data to the electronic record in the authoritative data store, and; (3) include			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605023HP: *Integrated Electronic Health Record (iEHR)*	444A: *Integrated Electronic Health Record (Tri-Service)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
supporting activities such as virtualization, a regionalization pilot, establishment of an iEHR Development Test Center/ Environment (DTC/DTE) configuration, and critical Clinical Data Repository (CDR) upgrades. iEHR Increment 2 focuses on architecture, design, infrastructure, and initial clinical capabilities. It will deliver: (1) infrastructure and core services to support clinical capability insertion into the new iEHR baseline (Service Oriented Architecture (SOA) Suite/ Enterprise Service Bus (ESB), Identity Management, Portal Framework, Access Control); (2) new clinical care graphical user interface; (3) Laboratory, Immunization, and Pharmacy clinical capabilities and; (4) Pharmacy "fixes" at the James A. Lovell Federal Health Care Center (JAL FHCC). In support of an Initial Operating Capability (IOC) in September 2014, iEHR Increment 2 Laboratory and Immunization clinical capabilities (e.g., orders and results management) will be deployed to the Hampton Roads and San Antonio DoD and VA treatment facilities, with Pharmacy "fixes" deployed at JAL FHCC, North Chicago, IL. Full deployment of Increment 2 scheduled to occur by Fiscal Year (FY) 2016 to nine regional data centers (two in the initial deployment, seven additional in the full deployment). Laboratory, Immunization, and Pharmacy clinical capabilities will be operationalized at nine VA facilities, nine DoD facilities, and at least one associated satellite facility per region. ***FY 2014 Plans:*** iEHR Increment 2 will deliver: (1) infrastructure and core services to support clinical capability insertion into the new iEHR baseline (Service Oriented Architecture (SOA) Suite/ Enterprise Service Bus (ESB), Identity Management, Portal Framework, Access Control); (2) new clinical care graphical user interface; (3) Laboratory, Immunization, and Pharmacy clinical capabilities and; (4) Pharmacy "fixes" at the James A. Lovell Federal Health Care Center (JALFHCC). -Complete following Increment 2 activities: -- Capability development -- Baseline integration and testing -- Capability deployment, installation and checkout of IOC sites -- Security Accreditation -- Operational Assessment -- Obtain Milestone C deployment decision -- IOT&E In support of an Initial Operating Capability (IOC) in September 2014, iEHR Increment 2 Laboratory and Immunization clinical capabilities (e.g., orders and results management) will be deployed to the Hampton Roads and San Antonio DoD and VA treatment facilities, with Pharmacy "fixes" deployed at JALFHCC North Chicago.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	64.100

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605023HP: *Integrated Electronic Health Record (iEHR)*	444A: *Integrated Electronic Health Record (Tri-Service)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, PE 0807784HP: *Information Technology Development* -	0.000	0.000	75.801		75.801	108.422	110.501	129.293	128.742	Continuing	Continuing
• BA-3, 0807784HP: *Replacement/ Modernization*	0.000	0.000	204.200		204.200	65.600	66.300	61.000	62.098	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources. Performance metrics for specific major projects may be viewed at the OMB Federal IT Dashboard website.

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APPROPRIATION/BUDGET ACTIVITY 0130: *Defense Health Program* BA 2: *RDT&E*					**R-1 ITEM NOMENCLATURE** PE 0605025HP: *Theater Medical Information Program - Joint (TMIP-J)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.000	0.000	35.463	-	35.463	34.105	34.713	35.303	35.904	Continuing	Continuing
445A: *Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)*	-	0.000	0.000	35.463	-	35.463	34.105	34.713	35.303	35.904	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Theater Medical Information Program - Joint (TMIP-J) integrates components of the Military Health System sustaining base systems and the Services´ medical information systems to ensure timely interoperable medical support for mobilization, deployment and sustainment of all Theater and deployed forces in support of any mission. TMIP-J enhances the clinical care and information capture at all levels of care in Theater, transmits critical information to the Theater Commander, the evacuation chain for combat and non-combat casualties, and forges the theater links of the longitudinal health record to the sustaining base and the Department of Veterans Affairs. TMIP-J is the medical component of the Global Combat Support System. TMIP-J provides information at the point of care and to the Theater tactical and strategic decision makers through efficient, reliable data capture, and data transmission to a centralized Theater database. This delivers TMIP-J´s four pillars of information support through the electronic health record, integrated medical logistics, patient movement and tracking, and medical command and control through data aggregation, reporting and analysis tools for trend analysis and situational awareness. TMIP-J fulfills the premise of "Train as you fight" through the integration of components which are identical or analogous to systems from the sustaining base. TMIP-J adapts and integrates these systems to specific Theater requirements and assures their availability in the no- and low- communications settings of the deployed environment through store and forward capture and transmission technology.

TMIP-J RDT&E is reported under the program element 0605013 through FY 2013 inclusive, but will be reported under new program element 0605023 for FY 2014 and out.

APPROPRIATION/BUDGET ACTIVITY	**R-1 ITEM NOMENCLATURE**
0130: *Defense Health Program*	PE 0605025HP: *Theater Medical Information Program - Joint (TMIP-J)*
BA 2: *RDT&E*	

B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	35.463	-	35.463
Total Adjustments	0.000	0.000	35.463	-	35.463
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)	-	-	35.463	-	35.463

Change Summary Explanation

FY 2012: No Change

FY 2013: No Change

FY 2014: Realignment from DHP RDT&E, PE 0605013-Information Technology Development (-$35.463 million) to DHP RDT&E, PE 0605025-Theater Medical Information Program – Joint (TMIP-J) (+$35.463 million) for Theater Medical Information Program – Joint (TMIP-J).

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605025HP: *Theater Medical Information Program - Joint (TMIP-J)*	445A: *Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
445A: *Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)*	-	0.000	0.000	35.463	-	35.463	34.105	34.713	35.303	35.904	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Theater Medical Information Program - Joint (TMIP-J) integrates components of the Military Health System sustaining base systems and the Services´ medical information systems to ensure timely interoperable medical support for mobilization, deployment and sustainment of all Theater and deployed forces in support of any mission. TMIP-J enhances the clinical care and information capture at all levels of care in Theater, transmits critical information to the Theater Commander, the evacuation chain for combat and non-combat casualties, and forges the theater links of the longitudinal health record to the sustaining base and the Department of Veterans Affairs. TMIP-J is the medical component of the Global Combat Support System. TMIP-J provides information at the point of care and to the Theater tactical and strategic decision makers through efficient, reliable data capture, and data transmission to a centralized Theater database. This delivers TMIP-J´s four pillars of information support through the electronic health record, integrated medical logistics, patient movement and tracking, and medical command and control through data aggregation, reporting and analysis tools for trend analysis and situational awareness. TMIP-J fulfills the premise of "Train as you fight" through the integration of components which are identical or analogous to systems from the sustaining base. TMIP-J adapts and integrates these systems to specific Theater requirements and assures their availability in the no- and low- communications settings of the deployed environment through store and forward capture and transmission technology.

TMIP-J RDT&E is reported under the program element 0605013 through FY 2013 inclusive, but will be reported under new program element 0605023 for FY 2014 and out.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)	0.000	0.000	35.463
Description: Complete Increment 2 Release 3 (I2R3) development/integration and conduct operational testing/operational assessment.			
FY 2014 Plans: Complete I2R3 development/integration and conduct operational testing/operational assessment. I2R3 includes the following: Theater Framework modernization and development, successful integration of EImmune information exchange with AHLTA-Theater, and a Mobile Computing Capability (MCC) framework that contains independent services capable of running			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605025HP: *Theater Medical Information Program - Joint (TMIP-J)*	445A: *Theater Medical Information Program - Joint (TMIP-J) (Tri-Service)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
simultaneously on the mobile device passing data to authorized MCC application components also residing on the same mobile device. Includes International Travel Medicine requirements within MSAT.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	35.463

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• BA-1, 0807793HP: *MHS Tri-Service Information*	0.000	0.000	55.407		55.407	61.612	65.309	67.142	69.056	Continuing	Continuing
• BA-3, 0807721HP: *Replacement/ Modernization*	0.000	0.000	2.425		2.425	2.550	2.593	2.637	2.682	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

E. Performance Metrics

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach. The results of these measurements are presented to management on a regular basis in various as part of the Integrated Product and Process Development (IPPD) process, In Process Reviews (IPRs), or other reviews to determine program effectiveness and provide new direction as needed to ensure the efficient use of resources. Performance metrics for specific projects may be viewed at the OMB Federal IT Dashboard website.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY
0130: *Defense Health Program*
BA 2: *RDT&E*

R-1 ITEM NOMENCLATURE
PE 0605145HP: *Medical Products and Support Systems Development*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	33.073	17.116	18.976	-	18.976	25.855	39.669	42.094	42.772	Continuing	Continuing
375A: *GDF-Medical Products and Support System Development*	-	18.062	8.521	13.476	-	13.476	23.955	38.769	41.194	41.872	Continuing	Continuing
399A: *Hyperbaric Oxygen Therapy Clinical Trial (Army)*	-	15.011	8.595	5.500	-	5.500	1.900	0.900	0.900	0.900	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This Program Element (PE) funds system development and demonstration of medical commodities delivered from the various medical advanced development and prototyping DoD Components that are directed at meeting validated requirements prior to full-rate initial production and fielding, including initial operational test and evaluation and clinical trials. Research in this PE is designed to address the following: areas of interest to the Secretary of Defense regarding Wounded Warriors, capabilities identified through the Joint Capabilities Integration and Development System, and the strategy and initiatives described in the Quadrennial Defense Review. Program development and execution is peer-reviewed and fully coordinated with all of the Military Services, appropriate Defense Agencies or Activities and other federal agencies, to include the Department of Veterans Affairs, the Department of Health and Human Services, and Department of Homeland Security. This coordination occurs through the planning and execution activities of the Joint Program Committees, established for the Defense Health Program Research, Development, Test and Evaluation funding. The work includes development and demonstration of medical modeling and simulation systems for training/education/ treatment, and medical system development and demonstration. The funding also supports product development of hyperbaric oxygenation for chronic, mild traumatic brain injury (mTBI), also called post-concussion syndrome. The effort encompasses development, initiation, operation, analysis, and subsequent publication of clinical trials to compare and assess the long-term benefit of hyperbaric oxygen (HBO2) therapy on service members with mTBI.

APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE		
0130: *Defense Health Program* BA 2: *RDT&E*			PE 0605145HP: *Medical Products and Support Systems Development*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	33.695	17.116	18.976	-	18.976
Current President's Budget	33.073	17.116	18.976	-	18.976
Total Adjustments	-0.622	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.622	-			

Change Summary Explanation

FY 2012: Realignment from DHP RDT&E, PE 0605145-Medical Products and Support Systems Development (-$0.622 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$0.622 million).

FY 2013: No Change

FY 2014: No Change

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605145HP: *Medical Products and Support Systems Development*	375A: *GDF-Medical Products and Support System Development*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
375A: *GDF-Medical Products and Support System Development*	-	18.062	8.521	13.476	-	13.476	23.955	38.769	41.194	41.872	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Activities conducted are intended to support system development and demonstration prior to initial full rate production and fielding of commodities.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: GDF - Medical Products and Support Systems Development (GDF-MPSSD)	18.062	8.521	13.476

Description: GDF-Medical Products and Support Systems Development (GDF-MPSSD): Activities conducted are intended to support system development and demonstration prior to initial full rate production and fielding of commodities delivered from 0604110HP (Medical Products Support and Advanced Concept Development). Development and demonstration activities will be conducted in the following two specific areas: development and demonstration of medical modeling and simulation systems for training/education/treatment, and medical system development and demonstration.

FY 2012 Accomplishments:

The Combat Casualty Care research area continued development on a portable anesthesia device for the Marine Corps, an integrated portable patient life support and monitoring system for expeditionary medical care, a reference device for traumatic brain injury biomarkers, and a ruggedized version of a device to measure eye tracking for the diagnosis of mild traumatic brain injury.

FY 2013 Plans:

Medical Training and Health Information Sciences (MTHIS) is focusing on producing technologies and products that will improve military relevant training with a focus on combat trauma training.

The Combat Casualty Care research area is continuing development of a TBI biomarkers reference device and complete the clinical trial of TBI biomarkers.

FY 2014 Plans:

Medical Training and Health Information Sciences (MTHIS) will focus on developing technologies and products that will improve military medicine through medic or medical provider training, technologies to reduce live tissue training, or home based training.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605145HP: *Medical Products and Support Systems Development*	375A: *GDF-Medical Products and Support System Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Combat Casualty Care research will continue the development effort of dried plasma and TBI biomarkers.			
Accomplishments/Planned Programs Subtotals	18.062	8.521	13.476

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Test and evaluate medical procedures and prototype devices in government-managed Phase 2 clinical trials to gather data required for military and regulatory requirements prior to production and fielding, to include FDA licensure and Environmental Protection Agency registration.

E. Performance Metrics

Principal investigators will participate in In-Progress Reviews, high-level DHP-sponsored Review & Analysis meetings, submit quarterly and annual status reports, and are subjected to Program Office or Program Sponsor Representative progress reviews to ensure that milestones are being met and deliverables will be transitioned on schedule. Integrated Product Teams, if established for a therapy or device, will monitor progress in accordance with DOD Regulation 5000 series. The benchmark performance metric for transition of research supported in this PE will be the attainment of a maturity level that is typical of TRL 8.

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605145HP: *Medical Products and Support Systems Development*	399A: *Hyperbaric Oxygen Therapy Clinical Trial (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
399A: *Hyperbaric Oxygen Therapy Clinical Trial (Army)*	-	15.011	8.595	5.500	-	5.500	1.900	0.900	0.900	0.900	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Army, the Hyperbaric Oxygen Therapy (HBO2) Clinical Trial will focus on research for development of treatment modalities using HBO2 for chronic mild TBI. Four HBO2 study sites are established and fully functional. The sites consist of a hyperbaric oxygen chamber enclosed in a mobile trailer, another mobile trailer for testing and evaluation of the subjects and a third subject changing trailer. Testing in humans will be designed to evaluate and use HBO2 treatments for Service members who are symptomatic from one or more concussions at the time of post-deployment health reassessments.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Hyperbaric Oxygen Therapy Clinical Trial (Army)	15.011	8.595	5.500
Description: HBO2 clinical trials are designed to test in humans the use of hyperbaric oxygen treatments for Service members who are symptomatic from one or more concussions at the time of post-deployment health reassessments. ***FY 2012 Accomplishments:*** For HBO2 therapy, the initial research study co-funded with the US Air Force was completed, analyzed and published, showing high dose HBO2 is safe and well tolerated, and that this procedure is associated with a major placebo effect but no additional benefit. A second proof of concept and outcome assessment study of low dose HBO2 is fully enrolled and nearing completion. Validation of the content of the lead post concussion outcome measure (Neurobehavioral Symptom Inventory questionnaire) was completed. A third study to confirm initial findings and evaluate cutting-edge radiologic and physiologic biomarker technology was fully approved by the Institutional Review Board. Meetings with FDA yielded a clear path for FDA clearance. ***FY 2013 Plans:*** The pilot study of low dose HBO2 is being completed, with analysis and results to be released. The team is working with the Navy and Veteran's Affairs (VA) researchers to analyze the results of the complementary dose ranging study also due to be completed this year. The team is completing a summary of these three studies for review by the national hyperbaric medical professional association, TRICARE, the VA and Department of Defense policymakers. A study confirming initial findings and evaluating cutting-edge radiologic and physiologic biomarker technology is to continue for 2 years. The VA is validating the Neurobehavioral			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605145HP: *Medical Products and Support Systems Development*	399A: *Hyperbaric Oxygen Therapy Clinical Trial (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Symptom Inventory questionnaire per FDA guidelines. A decision is being made to proceed to a FDA-regulated, phase III pivotal trial. ***FY 2014 Plans:*** HBO2 therapy treatment guidelines will be updated along with education of the end-users, as the results warrant. Integration into multi-modal TBI rehabilitation will continue. The study confirming initial findings and evaluating cutting-edge radiologic and physiologic biomarker technology will continue for 2 years. Long-term follow-up of study volunteers to evaluate durability of the improvement will continue.			
Accomplishments/Planned Programs Subtotals	15.011	8.595	5.500

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Test and evaluate medical procedures and prototype devices in government-managed Phase 2/3 clinical trials to gather data required for military and regulatory requirements prior to production and fielding, to include FDA licensure and Environmental Protection Agency registration.

E. Performance Metrics

The HBO2 Program Management Office Integrated Product Team monitors performance of contracts through review of monthly, yearly and final progress reports to ensure that milestones are being met, deliverables will be transitioned on schedule and within budget, and in accordance with DOD regulation 5000.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY
0130: *Defense Health Program*
BA 2: *RDT&E*

R-1 ITEM NOMENCLATURE
PE 0605502HP: *Small Business Innovation Research (SBIR) Program*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	36.040	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
470A: *Small Business Innovation Research (SBIR) (Army)*	-	36.040	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Small Business Innovation Research (SBIR) program was established in the Defense Health Program (DHP), Research, Development, Test and Evaluation (RDT&E) appropriation during FY 2001, and is funded in the year of execution. The objective of the DHP SBIR Program includes stimulating technological innovation, strengthening the role of small business in meeting DoD research and development needs, fostering and encouraging participation by minority and disadvantaged persons in technological innovation, and increasing the commercial application of DoD-supported research and development results. The program funds small business proposals chosen to enhance military medical research and information technology research.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	31.470	0.000	0.000	-	0.000
Current President's Budget	36.040	0.000	0.000	-	0.000
Total Adjustments	4.570	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	4.570	-			

Change Summary Explanation

FY 2012:
Restore FY 2013 President's Budget decrease to Congressional Special Interest from DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (-$14.890 million) from the following:
DHP RDT&E, PE 0601117-Basic Operational Medical Research Sciences (+$0.025 million);
DHP RDT&E, PE 0602115-Applied Biomedical Technology (+$0.869 million);
DHP RDT&E, PE 0603115-Medical Technology Development (+$13.302 million);

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605502HP: *Small Business Innovation Research (SBIR) Program*

DHP RDT&E, PE 0604110-Medical Products Support and Advanced Concept Development (+$0.694 million).

Realign SBIR bill (equivalent to FY 2013 President's Budget decrease of $14.890 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$14.890 million) from the following:
DHP RDT&E, PE 0601101-In-House Laboratory Independent Research (-$0.032 million);
DHP RDT&E, PE 0602115-Applied Biomedical Technology (-$0.345 million);
DHP RDT&E, PE 0602787-Medical Technology (AFRRI) (-$0.040 million);
DHP RDT&E, PE 0603002-Advanced Technology (AFRRI) (-$0.008 million)
DHP RDT&E, PE 0603115-Medical Technology Development (-$1.655 million);
DHP RDT&E, PE 0604110-Medical Products Support and Advanced Concept Development (-$1.789 million);
DHP RDT&E, PE 0605013-Information Technology Development (-$9.944 million);
DHP RDT&E, PE 0605145-Medical Products and Support Systems Development (-$0.392 million);
DHP RDT&E, PE 0606105-Medical Program-Wide Activities (-$0.533 million);
DHP RDT&E, PE 0607100-Medical Products and Capabilities Enhancement Activities (-$0.152 million).

Realign additional SBIR to DHP RDT&E, PE 0605502-Small Business Innovation Research (SBIR) Program (+$4.423 million) from the following:
DHP RDT&E, PE 0601101-In-House Laboratory Independent Research (-$0.003 million);
DHP RDT&E, PE 0602115-Applied Biomedical Technology (-$0.205 million);
DHP RDT&E, PE 0602787-Medical Technology (AFRRI) (-$0.004 million);
DHP RDT&E, PE 0603002-Advanced Technology (AFRRI) (-$0.001 million)
DHP RDT&E, PE 0603115-Medical Technology Development (-$1.080 million);
DHP RDT&E, PE 0604110-Medical Products Support and Advanced Concept Development (-$1.109 million);
DHP RDT&E, PE 0605013-Information Technology Development (-$1.373 million);
DHP RDT&E, PE 0605145-Medical Products and Support Systems Development (-$0.230 million);
DHP RDT&E, PE 0606105-Medical Program-Wide Activities (-$0.320 million);
DHP RDT&E, PE 0607100-Medical Products and Capabilities Enhancement Activities (-$0.098 million).

Realign SBIR from Prior Approval Reprogramming to DHP RDT&E, PE 0605502-Small Business Innovation Research (SBIR) Program (+$0.147 million) from the following:
DHP RDT&E, PE 0604110-Medical Products Support and Advanced Concept Development (-$0.104 million);
DHP RDT&E, PE 0605013-Information Technology Development (-$0.043 million);

FY 2013: No Change

FY 2014: No Change

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605502HP: *Small Business Innovation Research (SBIR) Program*	470A: *Small Business Innovation Research (SBIR) (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
470A: *Small Business Innovation Research (SBIR) (Army)*	-	36.040	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Small Business Innovation Research (SBIR): The SBIR program was established in the Defense Health Program (DHP) Research, Development, Test and Evaluation (RDT&E) appropriation during FY 2001, and is funded in the year of execution. The program funds small business proposals chosen to enhance military medical research and information technology research.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Small Business Innovation Research (SBIR) Program	36.040	0.000	0.000

Description: The program funds small business proposals chosen to enhance military medical research and information technology research. The following reflects the FY12 research area topics sought for proposals.

FY 2012 Accomplishments:

For FY12 (DHP SBIR 12.2), sixteen research area topics were developed for solicitation of biomedical technology SBIRs proposals. Funding for each research area topic will be based on the merits of responses to solicitations. Topics include development of a simulation-based training system to assist in teaching and training junctional and non-compressible hemorrhage control; integration of advanced sensor technology into synthetic mannequins; multi-substrate 3D printer with the ability to render high-fidelity anatomically accurate synthetic physical tissue models; prototype architecture to execute an open source, universal health exchange language; a mobile, cloud-based architecture that can integrate with existing or improved clinical workflow; architectural alternatives resulting in an easy-to use cohort builder for clinicians, nurses, and QA personnel; freestanding, lightweight, compact, portable sampling device to collect a broad spectrum of adult flying insect disease vectors; integration of networked sensors to assess accurate center of-gravity and center-of-pressure in real time; user-friendly, portable, universal hearing protection device field attenuation estimation system; self-powered wearable biosensors to provide continuous health monitoring; durable, scalable, robust and effective long-term antimicrobial textile finish; closed loop anesthesia delivery system; controlled, target-specific delivery system for topical treatment of peripheral neuropathy (damage to nerves outside of the brain and spinal cord); biometric model for use by the medical research community to address dismounted complex blast injury; rapid and reliable detection/diagnosis of pain and its intensity; and new innovative technology to intervene during the wound healing

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0605502HP: *Small Business Innovation Research (SBIR) Program*	470A: *Small Business Innovation Research (SBIR) (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
process following deep tissue burn injuries. Selection of proposals are planned to be completed in September 2012. Anticipated contract awards will be in November 2012. ***FY 2013 Plans:*** No funding programmed. ***FY 2014 Plans:*** No funding programmed.			
Accomplishments/Planned Programs Subtotals	36.040	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Test and evaluate commercially developed prototypes funded by the SBIR program to ensure military and regulatory requirements are met prior to production and fielding, to include FDA licensure and Environmental Protection Agency registration.

E. Performance Metrics

The number of Phase I awards supporting innovative technology development. The number of Phase II and III awards leading to technology transition.

APPROPRIATION/BUDGET ACTIVITY
0130: *Defense Health Program*
BA 2: *RDT&E*

R-1 ITEM NOMENCLATURE
PE 0606105HP: *Medical Program-Wide Activities*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	46.252	61.518	72.568	-	72.568	47.570	52.491	38.788	38.223	Continuing	Continuing
305T: *USAMRIID IO&T (Army)*	-	14.909	19.420	40.038	-	40.038	8.029	17.329	3.011	1.810	Continuing	Continuing
368A: *Pacific-Based Joint Information Technology Center - Maui (JITC-Maui) (FHP&RP)*	-	7.393	7.952	8.109	-	8.109	8.276	8.447	8.590	8.745	Continuing	Continuing
397T: *USAMRICD IO&T (Army)*	-	17.154	7.740	8.790	-	8.790	5.003	0.103	0.000	0.000	Continuing	Continuing
401A: *CONUS Laboratory Support Clinical Infrastructure (Army)*	-	3.830	13.854	3.000	-	3.000	8.144	8.291	8.440	8.592	Continuing	Continuing
432A: *OCONUS Laboratory Infrastructure Support (Army)*	-	2.966	7.078	8.081	-	8.081	13.136	13.145	13.367	13.608	Continuing	Continuing
433A: *NMRC Biological Defense Research Directorate (BDRD) (Navy)*	-	0.000	4.223	4.351	-	4.351	4.482	4.676	4.880	4.968	Continuing	Continuing
442A: *USARIEM Pike's Peak IO&T (Army)*	-	0.000	0.000	0.199	-	0.199	0.000	0.000	0.000	0.000	Continuing	Continuing
115T: *MILCON IO&T*	-	0.000	1.251	0.000	-	0.000	0.500	0.500	0.500	0.500	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Army Medical Command receives funding for research infrastructure management support requirements at select continental United States (CONUS) and outside the continental US (OCONUS) laboratories and trial sites. Research scientists at these laboratories conduct bio-surveillance and early-to-late-stage clinical research of investigational products such as biologics, drugs, and devices to treat/prevent polytrauma injuries. Research is conducted to obtain US Food and Drug Administration (FDA) licensure, a requirement for use of all medical products. The funding provides for the sustainment of significant technical expertise and knowledge independent of the number of assigned projects. This funding also provides for initial outfitting and transition (IO&T) cost requirements for replacement of research, development, test and evaluation (RDT&E) medical laboratories funded under multi-year military construction (MILCON) projects. These IO&T funds are designated as appropriations other than MILCON.

APPROPRIATION/BUDGET ACTIVITY	**R-1 ITEM NOMENCLATURE**
0130: *Defense Health Program*	PE 0606105HP: *Medical Program-Wide Activities*
BA 2: *RDT&E*	

Health Affairs (Force Health Protection & Readiness) receives funds to provide management support for research projects at Pacific Joint Information Technology Center (JITC).

For the Navy Bureau of Medicine and Surgery, this program element includes facility operational funding for the Medical Biological Defense research sub-function of the Naval Medical Research Center (NMRC) Biological Defense Research Directorate (BDRD). The program mission is mandated by the Joint Requirements Office-CBRN, capability baseline assessment chemical and biological passive defense. The primary function is Research on Countermeasures to Biological Threat Agents; Development of Assays to Detect Biological Threat Agents ; Bioforensic Analysis of Biological Threat Agents.

B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	47.105	61.518	72.568	-	72.568
Current President's Budget	46.252	61.518	72.568	-	72.568
Total Adjustments	-0.853	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.853	-			

Change Summary Explanation

FY 2012: Realignment from DHP RDT&E, PE 0606105-Medical Program-Wide Activities (-$0.853 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$0.853 million).

FY 2013: No Change

FY 2014: No Change

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	305T: *USAMRIID IO&T (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
305T: *USAMRIID IO&T (Army)*	-	14.909	19.420	40.038	-	40.038	8.029	17.329	3.011	1.810	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Funding supports the IO&T costs associated with MILCON for the US Army Medical Research Institute of Infectious Diseases (USAMRIID), Fort Detrick, MD.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: USAMRIID IO&T (Army)	14.909	19.420	40.038

FY 2012 Accomplishments:

The US Army Medical Research Institute of Infectious Diseases (USAMRIID) IO&T costs for this period supported the replacement facility MILCON project that is funded under the Defense MILCON appropriation. Equipment purchased is designated as Category C (CAT C) government furnished and government installed (GFGI) equipment from other than MILCON appropriations. The transition funds supported the extraordinary operational costs incurred as a direct result of the MILCON project that are not part of normal operational USAMRIID costs. USAMRIID IO&T increased based on phased requirements and construction progress as the building approaches completion. The FY12 initial outfitting (IO) equipment purchased was from fiscal year equipment listings based on delivery lead time, building placement, installation, and bona-fide need criteria. Transition costs include personnel, travel, planning and acquisition support, and decommissioning support.

FY 2013 Plans:

The FY13 USAMRIID IO&T program reflects the phased requirements based on construction progress as the building nears completion. Initial Outfitting (IO) equipment to be purchased for FY13 is from fiscal year equipment listings based on delivery lead time, building placement, installation, and bona-fide need criteria. FY13 transition costs are the incremental fiscal year requirements for operations that support this multi-year MILCON project. Transition funds provide for personnel, travel, planning and acquisition support, commission and transition support, and decommissioning support for the old site.

FY 2014 Plans:

The FY14 USAMRIID IO&T program reflects the phased requirements based on construction progress as the building nears completion. IO equipment to be purchased for FY14 is from fiscal year equipment listings based on delivery lead time, building placement, installation, and bona-fide need criteria. FY14 transition costs are the incremental fiscal year requirements for operations that support this multi-year MILCON project. Funds will be used to provide for personnel, planning and acquisition support, movement support for materiel from the old to new or intermediate facility sites, old site equipment turn-in support, post-

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	305T: *USAMRIID IO&T (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
move old site cleaning support, phased dual occupancy costs of old and new sites, commissioning and transition support, and decommissioning support.			
Accomplishments/Planned Programs Subtotals	14.909	19.420	40.038

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Metric includes completed and documented analysis by the performer reflecting program execution and completion dates based on approved phasing.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	368A: *Pacific-Based Joint Information Technology Center - Maui (JITC-Maui) (FHP&RP)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
368A: *Pacific-Based Joint Information Technology Center - Maui (JITC-Maui) (FHP&RP)*	-	7.393	7.952	8.109	-	8.109	8.276	8.447	8.590	8.745	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Pacific-Based Joint Information Technology Center - Maui (JITC-Maui) (FHP&RP) provides management support for Pacific-JITC, established to rapidly research, test and develop Warfighter medical solutions and products, through pilot projects or prototypes that provide mission critical value and actionable information to the DoD, including Services, combatant commanders, and the Department of Veterans Affairs.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Pacific-Based Joint Information Technology Center - Maui (JITC-Maui) (FHP&RP)	7.393	7.952	8.109
Description: Management support for research projects at Pacific Joint Information Technology Center (JITC). ***FY 2012 Accomplishments:*** The Pacific JITC managers have worked with the functional end users and TRICARE Management Activity sponsors mapping proposals and initiatives critical to the Warfighter, addressing medical research capability gaps, and Department requirements. JITC managers also maintained, utilized, and promoted use of the Pacific JITC Independent Verification and Validation (IV & V) lab by government entities including the testing and integration of Department Warfighter projects within the Sensitive Compartment Information Facility (SCIF) laboratory. ***FY 2013 Plans:*** The Pacific JITC managers work with the functional end users and TRICARE Management Activity sponsors to map proposals and initiatives critical to the Warfighter, address Joint Service capability gaps, and Department requirements. ***FY 2014 Plans:*** Pacific JITC will maintain, utilize, and promote use of Pacific JITC test and evaluation lab (IV & V) by government entities including the testing and integration of Department Warfighter projects within the SCIF laboratory. The Pacific JITC will continue to work with functional end users and TRICARE Management Activity sponsors to map proposals and initiatives critical to the Warfighter, address Joint Service capability gaps, and Department requirements.			
Accomplishments/Planned Programs Subtotals	7.393	7.952	8.109

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	368A: *Pacific-Based Joint Information Technology Center - Maui (JITC-Maui) (FHP&RP)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Metric includes completed and documented analysis by the performer reflecting program execution and completion dates based on approved phasing.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	397T: *USAMRICD IO&T (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
397T: *USAMRICD IO&T (Army)*	-	17.154	7.740	8.790	-	8.790	5.003	0.103	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Funding supports the IO&T costs associated with MILCON for the US Army Medical Research Institute of Chemical Defense (USAMRICD), Aberdeen Proving Ground, MD.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: USAMRICD IO&T (Army)	17.154	7.740	8.790

FY 2012 Accomplishments:

The US Army Medical Research Institute of Infectious Diseases (USAMRIID) IO&T costs for this period supported the replacement facility MILCON project that is funded under the Defense MILCON appropriation. Equipment purchased is designated as Category C (CAT C) government furnished and government installed (GFGI) equipment from other than MILCON appropriations. The transition funds supported the extraordinary operational costs incurred as a direct result of the MILCON project that are not part of normal operational USAMRIID costs. USAMRIID IO&T increased based on phased requirements and construction progress as the building approaches completion. The FY12 initial outfitting (IO) equipment purchased was from fiscal year equipment listings based on delivery lead time, building placement, installation, and bona-fide need criteria. Transition costs include personnel, travel, planning and acquisition support, and decommissioning support.

FY 2013 Plans:

The FY13 USAMRIID IO&T program reflects the phased requirements based on construction progress as the building nears completion. Initial Outfitting (IO) equipment to be purchased for FY13 is from fiscal year equipment listings based on delivery lead time, building placement, installation, and bona-fide need criteria. FY13 transition costs are the incremental fiscal year requirements for operations that support this multi-year MILCON project. Transition funds provide for personnel, travel, planning and acquisition support, commission and transition support, and decommissioning support for the old site.

FY 2014 Plans:

The FY14 USAMRIID IO&T program reflects the phased requirements based on construction progress as the building nears completion. IO equipment to be purchased for FY14 is from fiscal year equipment listings based on delivery lead time, building placement, installation, and bona-fide need criteria. FY14 transition costs are the incremental fiscal year requirements for operations that support this multi-year MILCON project. Funds will be used to provide for personnel, planning and acquisition support, movement support for materiel from the old to new or intermediate facility sites, old site equipment turn-in support, post-

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	397T: *USAMRICD IO&T (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
move old site cleaning support, phased dual occupancy costs of old and new sites, commissioning and transition support, and decommissioning support.			
Accomplishments/Planned Programs Subtotals	17.154	7.740	8.790

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Metric includes completed and documented analysis by the performer reflecting program execution and completion dates based on approved phasing.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	401A: *CONUS Laboratory Support Clinical Infrastructure (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
401A: *CONUS Laboratory Support Clinical Infrastructure (Army)*	-	3.830	13.854	3.000	-	3.000	8.144	8.291	8.440	8.592	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

CONUS Laboratory Infrastructure Support (Army) funding provides management support requirements for research infrastructure at select laboratories and research sites that conduct basic to late-stage clinical research and evaluation of investigational products, such as biologics, drugs, and devices to treat/prevent polytrauma injuries, through collaborative effort with the military health system's medical treatment facilities. These products are required to be licensed through the US FDA regulatory process prior to general use in humans. The funds sustain significant expertise and knowledge independent of the number of assigned projects.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: CONUS Laboratory Support Clinical Infrastructure (Army)	3.830	13.854	3.000

Description: Management support for research infrastructure at select laboratories and research sites that conduct basic to late-stage clinical research and evaluation of investigational products, such as biologics, drugs, and devices to treat/prevent polytrauma injuries, through collaborative effort with the military health system's medical treatment facilities.

FY 2012 Accomplishments:

The Clinical Trial Infrastructure funding supported development of capabilities at Military Treatment Facilities (MTFs) to conduct regulated clinical studies and US FDA regulated clinical trials. Initial funding was used to establish start-up and roll-out capabilities for clinical trial needs at MTF clinical trial sites. Establishment of relevant MTFs to conduct clinical trials is a joint effort between the RDT&E and Clinical Investigation Program (CIP) communities. Clinical research infrastructure funding is being apportioned among the three Services, and the Joint Task Force National Capital Region Medical Command. Multiple MTF sites were selected with priority given to those facilities having relevant patient populations to conduct essential clinical trials. Essential DHP clinical trials include such areas as blast/polytrauma, restorative/regenerative medicine, clinical and rehabilitative medicine, military infectious diseases, hyperbaric oxygen research, reconstructive and regenerative medicine, injury prevention, wound healing, combat trauma research, military-related psychological health issues, suicide prevention and treatment, substance abuse, traumatic brain injury and psychological health, including post-traumatic stress disorder and medical product development. Anticipated products include materiel solutions such as biologics, drugs, and devices as well as medical knowledge products

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	401A: *CONUS Laboratory Support Clinical Infrastructure (Army)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
such as clinical practice guidelines. Successful establishment of a sufficient infrastructure will result in close coordination and cooperation between the RDT&E community, CIP, MTF and Defense Centers of Excellence communities. ***FY 2013 Plans:*** In FY13, the Clinical Trial Infrastructure funding is providing for the maintenance and expansion of the clinical research infrastructure needed at MTFs having relevant patient populations to conduct essential RDT&E clinical trials. The clinical research infrastructure funding will be apportioned among the three Services, the Uniformed Services University of the Health Sciences and the Joint Task Force National Capital Region Medical Command. ***FY 2014 Plans:*** In FY14, established Clinical Trial Infrastructure will support the conduct of MTF-based RDT&E clinical trials in areas such as Traumatic Brain Injury, and Psychological Health and Rehabilitation. Support will be provided to collect data on research metrics. Research will be conducted at MTFs across the three Services, the Uniformed Services University of the Health Sciences and the Joint Task Force National Capital Region Medical Command.			
Accomplishments/Planned Programs Subtotals	3.830	13.854	3.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Metric includes completed and documented analysis by the performer reflecting program execution and completion dates based on approved phasing. Successful establishment of a sufficient infrastructure will result in close coordination and cooperation between the RDT&E community, Clinical Investigation Program, Medical Treatment Facilities, and Defense Centers of Excellence communities with the initiation of new collaborative clinical studies and clinical trials.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	432A: *OCONUS Laboratory Infrastructure Support (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
432A: *OCONUS Laboratory Infrastructure Support (Army)*	-	2.966	7.078	8.081	-	8.081	13.136	13.145	13.367	13.608	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The OCONUS Laboratory Infrastructure Support provides management support for research infrastructure at selected overseas laboratories and research sites that conduct basic to late-stage clinical research and evaluation of investigational products, such as biologics, drugs, and devices to treat/prevent polytrauma injuries, through collaborative effort with the military health system's medical treatment facilities.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: OCONUS Laboratory Infrastructure Support (Army)	2.966	7.078	8.081
Description: Management support for research infrastructure at selected overseas laboratories and research sites that conduct basic to late-stage clinical research and evaluation of investigational products, such as biologics, drugs, and devices to treat/ prevent polytrauma injuries, through collaborative effort with the military health system's medical treatment facilities.			
FY 2012 Accomplishments: OCONUS laboratory infrastructure support funding was applied to existing and new laboratories. The existing laboratories reside at Thailand and Kenya, while the Georgia lab is being established in FY12. Infrastructure sustainment costs consist of the administrative and facility functions at the three laboratory sites, which support medical research and development of products such as biologics, drugs, and devices to treat/prevent polytrauma injuries and infectious diseases.			
FY 2013 Plans: Funding is being applied to existing OCONUS infrastructure requirements at Thailand, Kenya, and Georgia laboratories. Infrastructure sustainment costs will consist of the administrative functions at the three laboratory sites, which support medical research and development of products such as biologics, drugs, and devices to treat/prevent polytrauma injuries and infectious diseases.			
FY 2014 Plans: Infrastructure funding costs for Kenya and Thailand laboratory support will consist of administration and infrastructure support. Infrastructure funding for the Georgia laboratory continues to build to meet administration and infrastructure support requirements.			
Accomplishments/Planned Programs Subtotals	2.966	7.078	8.081

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	432A: *OCONUS Laboratory Infrastructure Support (Army)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Metrics include documented analysis reflecting program execution of sustainment and modernization of the administration and infrastructure support required for general research, test, and evaluation at the laboratories in Kenya and Thailand, and a time-phased effort for establishment of the same in the Republic of Georgia.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	433A: *NMRC Biological Defense Research Directorate (BDRD) (Navy)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
433A: *NMRC Biological Defense Research Directorate (BDRD) (Navy)*	-	0.000	4.223	4.351	-	4.351	4.482	4.676	4.880	4.968	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

For the Navy Bureau of Medicine and Surgery, this program element (PE) includes RDT&E,HP funds for the Medical Biological Defense research sub-function of the Naval Medical Research Center (NMRC) Biological Defense Research Directorate (BDRD) that relocated to Fort Detrick, Maryland under the Base Re-Alignment and Closure (BRAC) Commission 2005. Consequently, there are significant increases in the operational costs by virtue of being at Fort Detrick, a highly secure National Interagency Biodefense Campus (NIBC). Uninterrupted utilities to all buildings on NIBC are provided by a Central Utility Plant (CUP) whose capacity all partners on the NIBC are required to buy into. The annual projected costs are distributed amongst the partners based on square feet and number of occupants of the building. The NIBC campus is a fenced physical location with Entry Control Points (ECP). The partners on the campus are required to pay for the guard force manning their ECP. BDRD's ECP is ECP5 and the projected costs for the guard force.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: NMRC Biological Defense Research Directorate (BDRD) (Navy)	0.000	4.223	4.351
Description: Biological Defense Research is a completely reimbursable program. The program is sustained by competitive acquisition of research funding. The research dollars can not pay for the increased operational costs of the program. The complete reimbursable nature of the program requires additional sustained core funding for its operational costs. ***FY 2012 Accomplishments:*** A significant amount of this funding will be used for increased costs related to the Central Utility Plant, Entry Control Point Security Force and other operational costs for maintenance, refuse, and custodial ***FY 2013 Plans:*** A significant amount of this funding will be used for increased costs related to the Central Utility Plant, Entry Control Point Security Force and other operational costs for maintenance, refuse, and custodial. ***FY 2014 Plans:*** Continue to provide funding for the Central Utility Plant, Entry Control Points Security Force and operational costs for maintenance, refuse, and custodial.			
Accomplishments/Planned Programs Subtotals	0.000	4.223	4.351

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	433A: *NMRC Biological Defense Research Directorate (BDRD) (Navy)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	442A: *USARIEM Pike's Peak IO&T (Army)*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
442A: *USARIEM Pike's Peak IO&T (Army)*	-	0.000	0.000	0.199	-	0.199	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Funding supports the initial outfitting and transition (IO&T) research, development, test and evaluation (RDT&E) costs associated with MILCON for the US Army Research Institute for Environmental Medicine (USARIEM) at Pike's Peak, Colorado,

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: USARIEM Pike's Peak IO&T (Army)	0.000	0.000	0.199
Description: Supports the initial outfitting and transition (IO&T) research, development, test and evaluation (RDT&E) costs associated with MILCON for the US Army Research Institute for Environmental Medicine (USARIEM) at Pike's Peak, Colorado. ***FY 2012 Accomplishments:*** No funds programmed. ***FY 2013 Plans:*** No funds programmed. ***FY 2014 Plans:*** For purchase of equipment designated as Category C (CAT C) government furnished and government installed (GFGI) equipment purchased from other than MILCON appropriations. It will also provide for transition funds that are extraordinary operational costs incurred as a direct result of the MILCON project, and that are not part of the normal operational costs.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	0.199

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	442A: *USARIEM Pike's Peak IO&T (Army)*

E. Performance Metrics

Metric includes completed and documented analysis by the performer reflecting program execution and completion dates based on approved phasing.

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0606105HP: *Medical Program-Wide Activities*	115T: *MILCON IO&T*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
115T: *MILCON IO&T*	-	0.000	1.251	0.000	-	0.000	0.500	0.500	0.500	0.500	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Provides for initial outfitting and transition (IO&T) cost requirements for replacement of research, development, test and evaluation (RDT&E) medical laboratories funded under multi-year military construction (MILCON) projects.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: MILCON IO&T	0.000	1.251	0.000
Description: Provides for initial outfitting and transition (IO&T) cost requirements for replacement of research, development, test and evaluation (RDT&E) medical laboratories funded under multi-year military construction (MILCON) projects. ***FY 2012 Accomplishments:*** No funding programmed. ***FY 2013 Plans:*** Provides for initial outfitting and transition (IO&T) cost requirements for replacement of research, development, test and evaluation (RDT&E) medical laboratories funded under multi-year military construction (MILCON) projects. ***FY 2014 Plans:*** No funding programmed.			
Accomplishments/Planned Programs Subtotals	0.000	1.251	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Metric includes completed and documented analysis by the performer reflecting program execution and completion dates based on approved phasing.

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Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY
0130: *Defense Health Program*
BA 2: *RDT&E*

R-1 ITEM NOMENCLATURE
PE 0607100HP: *Medical Products and Capabilities Enhancement Activities*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	14.146	15.815	14.646	-	14.646	18.231	18.995	19.315	19.663	Continuing	Continuing
377A: *GDF-Medical Products and Capabilities Enhancement Activities*	-	14.146	15.815	14.646	-	14.646	18.231	18.995	19.315	19.663	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Guidance for Development of the Force-Medical Products and Capabilities Enhancement Activities Program Element (PE) funds efforts to enhance fielded medical products or for pre-planned improvement of fielded medical products, including information management/information technology (IM/IT) systems. Additionally, work will be funded that provides clinical outcome follow-ups to military unique clinical practice guidelines. Research in this PE is designed to address areas of interest to the Secretary of Defense regarding Wounded Warriors, to address capabilities identified through the Joint Capabilities Integration and Development System, and to address the strategy and initiatives described in the Quadrennial Defense Review. Program development and execution is fully coordinated with appropriate Program Managers of fielded medical systems and with the relevant Senior Officials/stakeholders of clinical practice guidelines.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	14.396	15.815	14.646	-	14.646
Current President's Budget	14.146	15.815	14.646	-	14.646
Total Adjustments	-0.250	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.250	-			

Change Summary Explanation

FY 2012: Realignment from DHP RDT&E, PE 0607100-Medical Products and Capabilities Enhancement Activities (-$0.250 million) to DHP RDT&E PE 0605502-Small Business Innovation Research (SBIR) Program (+$0.250 million).

FY 2013: No Change

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0607100HP: *Medical Products and Capabilities Enhancement Activities*

FY 2014: No Change

Defense Health Program
Fiscal Year (FY) 2014 Budget Estimates
RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0607100HP: *Medical Products and Capabilities Enhancement Activities*	377A: *GDF-Medical Products and Capabilities Enhancement Activities*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
377A: *GDF-Medical Products and Capabilities Enhancement Activities*	-	14.146	15.815	14.646	-	14.646	18.231	18.995	19.315	19.663	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Guidance for Development of the Force-Medical Products and Capabilities Enhancement Activities: Funds will enhance modify, upgrade, test, and evaluate fielded medical materiel to ensure required performance of such materiel (such as medical sets, kits and outfits), in an expanded or altered environment from which they originally entered service. In addition, medical IM/IT systems will be upgraded with product improvements that will integrate medical injury and autopsy data with non-medical and live fire testing data, and blast sensor field data will be analyzed to determine if the data can be used to confidently predict head injury. These IM/IT enhancements will allow improved prediction of injuries, the knowledge of which will impact improvements to fighting/support vehicles and equipment that will ultimately reduce injuries.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: 377A: GDF – Medical Products and Capabilities Enhancement Activities	14.146	15.815	14.646
Description: Provide support for development efforts to upgrade medical products and capabilities that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.			
FY 2012 Accomplishments: For support to fielded systems: efforts were completed to improve the computer assisted rehabilitation environment, and to improve arthropod repellents and the insect bed netting system. Arthropods, such as ticks, fleas, mosquitoes, and other insects, are the vectors of numerous military-relevant diseases such as dengue, malaria, plague, and yellow fever. Efforts continued to enhance medical IM/IT systems that (a) capture and forward real time injury profiles back to the intelligence and materiel developer communities, (b) analyze blast sensor field data to determine if the data can be used to confidently predict head injury, (c) provide anatomical and other model enhancements to improve injury prediction, and (d) integrate the medical injury and autopsy data with non-medical and live fire testing data. The ultimate goal of all these IM/IT enhancements is to improve the combat performance of fighting and support vehicles and equipment. Additional projects undertaken with FY12 funds included: (a) improvements to the Combat Application Tourniquet (CAT) and modification to decontaminable litters; (b) testing of mosquito control measures, acupuncture as a means for rapid extremity pain relief, improvements to portable ventilators, intravenous infusion pumps, and biological dressings for hemorrhage control; (c) studies of medical practices to identify opportunities for improvement for injured personnel with ostomies (surgical procedures that create an artificial opening for the elimination of bodily			

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0130: *Defense Health Program* BA 2: *RDT&E*	PE 0607100HP: *Medical Products and Capabilities Enhancement Activities*	377A: *GDF-Medical Products and Capabilities Enhancement Activities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
wastes) and personnel who have undergone refractive eye surgery (e.g., LASIK); and (d) enhancements to training devices for spatial disorientation and hypoxia (insufficient levels of oxygen in blood or tissue) and for medical simulation. ***FY 2013 Plans:*** Funds will be used to enhance, modify, upgrade, test, and evaluate fielded medical materiel. The focus will be to ensure that performance requirements of materiel such as medical sets, kits and outfits in an expanded or altered environment from which they originally entered service are met. Support to fielded systems and IM/IT product improvement enhances medical systems. The systems capture and forward real time injury profiles to intelligence and materiel developer communities, analyze blast sensor field data to determine if the data can be used to confidently predict head injury, use anatomical and other models to improve injury prediction, and integrate medical injury and autopsy data with non medical and live fire testing data. This leads to improvements in combat performance of fighting and support vehicles, equipment, and medical best practices. ***FY 2014 Plans:*** Funds will be used to enhance, modify, upgrade, test, and evaluate fielded medical materiel. The focus will be to ensure that performance requirements of materiel such as medical sets, kits and outfits in an expanded or altered environment from which they originally entered service are met. Investments lead to improvements in combat performance of fighting and support vehicles, equipment, and medical best practices.			
Accomplishments/Planned Programs Subtotals	14.146	15.815	14.646

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Integrate product improvements and enhancements resulting from post marketing studies and surveillance.

E. Performance Metrics

Performance is measured based on the number of products for which testing either certifies use in a given environment (e.g., sufficiently ruggedized, airworthiness testing) and/or results in a recommendation of a specific product, and delivery of an enhanced product or knowledge product. The benchmark performance metric for research supported in this PE will be the enhancement of a maturity level that is typical of TRL 9.