

Defense Health Program
Fiscal Year (FY) 2012 Budget Estimates
Exhibit R-2, DHP RDT&E Budget Item Justification

Appropriation/Budget Activity
Defense Health Program/BA: 2

DATE: February 2011
R1 Item Nomenclature: 8
Information Technology Development
0605013HP

COST: (Dollars in Millions)

	2010 Actual	2011 Estimate	2012 Estimate	2013 Estimate	2014 Estimate	2015 Estimate	2016 Estimate
Total PE 0605013	121.077	136.761	176.345	197.112	140.999	88.474	88.069
Air Force Integrated Healthcare Toolset (AFIFHCT) (Air Force)	1.000	1.000	0.000	0.000	0.000	0.000	0.000
Armed Forces Health Longitudinal Technology Application (AHLTA) (Army)	0.000	1.556	1.603	1.651	1.684	1.718	1.778
Armed Forces Health Longitudinal Technology Application (AHLTA) (TMA)	6.121	4.467	1.976	1.627	1.340	1.103	1.122
Army Warrior Care and Transition System (AWCTS) (Army)	0.906	0.000	0.366	0.365	0.365	0.364	0.364
Centralized Credentials and Quality Assurance System (CCQAS) (TMA)	0.121	0.211	0.000	0.000	0.000	0.000	0.000
Composite Health Care System (CHCS) (TMA)	7.936	2.466	2.962	2.963	0.784	0.000	0.000

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Composite Occupational Health & Operational Risk Tracking (COHORT) (Air Force)	1.300	1.400	0.000	0.000	0.000	0.000	0.000
CSI-Composite Occupational Health & Risk Tracking (COHORT) (Air Force)	2.400	0.000	0.000	0.000	0.000	0.000	0.000
CSI-Regional Telepathology Initiative at Keesler AFB (Air Force)	1.680	0.000	0.000	0.000	0.000	0.000	0.000
Defense Center of Excellence (FHP&RP)	0.000	1.205	1.230	1.256	1.282	1.309	1.331
Defense Medical Human Resources System (internet) DMHRSI (TMA)	8.521	0.000	0.000	0.000	0.000	0.000	0.000
Defense Medical Logistics Standard Support (DMLSS) (TMA)	7.336	23.444	13.653	6.882	2.668	0.000	0.000
Defense Occupational and Environmental Health Readiness System - Industrial Hygiene (DOEHRIS-IH) (TMA)	0.000	3.721	15.632	0.142	3.942	0.000	0.000

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Electronic Health Record (EHR) Way Ahead (Budgeted) (TMA)	0.000	41.620	86.715	119.700	64.700	11.700	11.899
Enterprise Blood Management System (EBMS) (TMA)	6.200	2.925	0.975	0.975	0.975	1.072	1.090
Executive Information/Decision Support (EI/DS) (TMA)	2.120	1.949	2.810	2.786	4.914	4.297	2.419
Expense Assignment System IV (EAS IV) (TMA)	7.246	0.000	0.000	0.000	0.000	0.000	0.000
Health Services Data Warehouse (HSDW) (Air Force)	1.600	1.665	0.000	0.000	0.000	0.000	0.000
IM/IT Test Bed (Air Force)	1.888	2.223	2.300	2.400	2.395	2.501	2.544
Integrated Clinical Database (ICDB-AF)	0.500	0.500	0.000	0.000	0.000	0.000	0.000
Joint Electronic Health Record Interoperability (JEHRI) (TMA)	2.760	0.000	0.000	0.000	0.000	0.000	0.000
Medical Operational Data System (MODS) (Army)	2.906	3.253	3.350	3.450	3.519	3.589	3.715

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Navy Medicine CIO Management Operations (Navy)	2.946	4.156	4.239	4.323	4.409	4.497	4.574
Neuro Cognitive Assessment Tool (NCAT) (TMA)	2.837	2.897	0.000	0.000	0.000	0.000	0.000
Other Related Technical Activities (TMA)	3.793	3.153	3.164	2.976	2.950	2.589	2.585
Patient Safety Reporting (PSR) (TMA)	0.000	0.000	2.294	0.935	0.000	0.000	0.000
Theater Enterprise Wide Logistics System (TEWLS) (Army)	0.653	0.000	0.000	0.000	0.000	0.000	0.000
Theater Medical Information Program (TMIP) (TMA)	35.502	21.861	24.318	41.227	41.542	50.127	50.979
Third Party Outpatient Collection System (TPOCS) (TMA)	0.507	0.459	0.378	0.000	0.000	0.000	0.000
TMA E-Commerce (TMA)	6.744	5.630	3.380	3.454	3.530	3.608	3.669
TRICARE on Line (TOL) (TMA)	0.975	0.000	0.000	0.000	0.000	0.000	0.000

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Virtual Lifetime Electronic Record (VLER) (Budgeted) (TMA)	3.830	5.000	5.000	0.000	0.000	0.000	0.000
Virtual Lifetime Electronic Records (VLER) (Army)	0.749	0.000	0.000	0.000	0.000	0.000	0.000

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: For the Army Medical Command the focus is to identify, explore, and demonstrate key technologies to overcome medical and military unique technology barriers. Programs include development projects for Army service level support for the Armed Forces Health Longitudinal Technology Application (AHLTA), the Theater Enterprise Wide Logistics System (TEWLS), the Medical Occupational Data System (MODS), the Army Warrior Care and Transition System (AWCTS), and the Virtual Lifetime Electronic Record (VLER).

For the Navy Bureau of Medicine and Surgery, the Navy Medical IM/IT service RDT&E funds the focus is on development required for those systems that are integral to Navy Medicine. 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 TMA Central Programs.

For the Navy Medicine CIO Management Operations: IM/IT RDT&E requests will be vetted through the BUMED Governance Process. BUMED IM/IT CIO Governance will monitor progress and milestones every six months.

For the Air Force Medical Service this program element supports IM/IT development requirements within four AFMS that the Chief Information Officer defined as core capabilities essential to the 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 ad hoc without standard methodologies, mapping of business requirements, transparent analytic models, and then distributed by office productivity software. Centralized production of standard reports, balance sheets, and dynamic query tools would relieve many managers and action officers 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

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encompass what has merged into a common process of tracking unit capability and personal health assessments. Consolidation of medical readiness applications would streamline disability, medical readiness, deployment surveillance, and flying status tracking and reporting for those who currently must move between multiple applications.

a. Medical Readiness - There are at least 6 applications that medics now use for tracking and reporting disability, deployment health, health assessment, and preventive health assessment. Medics would benefit from a common source to track these essential mission requirements in order to assure that the readiness and occupational needs of the AF are maintained. Additionally, an increasing number of reports and data feeds are requested to support AF Line, AFMS leadership, and MAJCOM/MTF customers. Data models and dynamic query tools are needed for self-service ad hoc reporting and building of standard, policy-driven reports.

b. Population Health - Chronic disease care is the most expensive and fastest growing consumer of medical resources. Improvements are needed in clinical decision support, patient safety, facilitation of home and remote monitoring, and telemedicine that will facilitate new models for delivery of medicine other than the traditional visit to the doctor's office. Personalized medicine research will identify new methods for preventing and treating diseases--this research needs very sophisticated data analytics and integrated data warehouses.

c. Experience of Care - Technology advancements are bridging the gap between patient and provider allowing better communication, relationships, and objective monitoring for physical factors that drive preventable visits and hospitalizations. There is increasing opportunity to bring patients, primary care, and specialists into collaborative visits without multiple appointments and long-distance travel. These telemedicine tools require significant investments in integration for use on AF Networks.

d. Per capita cost -- The integration of accounting systems, human resource tracking, and 'cost of care' is extremely difficult because of siloed systems. The aggregation of these data sets and modeling for improved analytics would significantly enhance the decision making capability of management and leadership.

The funding in this program element also provides for operation and sustainment of the IM/IT Test Bed (IMIT-TB) capability, which is a dedicated staffed OT location offering 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, IM/IT program includes RDT&E funding for the following initiatives of special interest:

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1) AHLTA, which is DoD's current Electronic Health Record (EHR), serves as one of the world's largest clinical information systems that provides secure, 24x7, worldwide online access to patients' medical records, making it a key enabler of military medical readiness; 2) Electronic Health Record (EHR) Way Ahead is a proposed Major Automated Information System (MAIS) program designed to replace/sunset the current portfolio of systems providing initial EHR capability, AHLTA and CHCS. EHR Way Ahead will establish a comprehensive, longitudinal, electronic health record that is available anytime, anywhere for the lifetime of every patient. This longitudinal electronic health record will support virtual lifetime electronic records (VLER); 3) Theater Medical Information Program-Joint (TMIP-J) integrates the military health information systems to ensure timely interoperable medical support; 4) Defense Medical Logistics Standard Support (DMLSS) provides integrated supply chain and life cycle management for pharmaceuticals, medical supplies, equipment, health facilities, and services; 5) Executive Information/Decision Support (EI/DS) receives and stores data from MHS systems, processes the data through a variety of business rules, and makes the data available for management of the business of health care; 6) Defense Occupational and Environmental Health Readiness System - Industrial Hygiene (DOEHRS-IH) assembles, uses, compares, evaluates and stores data on occupational personnel exposure information, workplace environment monitoring, personnel protective equipment usage, observation of work practices, and health hazard education; and 7) various Wounded, Ill and Injured (WII) Warrior initiatives such as Neuro Cognitive Assessment Tool (NCAT), Behavioral health (BH) notes that will improve BH workflow, and developing a web-based solution for DoD and VA healthcare providers. The Central IM/IT Program also contains RDT&E funding for mission essential initiatives such as: Enterprise Blood Management System (EBMS), Defense Medical Human Resources System (internet) (DMHRSi), TRICARE On Line (TOL), Joint Electronic Health Record Interoperability (JEHRI), Expense Assignment System IV (EAS IV), Centralized Credentials and Quality Assurance System (CCQAS), and Third Party Outpatient Collection System (TPOCS).

The DHP, RDT&E appropriation includes the following TMA initiatives: Electronic Commerce System: 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 Comprizon.Buy and the replacement 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

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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 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.

B. PROGRAM CHANGE SUMMARY:

	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
FY12 Budget Estimate RDT&E	125.379	136.761	175.979	196.747
Change Proposal	0.000	0.000	0.366	0.365
Realignment	0.000	0.000	0.000	0.000
SBIR	-4.302	0.000	0.000	0.000
FY12 Budget Submission RDT&E	121.077	136.761	176.345	197.112

PROGRAM CHANGE SUMMARY EXPLANATION:

FY 2010: SBIR Transfer from DHP RDT&E, PE 0605013 - Information Technology Development (-\$4.302 million) to DHP RDT&E, PE 0605502 - Small Business Innovation Research (SBIR) program (+\$4.302 million).

FY 2011: No Change.

FY 2012: Change Proposal to DHP RDT&E, PE 0605013 - Information Technology Development for Warrior Transition Command (+\$0.366 million).

FY 2013: Change Proposal to DHP RDT&E, PE 0605013 - Information Technology Development for Warrior Transition Command (+\$0.365 million).

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C. OTHER PROGRAM FUNDING SUMMARY:

	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>
	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>
DHP Operation & Maintenance	625.795	750.690	741.993	794.591	812.092	699.259	712.179
BA-1, PE 0807714	1.215	1.252	0.000	0.000	0.000	0.000	0.000
BA-1, PE 0807724	0.895	0.000	0.000	0.000	0.000	0.000	0.000
BA-1, PE 0807752	16.679	11.977	12.241	12.510	12.785	13.067	13.354
BA-1, PE 0807781	152.140	165.798	189.711	192.146	195.258	198.420	201.644
BA-1, PE 0807793	432.654	550.409	520.758	570.319	584.088	467.459	476.498
BA-1, PE 0807795	19.586	18.154	16.935	17.226	17.527	17.834	18.159
BA-1, PE 0807995	2.626	3.100	2.348	2.390	2.434	2.479	2.524
DHP Procurement	40.245	168.249	248.001	151.687	201.938	12.804	13.757
BA-3, PE 0807721	39.735	167.729	247.471	151.146	201.386	12.241	13.184
BA-3, PE 0807720	0.510	0.520	0.530	0.541	0.552	0.563	0.573

D. ACQUISITION STRATEGY: Not Required.

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.