OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

JUL 06 2010

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

Dear Mr. Chairman:

Enclosed is the Calendar Year 2009 report to Congress on the Department of Defense (DoD) Force Health Protection Quality Assurance Program, as required by Section 739 of the National Defense Authorization Act for Fiscal Year 2005. This report addresses specific quality assurance activities during calendar year 2009, including the review of more than 400 deployment medical records of Service members, information maintained in the central DoD database, and the Military Services' Force Health Protection measures. In addition, it provides information on compliance in recording deployment health assessment data in military personnel records, as required by Section 739.

Thank you for your continued support of the Military Health System.

Sincerely,

Charles L. Rice, M D.
President, Uniformed Services University of the Health Sciences,
Performing the Duties of the Assistant Secretary of Defense (Health Affairs)

Enclosure:
As stated

cc.
The Honorable John McCain
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

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

JUL 06 2010

Dear Mr. Chairman.

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The Honorable Lindsey O Graham
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

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

JUL 06 2010

Dear Mr Chairman

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Performing the Duties of the
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(Health Affairs)

Enclosure:
As stated

cc
The Honorable Howard P "Buck" McKeon
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

JUL 06 2010

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

Dear Madam Chairwoman.

Enclosed is the Calendar Year 2009 report to Congress on the Department of Defense (DoD) Force Health Protection Quality Assurance Program, as required by Section 739 of the National Defense Authorization Act for Fiscal Year 2005 This report addresses specific quality assurance activities during calendar year 2009, including the review of more than 400 deployment medical records of Service members, information maintained in the central DoD database, and the Military Services' Force Health Protection measures. In addition, it provides information on compliance in recording deployment health assessment data in military personnel records, as required by Section 739.

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As stated

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The Honorable Joe Wilson
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

JUL 06 2010

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

Dear Mr Chairman:

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Enclosure
As stated

cc:
The Honorable Thad Cochran
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

JUL 06 2010

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

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The Honorable Thad Cochran
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

JUL 06 2010

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

Dear Mr Chairman

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Enclosure:
As stated

cc.
The Honorable Jerry Lewis
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

JUL 06 2010

The Honorable Norm Dicks
Chairman, Subcommittee on Defense
Committee on Appropriations
U S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman.

Enclosed is the Calendar Year 2009 report to Congress on the Department of Defense (DoD) Force Health Protection Quality Assurance Program, as required by Section 739 of the National Defense Authorization Act for Fiscal Year 2005 This report addresses specific quality assurance activities during calendar year 2009, including the review of more than 400 deployment medical records of Service members, information maintained in the central DoD database, and the Military Services' Force Health Protection measures In addition, it provides information on compliance in recording deployment health assessment data in military personnel records, as required by Section 739.

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Enclosure
As stated

cc.
The Honorable C. W Bill Young
Ranking Member

THE 2009 ACTIVITIES OF THE FORCE HEALTH PROTECTION QUALITY ASSURANCE PROGRAM OF THE DEPARTMENT OF DEFENSE

JULY 2010

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THE 2009 ACTIVITIES OF THE FORCE HEALTH PROTECTION QUALITY ASSURANCE PROGRAM OF THE DEPARTMENT OF DEFENSE

Background

The Department of Defense (DoD) reports annually to Congress on the Force Health Protection Quality Assurance (FHPQA) program, as required for in Section 739 of the National Defense Authorization Act (NDAA) for Fiscal Year 2005. Topics include maintenance of deployment health assessment information in the Armed Forces Health Surveillance Center (AFHSC), immunization data, health assessment data in deployment military medical records, recommendations provided in response to quality assurance findings during the installation visits, and deployment-related exposures to occupational or environmental hazards This report is DoD's 2010 report to the Armed Services Committees of the Senate and the House of Representatives It covers the Force Health Protection Quality Assurance activities during calendar year (CY) 2009

Deployment Health Quality Assurance Program

The Department of Defense published Health Affairs (HA) Policy 04-001, "Deployment Health Quality Assurance Program," in January 2004 This policy directed the implementation of a DoD Deployment Health Quality Assurance (DHQA) Program under the direction of the Deputy Assistant Secretary of Defense (DASD) for Force Health Protection and Readiness (FHP&R) The Department issued DoD Directive (DoDD) 6200.05, "Force Health Protection Quality Assurance Program," on February 16, 2007, as an enhancement to HA Policy 04-001 The enhancement broadened comprehensive military health surveillance by applying agreed-upon quality assurance measures relevant to military health, deployment, and occupational and environmental health (OEH) surveillance activities throughout the entire period of an individual's military service These measures incorporate high risk, problem prone, or high volume health issues faced by deployed individuals

As specified in DoDD 6490 02E, "Comprehensive Health Surveillance," and DoDD 6493 04, "Deployment Health," the Assistant Secretary of Defense for Health Affairs (ASD(HA)) has both the authority and the responsibility for all aspects of comprehensive military health surveillance and documentation related to force health protection and surveillance implementation These include longitudinal health monitoring, epidemic and outbreak prevention, and detection and response activities, as well as deployment health surveillance monitoring of environmental and occupational health hazards, assessment of disease and injury prevention and control, and health care system evaluation and planning

DoDD 6200.05 provides guidance focused on those important activities under the three pillars of DoD's force health protection, which are (1) promoting and sustaining a healthy and fit force, (2) preventing illness and injury, and (3) providing medical and rehabilitative care to the sick and injured

The DASD(FHP&R), in conjunction with the Force Health Protection Council[1], oversees the FHPQA program, and approves the selection of key elements for monitoring and reporting This effort demonstrates the commitment to force health protection among the Services. The CY 2009 force health protection measures were the following

- Conducted OEH Site Assessments,
- Tracked Individual Medical Readiness (IMR),
- Monitored overall force readiness status,
- Confirmed the accuracy of Defense Manpower Data Center (DMDC) and Service Deployment Roster Accounting systems,
- Ensured the completion of Pre-Deployment Health Assessment[2] (Pre-DHA), Post Deployment Health Assessment[3] (PDHA), and Post-Deployment Health Reassessment[4] (PDHRA) availability in DoD centralized systems,
- Tracked the rates of baseline neurocognitive assessments (ANAM)[5] completed before departure,
- Monitored theater mental health encounter trends, and
- Observed theater mental health evacuation trends

In CY 2009, the FHPQA Program performed the following activities

(1) Visited DoD installations to assess compliance with force health protection policy and procedures,
(2) Reviewed quarterly reports provided by the military Services regarding their specific FHPQA programs and initiatives,
(3) Reported deployment health assessment documentation trends, and
(4) Electronically analyzed and compared data from the AFHSC and the Services.

[1] The members include the Services' Surgeons General of the Army, Navy and Air Force, the Medical Officer of the Marine Corps, and the Joint Staff Surgeon
[2] DD Form 2795 The health assessment questionnaires mentioned throughout this document are listed together with their corresponding Defense Department (DD) form numbers in Appendix A
[3] DD Form 2796 See Appendix A
[4] DD Form 2900 See Appendix A
[5] The Automated Neuropsychological Assessment Metrics (ANAM) was selected by DoD as the specific type of Neurocognitive Functional Assessment Tool (NCAT) to test and record a Service member's cognitive performance prior to deployment

Force Health Protection Quality Assurance Visits to Military Installations

In CY 2009, staff from FHP&R and the Services' medical departments jointly planned, coordinated, and conducted the FHPQA visits to the military installations listed in Figure 1

Figure 1: Dates and Locations of the 2009 Joint Installation Visits

Date	Service	Component	Installation
Mar 2009	USA	Active Duty	Joint Readiness Training Center, Fort Polk, LA
May 2009	USA	Civilian	USA Corps of Engineers, Transatlantic Division, Winchester, VA
Jun 2009	USA	Reserves	377th Theater Sustainment Command, Naval Air Station/Joint Reserve Base, Belle Chasse, New Orleans, LA
Jun 2009	USMC	Active Duty	Third Marine Aircraft Wing (MAW), Marine Air Station (MAS) Miramar, San Diego, CA, First Marine Division and First Combat Logistics Group (CLG), Marine Corps Base, Camp Pendleton, CA
Sep 2009	USAF	Reserves	916th Air Refueling Wing, Seymour Johnson AFB, Goldsboro, NC
Sep 2009	USAF	Active Duty	4th Medical Group, Seymour Johnson AFB, Goldsboro, NC
Dec 2009	USN	Active Duty	Naval Medical Center, Portsmouth, VA
Dec 2009	USN	Reserves	Naval Operation Support Center, Norfolk, VA
Dec 2009	USMC	Reserves	Joint Base Andrews Naval Air Facility, Camp Springs, MD

The purpose of the visits was to assess deployment health policy compliance and effectiveness as directed by Department of Defense Instruction (DoDI) 6200 05 These visits generally included briefings with commanders and providers, discussions of deployment health processing activities and issues, and reviews of individual medical records for documentation of deployment health–related information (including required pre- and post-deployment health-related information (including required pre- and post-deployment health assessments)

In preparation for each visit, the FHPQA program collaborated with each Service and with the Armed Forces Health Surveillance Center (AFHSC) to collect deployment-related data Available enterprise-wide documentation of both pre- and post-deployment health assessments and serum specimens were pre-populated onto a FHPQA data collection tool and reviewed This review facilitated the identification of individuals who had recently deployed and returned from deployment and had the required post-deployment assessment forms

The Government Accountability Office (GAO), in the report titled, "Defense Health Care Oversight of Military Services' Post-Deployment Health Reassessment Completion Rates Is Limited," September 4, 2008 (GAO 08-1025R), recommended that the AFHSC's monthly reports to the FHPQA program include information sufficient for the FHPQA program to accurately assess and report compliance, including the total

number of Service members returned from deployment who should have completed the PDHRA During the installation visits, the FHPQA program teams (1) verified the accuracy of the data provided by the AFHSC, (2) reviewed for data transfer inconsistencies, and (3) discussed deployment data processing practices Data transfer or inconsistency concerns were reported to the AFHSC for further investigation

Findings from the 2009 FHPQA visits included the percentage of deployment medical records consistent with the centralized database Figure 2 presents the compliance data observed during these visitations [6]

The visitation team made observations, noted commendable practices and process improvement initiatives, and provided constructive recommendations during each FHPQA installation visit conducted in 2009 as noted below

Figure 2: Compliance Data Observed during the 2009 FHPQA Joint Installation Visits

Metric	Joint Readiness Training Center, Fort Polk, LA	Corps of Engineers Winchester, VA	377th TSC Belle Chasse, LA	MAS Miramar & Camp Pendleton, CA	916th ARW, Seymour Johnson AFB, NC	4th Med Gp, Seymour Johnson AFB, NC	Naval Medical Center Portsmouth, VA	Naval Ops Support Center, Norfolk, VA	Joint Base Andrews NAF, MD
Number of Records Received and Reviewed Electronically	200	214	100	100	17	100	75	75	12
Number of Records Reviewed on Site	36	167	26	93	16	86	31	37	2
Evidence of current anthrax, influenza, and small pox vaccinations in record	90%	N/A	90%	73%	69%	89%	68%	84%	N/A
Evidence of current season's influenza vaccination in record	94%	N/A	94%	86%	100%	98%	100%	91%	N/A
Periodic Health Report in record	34%	N/A	34%	89%	81%	89%	65%	81%	N/A
Record contains all DH assessments (PHA, Pre-DHA, PDHA, & PDHRA)	80%	N/A	80%	43%	81%	37%	41%	72%	N/A
PHA in record	69%	N/A	69%	97%	94%	91%	95%	84%	N/A
Pre-DHA in record	50%	84%	50%	76%	88%	95%	81%	81%	N/A
PDHA in record	54%	27%	54%	76%	100%	98%	57%	88%	N/A
PDHRA in record	8%	5%	8%	58%	88%	50%	89%	94%	N/A
Record of a baseline neurocognitive test before deployment in electronic database	12%	0%	12%	NA	63%	39%	NA	NA	N/A
Pre-deployment Sera in DMSS	24%	86%	24%	94%	94%	96%	95%	68%	N/A
Return from deployment Sera in DMSS	18%	N/A	18%	70%	88%	74%	19%	14%	N/A

NOTE
N/A = Not available

[6] All findings in Figure 2 are based on data observed by the FHPQA team during the installation visits Some statistics may vary by +/- 1 percent due to rounding

Joint Readiness Training Center, Fort Polk, LA

Dates of Visit March 2–4, 2009

Service and Component: United States Army Active Duty

Observations:

1 The majority of the PDHAs accomplished at Fort Polk were not successfully incorporated into the Defense Medical Surveillance System (DMSS)

2. The Battalion Aid Stations (BASs) at Fort Polk have access to AHLTA[7], but do not use it to document health care This results in the Soldier Readiness Processing Center (SRPC) not having access to up-to-date clinical information during the AHLTA record review portion of the Pre-DHA The Hospital Commander reported that he could not compel these individuals to comply with Military Health System (MHS) policy

3 Deployment health assessments are not included in the local medical record peer review process The Hospital Commander was opposed to the suggestion and did not agree that any of the existing Clinical Practice Guidelines (CPGs) were binding (for example, DoD/Department of Veterans Affairs (VA) CPGs are not authoritative because they were neither promulgated nor endorsed by any of the national specialty organizations, colleges, or academies

Commendable Practices and Process Improvement Initiatives:

1 There was excellent compliance with starting the anthrax immunization series before departure and providing the boosters at appropriate intervals while in theater Similarly, the appropriate influenza vaccine was administered in the deployed setting

2 A licensed clinical social worker (LCSW) interviews every soldier as part of the Pre-DHA, PDHA, and PDHRA The LCSWs use additional screening scales beyond what is in the respective self-reporting tools, such as the Post-Traumatic Stress Disorder Check List – Military version (PCL-M) The forms are handwritten and contain a summary note[8] by the LCSW entered into AHLTA

3 The installation has a one-stop SRPC for Active Duty, Reserve, National Guard, and Civilian deployment health processing, involving collaborative processes with Human Resources, Preventive Medicine, and Occupational Health

4 A referral tracking system has been developed for civilians and is under development for Active Duty personnel

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[7] AHLTA is the DoD's Military Health System (MHS) electronic health record (EHR)

[8] These notes were not available to the reviewers

Overall Recommendations:

1. The local medical staff may need to educate line commanders regarding their requirement to. (A) comply with MHS, Department of the Army (DA), and FHP&R policy and programs; (B) clarify the deployment health policies, (C) utilize AHLTA in the garrison BASs: (D) provide deployment rosters; and (E) collaborate with the SRPCs in support of all who deploy
2. Implement the use of the Periodic Health Assessment (PHA).[9]
3. Implement baseline neurocognitive testing
4. Implement a practice of internal peer review to discuss, educate, and validate deployment health practices targeting deployment health assessments and standards of care
5. Support the development of policy and training for providers

[9] DD Form 2766

U.S. Army Corps of Engineers, Transatlantic Division, Winchester, VA

Date of Visit: May 20, 2009

Service and Component: United States Army Civilian

Observations:

1 Medical evaluations were submitted and reviewed by onsite deployment medical staff prior to formal deployment processing Health care personnel investigate any missing or abnormal information

2 The United States Army Corps of Engineers (USACE) has implemented a hearing requirement for its members

3 All individuals over 40 years of age were required to receive an electrocardiogram (EKG) and a lipid panel prior to deploying

Commendable Practices and Process Improvement Initiatives:

1 Permanent "No-Go Lists"[10] of criteria are maintained (for example, Body Mass Index (BMI) over 40)

2 The USACE follows the American Cancer Society's age-adjusted recommendations and has augmented the pre-deployment assessment requirements to include those recommendations for frequent deployers.

Overall Recommendation:

1 Implement a plan for the use and tracking of PDHRAs

[10] A "No-Go List" contains specific criteria which will exclude an individual from deploying

377th Theater Sustainment Command, Naval Air Station, Joint Reserve Base, Belle Chasse (New Orleans), LA

Dates of Visit: June 21–23, 2009

Service and Component: United States Army Reserves

Observations:

1. The 377th Theater Sustainment Command is doing more tuberculosis (TB) skin testing than required by either policy or reasonable public health practice.
2. Onsite dental exams were available in the SRPC. Any required dental restorative work was accomplished in the local dental treatment facility.
3 Most soldiers indicated on the PDHA that they never used N-Diethyl-meta-Toluamide (DEET) or permethrin-treated uniforms, that these protective measures were not required, or that they were not available.
4 None of the records that indicated a provider referral in the PDHA had any referral care documented

Commendable Practices and Process Improvement Initiatives:

1. There was excellent compliance with starting the anthrax immunization series before departure and providing the boosters at appropriate intervals while in the theater. Similarly, the appropriate influenza vaccine was administered in the deployed setting
2 A LCSW interviews every soldier as part of the Pre-DHA, PDHA, and PDHRA. The LCSWs use additional screening scales beyond what is in the respective self-reporting tools, such as the PCL-M. The forms are handwritten and contain a summary note[11] by the LCSW entered into AHLTA.
3. There was one-stop soldier readiness processing (SRP) for Active Duty, Reserve, National Guard, and Civilian deployment health processing as a result of collaborative processes with Human Resources, Preventive Medicine and Occupational Health
4 A referral tracking system has been implemented for civilians and is under development for Active duty.

[11] These notes were not available to the reviewers

Overall Recommendations:

1 The local medical staff may need to educate line commanders regarding their requirement to (A) comply with MHS, DA, and FHP&R policy and programs, (B) clarify the deployment health policies, (C) use AHLTA in the garrison BASs, (D) provide deployment rosters, and (E) collaborate with the SRPC in support of all who deploy

2 Implement the use of the PHA and baseline neurocognitive testing

3 Implement a practice of internal peer review to discuss, educate, and validate deployment health practices targeting deployment health assessments and standards of care

4 Support the development of policy and training for providers

Third Marine Aircraft Wing, Marine Air Station Miramar, San Diego, CA/First Marine Division and First Combat Logistics Group, Marine Corps Base, Camp Pendleton, CA

Dates of Visit: June 25–26, 2009

Service and Component: U S Marine Corps Active Duty

Observations:

1 Command representatives, providers, and Service members are doing an outstanding job of record keeping relative to the PHA.

2 A large percentage of records reviewed indicated compliance with pre-deployment serum sample compliance

3 The Human Papillomavirus vaccine is available to male Marines and sailors, if requested

4 Baseline neurocognitive testing implementation has begun.

Commendable Practices and Process Improvement Initiatives:

1 Command representatives articulated concerns and initiatives regarding the tracking of post-deployment care

2 The practice of peer review includes deployment health records.

Overall Recommendations:

1. Increase the amount of follow up for Service members whose records indicated provider referrals on the PDHAs

2 Increase the rate of baseline neurocognitive testing.

916th Air Refueling Wing, Seymour Johnson Air Force Base, Goldsboro, NC

Dates of Visit: September 11–13, 2009

Service and Component: U S Air Force Reserves

Observations:

1 There was evidence of coordinated referrals from PDHA from theater through the PDHRA

2 Smallpox immunization screening questionnaires are filed independently from deployment medical records

Commendable Practices and Process Improvement Initiatives:

1 Quality control checks to validate PDHA completion have been implemented

2 The percentage of neurocognitive compliance is high

3 Deployment medical records are well organized

Overall Recommendation:

1 Develop and implement a plan for staff education that will lead to improving forms management for smallpox immunization screening (questionnaires)

Fourth Medical Group, Seymour Johnson Air Force Base, Goldsboro, NC

Dates of Visit: September 14–17, 2009

Service and Component: U S Air Force Active Duty

Observations:

1 The Fourth Medical Group has overall solid programs in a very high operational tempo environment

2 There is consistent evidence and documentation of in-theater care in the medical records

3 There is strong evidence of concurrent, almost immediate, post-deployment assessment mental health review and support

4. There is a robust post-deployment review and referral process and program

Commendable Practices and Process Improvement Initiatives:

1 The installation has instituted a "Warrior Health Team" project

2 There are "Four Free" mental health visits for post-deployment mental health issues[12]

3 The deployment medical records are very well organized.

4 There is evidence of timely and thorough follow-up for high-risk TB personnel

Overall Recommendations:

1. Review current U S Air Force implementation guidance and policies regarding the PDHAs

2 Develop and implement staff training regarding the deployment health surveillance process

3 Complete PDHRAs in accordance with DoD policy

[12] These visits are with a credentialed mental health provider but are not coded to reflect it Individuals can use these visits to discuss issues in a non-threatening environment If the individual requires more than four visits, they are established in the routine mental health program with the visits appropriately captured and coded

Naval Medical Center, Portsmouth, VA

Dates of Visit: December 7–9, 2009

Service and Component: U S Navy Active Duty

Observations:

1. Certain PDHRA forms were pasted or scanned into AHLTA and printed into the medical record, as opposed to a copy of the actual form being placed into the medical record This practice satisfies DoD's requirements, nevertheless, the forms were difficult to read and often incomplete
2 Of the records that indicated a provider referral in the PDHA, none had any referral care documented

Commendable Practices and Process Improvement Initiatives:

1 This installation was noted as the Deployment Health Assessment Program Model for 2009
2 There is consistent PHA documentation and coordinated PHA referrals with Primary Care
3. The Individual Medical Readiness data is up-to-date
4 Deployment medical records are well organized
5 A baseline neurocognitive testing plan is in place

Overall Recommendation:

1 Implement deployment health record peer review

Naval Operations Support Center, Norfolk, VA

Dates of Visit: December 10–11, 2009

Service and Component: U S Navy Reserves

Observations:

1. Some Pre-DHA form dates were inconsistent with AFHSC dates
2. Several PDHA form departure dates and arrival dates from theater differed from AFHSC dates
3. The PDHRA referral management program needs improvement
4. The rate of post-deployment sera completion was less than satisfactory

Commendable Practices and Process Improvement Initiatives:

1. The team observed a commendable DHA program process in this Reserve Component which tracks its personnel from reserve duty to active duty and later, the Department of Veterans Affairs
2. There was evidence of strong Command/Organizational support
3. There were personnel resources dedicated to the DHP.
4. The DHP records were well organized
5. The declination rate was low
6. There was a high completion rate of proactive DHA compliance monitoring

Overall Recommendations:

1. Continue baseline neurocognitive testing.
2. Increase the completion rate of post-deployment sera
3. Continue the Commander's Referral Management Plan (a Best Practice)

Joint Base, Andrews Naval Air Facility, Camp Springs, MD

Date of Visit: December 28, 2009

Service and Component: U S Marine Corps Reserves

Observations:

1 There was no paper-based or electronic evidence of the completion of the Pre-DHAs

2 There was no paper-based or electronic evidence of the completion of the PDHAs

3 For those Marines who had a completed PDHRA, the completion date was not within the policy compliance timeframe (that is, within 180 days of the return from deployment)

4 Administrative and medical support for Marine Reservists who require PDHRA completion was not available at the time of the visit

Commendable Practices and Process Improvement Initiatives:

1 There was evidence of strong Command support

2 The available records were well organized and there was evidence of referral information in the available records

3 There was evidence of consistent PHA documentation

Overall Recommendations:

1 Implement baseline neurocognitive testing

2 Complete the return-from-deployment sera

3 Offer PDHRA to Marine Reservists who have deployed, and require PDHRA completion within the policy timeline

88th Regional Support Command, Yellow Ribbon Reintegration Program Conference

Dates of Conference: July 24–26, 2009

Service and Component: U S Army Reserves

In addition to the visitations to the aforementioned military installations during 2009, representatives from the Office of the DASD(FHP&R) and from the Services' medical departments attended the Yellow Ribbon Reintegration Conference at the Hyatt Regency Chicago from July 24 to 26, 2009 to learn more about the program [13] The conference was hosted by the 88th Regional Support Command of the US Army Reserves

The Yellow Ribbon Reintegration Program was established by Public Law 110-181, §582, of the NDAA for fiscal year 2008 The legislation calls on the Secretary of Defense to establish a national combat Veteran reintegration program to provide National Guard and Reserve members and their families with sufficient information, services, referral, and proactive outreach opportunities throughout the entire deployment cycle The legislation requires that the Yellow Ribbon Program must include informational events and activities for members of the Reserve Components of the Armed Forces, their families, and community members to facilitate access to services supporting their health and well-being through the four phases of the deployment cycle (pre-deployment, deployment, demobilization, and return from deployment) Participation in the program is voluntary

The goals of the Yellow Ribbon Program are to (1) prepare individuals and families for mobilization, (2) sustain families during mobilization, and (3) reintegrate Service members with their families, communities, and employers upon return from deployment The program also provides information on current benefits and resources available to help overcome the challenges of reintegration

The Secretary of Defense recently captured the spirit of the program in these motivational words "In this time of war, our families deserve our support and thanks as well They are the power behind the power— husbands and wives, sons and daughters, brothers and sisters of our troops " [14]

[13] This conference is not included in Figures 1 and 2 because the representatives did not observe deployment health data as part of this activity It is included in this section of the report because of its relevance to the health care of Service members, deployed civilians, and their families

[14] *http //www yellowribbon mil/*

Analysis of the Armed Forces Health Surveillance Center's Reporting

In 2008, the Assistant Secretary of Defense for Health Affairs (ASD(HA)) and the Deputy Assistant Secretary of Defense (FHP&R) established the Armed Forces Health Surveillance Center (AFHSC). The AFHSC receives data feeds from the Army's Medical Protection System (MEDPROS), the Air Force's Preventive Health Assessment Individual Medal Readiness System (PIMR), the Marine Corps Medical Readiness Reporting System (MRRS), and the Navy Environmental Health Center (NEHC). The AFHSC also receives copies of the monthly Contingency Tracking System (CTS), a roster that is prepared by DMDC and includes information (provided by the Services) on all Service members who have deployed.

The AFHSC operates and maintains the DMSS, a repository of enterprise-wide data on diseases, medical events, personnel, and deployments. The AFHSC provides data and reports to the Services, the FHPQA program, and other supporting agencies for review. Additionally, the AFHSC prepares the Medical Surveillance Monthly Report (MSMR) and publishes it monthly.[15]

The following data is based on specific deployment criteria and should not to be compared with the total number of forms submitted by the Services. Figure 3 attempts to addresses the GAO's concerns outlined in the report title, "Defense Health Care Oversight of Military Services' Post-Deployment Health Reassessment Completion Rates Is Limited," September 4, 2008, (GAO Code 08-1025R). DoD's ability to provide these data is dependent on the Services' continued collaboration in supporting the ongoing efforts to resolve deployment data roster discrepancies and organizational alignment of reporting methodologies with departmental policy.

Many factors should be considered when reviewing these reports, such as deployment rotations, AFHSC reporting methodologies, Service policy changes throughout the reporting year, and multiple deployments within a calendar year. The following tables were developed to demonstrate how data may support compliance reporting. Time lags between DMDC and CTS roster reporting may account for some data discrepancies.

[15] The AFHSC makes the MSMR available online at http://www.afhsc.mil.

Figure 3: Defense Medical Surveillance System Report *2009*

ARMY DEPLOYMENT QA REPORT

	Deployment End Date	Component	Number Returned	Pre-DHA		PDHA		PDHRA		Post Deploy Serum		Referral on the PDHA		Medical Visit After Referral	
				Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
ARMY	01 JAN 2009 31 MAR 2009	Active	37 036	29 267	79 02	32 216	86 99	25 214	68 08	32 296	87 20	12 469	38 70	10 451	83 82
	01 JAN 2009 31 MAR 2009	Reserve	4 303	3 500	81 34	3 614	83 99	2 221	51 62	3 588	83 38	1 821	50 39	1 546	84 90
	01 JAN 2009 31 MAR 2009	Guard	5 426	4,458	82 16	4,536	83 60	3,470	63 95	4 528	83 45	1,880	41 45	1,614	85 85
	01 APR 2009 30 JUN 2009	Active	34 399	28 608	83 17	27 809	80 84	21 620	62 85	27 397	79 64	11887	42 75	9241	77 74
	01 APR 2009 30 JUN 2009	Reserve	3 656	2 932	80 20	2 499	68 35	1 751	47 89	2 454	67 12	1358	54 34	1202	88 51
	01 APR 2009 30 JUN 2009	Guard	7,407	6,473	87 39	6,030	81 41	4,866	65 69	6,024	81 33	3274	54 30	2635	80 48
	01 JUL 2009 30 SEP 2009	Active	35 574	28 809	80 98	29 809	83 79	18 910	53 16	29 141	81 92	12 518	41 99	10 566	84 41
	01 JUL 2009 30 SEP 2009	Reserve	4 516	3 707	82 09	3 515	77 83	1 975	43 73	3 482	77 10	1 697	48 28	1277	75.25
	01 JUL 2009 30 SEP 2009	Guard	17,339	15,213	87 74	16,134	93 05	10,178	58 70	15,876	91 56	7,108	44 96	5,801	81 61
	01 OCT 2009 31 DEC 2009	Active	43 016	37 659	87 55	35 813	83 26	6 617	15 38	35 355	82 19	15 276	42 65	11 830	77 44
	01 OCT 2009 31 DEC 2009	Reserve	3 684	2 957	80 27	2 781	75 49	581	15 77	2 653	72 01	1 435	51 60	1 081	75 33
	01 OCT 2009 31 DEC 2009	Guard	8,315	7,693	92 52	6,594	79 30	1,412	16 98	6,363	76 52	3,064	46 47	2,501	81 63

NAVY DEPLOYMENT QA REPORT

	Deployment End Date	Component	Number Returned	Pre-DHA		PDHA		PDHRA		Post Deploy Serum		Referral on the PDHA		Medical Visit After Referral	
				Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
NAVY	01 JAN 2009 31 MAR 2009	Active	10 639	1 697	15 95	2 742	25 77	2 221	20 88	4 265	40 09	744	27 13	614	82 53
	01 JAN 2009 31 MAR 2009	Reserve	1,044	359	34 39	560	53 64	432	41 38	715	68 49	200	35 71	190	95 00
	01 APR 2009 30 JUN 2009	Active	11 834	1 269	10 72	1 291	10 91	1 116	9 43	3 826	32 33	301	23 32	267	88 70
	01 APR 2009 30 JUN 2009	Reserve	1,285	484	37 67	308	23 97	475	36 96	872	67 86	106	34 42	99	93 40
	01 JUL 2009 30 SEP 2009	Active	15 062	2 182	14 49	1200	7 97	1668	11 07	4 357	28 93	251	20 92	227	90.44
	01 JUL 2009 30 SEP 2009	Reserve	2,191	601	27 43	431	19 67	503	22 96	1,521	69 42	114	26 45	109	95 61
	01 OCT 2009 31 DEC 2009	Active	11 381	2 184	19 19	2 217	19 48	370	3 25	3 843	33 77	444	20 03	353	79 50
	01 OCT 2009 31 DEC 2009	Reserve	738	297	40 24	473	64 09	121	16 40	526	71 27	149	31 50	139	93 29

AIR FORCE DEPLOYMENT QA REPORT

	Deployment End Date	Component	Number Returned	Pre-DHA		PDHA		PDHRA		Post Deploy Serum		Referral on the PDHA		Medical Visit After Referral	
				Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
AIR FORCE	01 JAN 2009 31 MAR 2009	Active	16 669	14 692	88 14	14 863	89 17	13 149	78 88	15 084	90 49	1356	9 12	1257	92 70
	01 JAN 2009 31 MAR 2009	Reserve	2 636	1 333	50 57	1 446	54 86	976	37 03	1 505	57 09	308	21 30	201	65 26
	01-JAN 2009 31 MAR 2009	Guard	3,283	2 264	68 96	2 380	72 49	1,750	53 30	2 293	69 84	287	12 06	179	62 37
	01 APR 2009 30 JUN 2009	Active	13 644	11 948	87 57	12 032	88 19	10 292	75 43	11 969	87 72	1210	10 06	1148	94 88
	01 APR 2009 30 JUN 2009	Reserve	2 603	1627	62 50	1689	64 89	958	36 73	1703	65 42	264	15 63	162	61 36
	01 APR 2009 30 JUN 2009	Guard	2,888	2 086	72 23	2,191	75 87	1772	61 36	1,819	62 98	227	10 36	143	63 00
	01 JUL 2009 30 SEP 2009	Active	15 489	13 775	88 93	13 664	88 22	11 412	73 68	13 763	88 86	1449	10 60	1390	95 93
	01 JUL 2009 30 SEP 2009	Reserve	2 311	1186	51 32	1186	51 32	689	29 81	1245	53 87	264	22 26	188	71 21
	01 JUL 2009 30 SEP 2009	Guard	4,141	2,745	66 29	2,931	70 78	2,263	54 65	2,693	65 03	323	11 02	181	56 04
	01 OCT 2009 31 DEC 2009	Active	14 739	13 247	89 88	12 709	86 23	4 288	29 09	11828	80 25	1441	11 34	1281	88 90
	01 OCT 2009 31 DEC 2009	Reserve	1073	575	53 59	542	50 51	115	10 72	419	39 05	111	20 48	72	64 86
	01 OCT 2009 31 DEC 2009	Guard	3,678	2,807	76 32	2 780	75 58	892	24 25	2,134	58 02	278	10 00	156	56 12

MARINE DEPLOYMENT QA REPORT

	Deployment End Date	Component	Number Returned	Pre-DHA		PDHA		PDHRA		Post Deploy Serum		Referral on the PDHA		Medical Visit After Referral	
				Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
MARINES	01 JAN 2009 31 MAR 2009	Active	10 511	4 997	47 54	5 853	55 68	4 460	42 43	7 942	75 56	1187	20 28	886	74 64
	01 JAN 2009 31 MAR 2009	Reserve	450	197	43 78	192	42 67	261	58 00	235	52 22	49	25 52	38	77 55
	01 APR 2009 30 JUN 2009	Active	19 852	7 709	40 89	2 579	13 63	7 115	37 74	6 267	33 24	434	16 89	363	83 64
	01 APR 2009 30 JUN 2009	Reserve	2,057	423	20 46	42	2 03	1,161	55 68	172	8 32	12	28 57	8	66 67
	01 JUL 2009 30 SEP 2009	Active	8 819	4 696	53 25	2 976	33 75	3 041	34 48	5 817	65 96	603	20 26	498	82 59
	01 JUL 2009 30-SEP 2009	Reserve	1572	936	59 54	388	24 68	269	17 11	675	42 94	52	13 40	35	67 31
	01 OCT 2009 31 DEC 2009	Active	9 860	5 139	52 12	5 387	54 63	1564	15 86	7 076	71 76	1087	20 18	629	57 87
	01 OCT 2009 31 DEC 2009	Reserve	699	393	56 22	377	53 93	11	1 57	253	36 19	67	17 77	35	52 24

Prepared by AFHSC, as of March 10, 2010 (Data Source DMSS)

NOTES

PDHAs received within the period from 60 days prior to the end of the deployment to 60 days after

PDHRAs received in the period from 60 to 210 days from the end of the deployment

Serum drawn in the period from 30 days prior to the end of the deployment to 60 days after the end of the deployment

Inpatient or outpatient visit within 180 days of PDHA date

Military Services' FHPQA Program Report Summary

The office of the DASD (FHP&R) routinely requests quarterly reports on the Services' DHQA programs Each report includes the status of the force health protection key metrics and results, a summary of DHQA activities from various offices, problems identified, and improvements made for the quarter requested These reports are compiled by FHP&R and sent to the Surgeons General of the Army, Navy, and Air Force and the Medical Officer of the Marine Corps

The Services continue to provide steadfast support by conducting DHQA efforts that are tailored in scope, focus, and methodology to their organizational structure, environment, and mission What follows are summary reports based on the Services' 2009 quarterly DHQA reports

United States Army

The Surgeon General of the Army assigned the United States Army Public Health Command[16] (Provisional) (USAPHC), formerly the United States Army Center for Health Promotion and Preventive Medicine (USACHPPM), with the responsibility for a DHQA program The Army DHQA program provides onsite reviews and a system for accountability and process improvement as well as quality assurance The Department of the Army Personnel Policy Guidance (Chapter 7), DoDI 6490 03, "Deployment Health," August 11, 2006, and DoDI 6200 05, "Force Health Protection Quality Assurance Program," February 16, 2007, serve as references for guidance, measures, and reporting requirements related to deployment health activities

[16] A reorganization of the Army Medical Command, which became provisionally effective in October 2009, aligned the regional medical commands (RMCs) with TRICARE regions while improving readiness and support for the Army Force Generation cycle of deployments and resets In a separate reorganization initiative, the public health functions of the Veterinary Command (VETCOM) and the U S Army Center for Health Promotion and Preventive Medicine (USACHPPM) combined into the new U S Army Public Health Command (USAPHC) It shall be referred to hereinafter throughout this document as the USAPHC For further details, see the September 2009 issue of *The Mercury* at http //www armymedicine army mil/news/mercury/archive cfm?m=9&y=2009

Figure 4: 2009 U.S. Army Deployment Health Data

Deployment Dates Initial Report (By Quarters and Component)	Number Returned	% of Pre DHA	% of PDHA	% of PDHRA	% Post Deployment Sera	% Referrals on PDHA	% Post Deployment Medical Visit
1st Quarter (01/01/2009 03/31/2009)							
Active Duty	36 995	79 00%	87 00%	58 00%	87 00%	39 00%	84 00%
Reserve	4 301	81 00%	84 00%	28 00%	83 00%	50 00%	86 00%
Guard	5 415	82 00%	84 00%	50 00%	84 00%	41 00%	81 00%
2nd Quarter (04/01/2009 06/30/2009)							
Active Duty	34 339	83 00%	81 00%	35 00%	80 00%	43 00%	77 00%
Reserve	3 662	80 00%	68 00%	24 00%	67 00%	54 00%	88 00%
Guard	7 372	87 00%	82 00%	38 00%	82 00%	54 00%	79 00%
3rd Quarter (07/01/2009 09/30/2009)							
Active Duty	34 635	81 00%	85 00%	26 00%	83 00%	42 00%	84 00%
Reserve	4 474	82 00%	77 00%	20 00%	76 00%	48 00%	75 00%
Guard	17 282	88 00%	93 00%	31 00%	92 00%	44 00%	82 00%
4th Quarter (10/01/2009 12/31/2009)							
Active Duty	43 016	88 00%	83 00%	15 00%	82 00%	43 00%	77 00%
Reserve	3 684	80 00%	75 00%	16 00%	72 00%	52 00%	75 00%
Guard	8 315	93 00%	79 00%	17 00%	77 00%	46 00%	82 00%

Source DMSS (AFHSC) - data presented one quarter in arrears

NOTES

Pre-DHA completed within the 90 days prior to 30 days after the start of deployment

PDHA completed within the period from 60 days prior to the end of the deployment to 60 days after

PDHRA completed in the period from 60-210 days from the end of the deployment

Serum drawn in the period from 30 days prior to the end of the deployment to 60 days after the end

Inpatient or outpatient visit within 180 days of PDHA date

The Army reported that the Armed Forces Health Surveillance Center provides information on selected Department of Defense Force Health Protection Quality Assurance elements Each quarter the Army provides data on the number of its members returned from deployment, the percentage of pre- and post-deployment health assessments, reassessments, post-deployment serum samples, and post-deployment referrals indicated and completed Included each quarter are initial data from the most current past quarter, updated data from the second most current past quarter, and final data from the third most current past quarter The lag between the Defense Tracking System and the Defense Medical Surveillance System (DMSS) means that the data are presented one quarter in arrears In order to provide a complete set of data for CY 2009 for this report, the statistics presented in Figure 4 are extrapolated from the "initial data" section of the four quarterly reports presented by the Army spanning the period from January 1–December 31, 2009

The U S Army made a significant effort during CY 2009 to improve its FHPQA program In addition to the visits conducted jointly with representation from the Office of the DASD(FHP&R), described in the "FHPQA Visits to Military Installations" section of this report, the US Army conducted additional onsite visitations and evaluations as described below

- The Office of the Surgeon General (OTSG)/MEDCOM PDHRA team conducted onsite visits to sixteen European Regional Medical Command (ERMC) sites and two Commands (Africa Command (AFRICOM) and United States Army Europe (USAEUR) in October 2009 Sites visited included Vilseck, Grafenwoehr, Illesheim, Katterbach, Schweinfurt, Mannheim, Stuttgart, Kleber, Baumholder, Wiesbaden, and Bamberg Health Clinics, the 173rd and the Vilseck Consolidated Aid Stations, Garrison S3, Heidelberg Medical Activity (MEDDAC), ERMC force health protection, the USAREUR Deputy Surgeon, the PDHRA Section at Landstuhl Regional Medical Center (LRMC), and the AFRICOM Command Surgeon The program team provided sites with a PDHRA toolkit, which included PDHRA policies, Internet resources, educational material for health care providers and Soldiers, strategic communications material, PDHRA Soldier Satisfaction Surveys, and PDHRA MEDPROS Leader's Guides The team trained 55 staff members on policies and program management, provided information on the PDHRA annual conference, and shared working practices

- The U S Army FHPQA Site Inspection Visit (SIV) to Fort Drum revealed a program capable of screening soldiers and providing coordinated care within the required Army standards Best practices noted include (1) Cross-trained staff to maximize efficiency during all SRPC processing, (2) Behavioral Health (BH) screening of all soldiers during the PDHRA, and (3) Frequent engagement with units to support compliance

- The team visited the Fort Meade PDHRA program at Kimbrough Ambulatory Care Center (KACC) and observed that it had effective procedures for completing, monitoring, and reporting soldier PDHRA with opportunities for in and out-processing and referral tracking

- The SIV to the Fort Bragg PDHRA Program revealed a program capable of screening soldiers and providing coordinated care within the required Army standards The SRPC provided PDHRA screenings for scheduled unit events and the Medical One-Stop supported individual appointments and walk-ins An overview of the PDHRA program was incorporated into unit leaders' and providers' training and referral tracking included priority and expedited appointments

- The SIV to Fort Eustis revealed a cooperative environment between the PDHRA program and the installation leadership Compliance tracking for some units at Fort Eustis was not occurring at the time of the SIV Compliance was reported to the Commanding General by the PDHRA Coordinator at garrison meetings The coordinator assisted unit commanders in scheduling PDHRAs There was also a buddy system, where soldiers with an immediate BH need were accompanied by a buddy from their unit to the BH department until the soldier is seen by a BH provider.

There has been consistent improvement over time in the percentage of pre- and post-deployment assessments, post-deployment serum samples, and post-deployment referrals indicated and completed, however, these data indicate that there is still room for improvement

United States Navy

The Navy and Marine Corps Public Health Center (NMCPHC) reported that it calculated compliance with post-deployment assessment completions and medical referral follow-up within the specified timeframes. With the exemptions from reporting for personnel deployed and with less than 30 days ashore in theater, the true denominator used for calculating compliance cannot be readily calculated. Current Navy deployment rosters do not account for the exemption, thus overestimating the number of required deployment health assessment surveys.

The Navy reported that the Office of the Chief of Naval Operations (OPNAV N135) developed a new metric for compliance based on the assumption that an individual who completed a Pre-DHA will need to complete a PDHA. The Navy reported that the Bureau of Medicine and Surgery, NMCPHC, and OPNAV N135 continue to work on the development of a reliable metric that reflects the level of compliance with the DoDI 6490.03, "Deployment Health," August 11, 2006.

Figure 5 is a summary of compliance for Navy Active Duty and Reserve[17] component personnel who completed a PDHA based on the date they return from deployment. With the imprecision of deployment/return from deployment dates, +/-30 days was added to each deadline for the PDHA, the post-deployment health reassessment, and the pre-deployment health assessment. The Pre-DHA was used as a window that was 90 days before and 30 days after the deployment start date on the matching PDHA. Serum sample counts were obtained by matching the eligible surveys to the DoD Serum Repository's inventory database referred to as the DMSS operated by the AFHSC.

The Navy consistently improved the formatting and content of the quality assurance reporting throughout 2009. As a result, statistics for several metrics, particularly for the Reserve component, were more completely and accurately reported in the second, third, and fourth quarters of the year, as shown in Figure 5.

[17] Reserve component medical visits are not routinely captured by the MHS, as a result, some Reserve statistics in Figure 5 are either unavailable or cannot be verified. BUMED is investigating alternate sources of medical referral compliance.

Figure 5: 2009 U S. Navy Deployment Health Data

	Component	Metric	First Quarter 01/01/2009 03/31/2009		Second Quarter 04/01/2009 06/30/2009		Third Quarter 07/01/2009 09/30/2009		Fourth Quarter 10/01/2009 12/31/2009	
			Number	%	Number	%	Number	%	Number	%
1	Active Duty	Individuals with PDHAs returned in quarter	1 741		1,629		3,438		3 144	
	Reserves		–		406		1,143		516	
2	Active Duty	– with at least 1 referral	52	3 60%	367	22 50%	726	21 10%	584	18 58%
	Reserves		–	–	149	36 70%	334	29 20%	169	32 75%
3	Active Duty	– with a matching medical visit	48	77 40%	306	83 40%	598	82 40%	417	71 40%
	Reserves		–	–	139	93 30%	322	96 40%	152	89 94%
4	Active Duty	– with a mental health referral	–	–	49	13 40%	95	13 10%	59	2 19%
	Reserves		–	–	17	11 40%	16	4 80%	22	4 26%
5	Active Duty	– with a matching mental health visit	–	–	12	24 50%	81	85 30%	54	78 26%
	Reserves		–	–	11	64 70%	15	93 80%	21	95 45%
6	Active Duty	Number of serum samples in quarter	920	52 80%			–	–	1 094	34 80%
	Reserves		–	–	–	–	–	–	298	57 75%
7	Active Duty	Number of individuals returned 2 quarters prior	–		2,193		2,792		2,800	
	Reserves			–	390		483		733	
8	Active Duty	– Number of PDHRAs	882	–	869	39 60%	704	25 20%	639	22 81%
	Reserves		–	–	123	31 50%	177	36 60%	215	29 33%
9	Active Duty	– With at least 1 referral	72	8 20%	118	13 60%	186	26 40%	93	14 55%
	Reserves		–	–	19	15 40%	40	22 60%	41	19 07%
10	Active Duty	– With matching medical visit	72	8 20%	105	89 00%	161	86 60%	87	93 55%
	Reserves		–	–			7	17 50%	7	17 01%
11	Active Duty	With mental health referral	–	–	33	3 80%	51	7 20%	30	4 69%
	Reserves		–	–	2	1 60%	10	5 60%	10	4 65%
12	Active Duty	– With matching mental health visit	–	–	18	54 50%	46	90 20%	30	100 00%
	Reserves		–	–	–	–	3	30 00%	1	10 00%

Sources NMCPHC (Quarters 1 – 3) and AFHSC (Quarter 4)

NOTES

Line 1 Number of PDHAs with a matching Pre-DHA with an end of deployment date within the respective quarter

Line 2 Number of individuals with at least one medical referral on the PDHA

Line 3 Number of individuals with a medical referral that also had a matching medical visit in the Military Health System (MHS) ambulatory data system

Line 4 Number of individuals with at least one mental health referral

Line 5 Number of individuals with at least one mental health referral and a matching mental health visit in the MHS, not including mental health referrals to sources outside of the MHS

Line 6 Number of serum samples with matching Pre-DHA and PDHA with an end-deployment date within the respective quarter

Line 7 Number of individuals with matching Pre-DHA and PDHA with an end-deployment date within the respective quarter

Line 8 Number of qualified PDHRAs from Line 6 that were completed within 60-210 days of the end of deployment date

Line 9 Number of individuals with at least one medical referral on the PDHRA

Line 10 Number of individuals with a medical referral who also had a matching medical visit in the MHS ambulatory data system

Line 11 Number of individuals with at least one mental health referral on the PDHRA

Line 12 Number of individuals with at least one mental health referral and a matching mental health visit in the MHS, not including mental health referrals to sources outside of the MHS

United States Air Force

The U S Air Force reported its DHQA statistics quarterly for 2009 Figure 6 summarizes completion rates of key pre- and post-deployment requirements for all U S Air Force Service members identified in a deployment status for a duration of 30 or more during 2009 The data sources for this report include the Air Force Medical Service's Preventive Health Assessment and the Individual Medical Readiness (PIMR) application for numerator data and an unclassified query of the Air Force Military Personnel Data System's Deliberate Crisis Action Planning and Execution Segment (DCAPES) provided by the DMDC as the source of the denominators There have been no reported quality issues with the denominator data received from DMDC for 2009

During the September 2009 U S Air Force quality assurance review, it was noted that for Active Duty members who filled out the PDHRA, but did not respond positively to certain questions, the questionnaire was electronically closed out and forwarded to the central repository without a provider's review or signature[18]

[18] The U S Air Force Surgeon General requested and was granted a temporary exemption to policy, PDHRA, to waive provider's review and signature on DD Form 2900 for Service members who indicated no post-deployment health concerns

Figure 6: 2009 U.S. Air Force Deployment Health Data

	First Quarter 01/01/2009 03/31/2009	Second Quarter 04/01/2009 06/30/2009	Third Quarter 07/01/2009 09/30/2009	Fourth Quarter 10/01/2009 12/31/2009
Pre Deployment Metrics				
Total Number of Deployers	18 679	17 670	19 176	14 736
Number of Completed Pre-DHAs	15 584	14 528	15 948	12 081
% of Completed Pre-DHAs	83 00%	82 00%	83 00%	82 00%
Number of Completed Pre Deployment Serum	14 604	15 031	15 891	12 399
% of Completed Pre-Deployment Serum	78 00%	85 00%	83 00%	84 00%
Post Deployment Metrics				
Total Number of Deployers	24 097	18 543	21 246	19 999
Number of Completed PDHAs	20 789	15 969	15 969	16 881
% of Completed PDHAs	86 00%	86 00%	87 00%	84 00%
Number Completed Ret d from Deployment Serum	16 848	13 056	15 072	15 072
% of Completed Ret d from Deployment Serum	70 00%	70 00%	71 00%	71 00%
Number of Individuals Requiring Referrals	2 157	1 663	2 103	2 103
% of Individuals Requiring Referrals	10 00%	10 00%	11 00%	11 00%
Number of Completed Referrals	707	546	603	603
% of Completed Referrals*	33 00%	33 00%	29 00%	29 00%
Post Deployment Reassessment Metrics (04/01/2004 to Present)				
Number of Members Who Have Returned Since 03/01/2004	75 552	77 703		
Number of Members Who have Returned Since 03 01 2004 & Completed PDHRA	61 281	63 938		
% of Members Who Have Returned Since 03 01 2004 & Completed PDHRA	81 00%	82 00%		
Post Deployment Reassessment Metrics (03/01/2005 to Present)				
Number of Members Who Have Returned Since 10/01/2005			76 602	71 948
Number of Members Who Have Returned Since 10/01/2005 & Completed PDHRA			63 789	61 789
% of Members Who Have Returned Since 10/01 2005 & Completed PDHRA			83 00%	86 00%

Source DCAPES

NOTES

* Denominator is number of completed PDHAs

+ Denominator is number of individuals requiring referrals

United States Marine Corps

The Marine Corps reported that the data provided are from the AFHSC Data on the number of Marines who returned from deployment, the percentage of pre- and post-deployment referrals indicated and completed are provided in Figure 7

The Headquarters Marine Corps (Health Services) reported that further investigation regarding the decrease in reporting/compliance continues Initiatives planned will determine the presence of potential data flow processing issues with Navy, Marine Corps Public Health Center, and any need to investigate unit level compliance

Figure 7: 2009 U.S. Marine Corps Deployment Health Data

Deployment End Date		Component	Number Returned	Pre DHA		PDHA		PDHRA		Post Deployment Serum		Referral on PDHA		Medical Visit After Referral	
				Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
01/01/2009	03/31/2009	Active	10 511	4 997	47 54	5 853	55 68	4 460	42 43	7 942	75 56	1 187	20 28	886	74 64
01/01/2009	03/31/2009	Reserves	450	197	43 78	192	42 67	261	58 00	235	52 22	49	25 52	38	77 55
04/01/2009	06/30/2009	Active	18 852	7 709	40 89	2 570	13 63	7 115	37 74	6 267	33 24	434	16 89	363	83 64
04/01/2009	06/30/2009	Reserves	2 067	423	20 46	42	2 03	1 151	55 68	172	8 32	12	28 57	8	66 67
07/01/2009	09/30/2009	Active	8 819	4 696	53 25	2 976	33 75	3 041	34 48	5 817	65 96	603	20 26	498	82 59
07/01/2009	09/30/2009	Reserves	1 572	936	59 54	388	24 68	269	17 11	675	42 94	52	13 40	35	67 31
10/01/2009	12/31/2009	Active	9 860	5 139	52 12	5 387	54 63	1 564	15 86	7 076	71 76	1 087	20 18	629	57 87
10/01/2009	12/31/2009	Reserves	699	393	56 22	377	53 93	11	1 57	253	36 19	67	17 77	35	52 24

Source Defense Medical Surveillance System (DMSS)

NOTES
PDHA completed within the period from 60 days prior to the end of the deployment to 60 days after return from deployment
PDHRA completed in the period from 60-120 days from the end of the deployment
Serum drawn in the period from 30 days prior to the end of the deployment to 60 days after the end of deployment
Inpatient or outpatient visit within 180 days of the PDHA date

Armed Forces Health Surveillance Center Report

During CY 2009, the DoD periodically reviewed the questions and associated data collection and analysis processes to ensure that the questionnaires were meeting the DoD force health protection goal of maintaining a fit and healthy force The AFHSC provided deployment health assessment data monthly to the FHPQA program The following article, "Update Deployment Health Assessment, US Armed Forces, December 2009," was published by the AFHSC in the *Medical Surveillance Monthly Report (MSMR),* Volume 17, Number 01, January 2010 It provides the total number of submitted deployment health assessment and reassessment forms and Service members' self-reported concerns Unlike compliance tracking, this reporting includes all forms that are received The charts and analysis include all reports received from January to December 2009

Update Deployment Health Assessments, US Armed Forces, December 2009

Since January 2003, peaks and troughs in the numbers of pre- and post-deployment health assessment forms transmitted to the AFHSC generally correspond to times of departure and return of large numbers of deployers Since April 2006, numbers of PDHRAs transmitted per month have ranged from 17,000 to 43,000 (see Figures 8 and 10)

During the past 12 months, the proportions of returned deployers who rated their health as "fair" or "poor" were 8-11% on PDHA questionnaires and 10-14% on PDHRA questionnaires (Figure 9)

In general, on post-deployment assessments and reassessments, deployers in the Army and in Reserve components were more likely than their respective counterparts to report health and exposure-related concerns (Figures 9 and 11) Both Active and Reserve component members were more likely to report exposure concerns three to six months after return from deployment (Figure 12)

At the time of return from deployment, soldiers serving in the active component were the most likely of all deployers to receive mental health referrals, however, three to six months after returning, Active Duty Soldiers were less likely than Army and Marine Corps Reservists to receive mental health referrals (Figure 11)

Finally, during the past three years, Reserve Component members have been more likely than active duty personnel to report "exposure concerns" on PDHAs and PDHRAs (Figure 12)

Figure 8: Deployment-related health assessment forms, by month, US Armed Forces, January - December 2009

	Pre-DHA		PDHA		PDHRA	
	No	%	No	%	No	%
Total	**462,801**	**100**	**378,759**	**100**	**311,451**	**100**
2009						
February	36 907	8 0	28 818	7 6	28 563	9 2
March	40 649	8 8	26 557	7 0	32 201	10 3
April	43 505	9 4	20 015	5 3	31 357	10 1
May	36 265	7 8	28 310	7 5	25 032	8 0
June	44 405	9 6	28 761	7 6	26,936	8 6
July	39 870	8 6	28 701	7 6	22 647	7 3
August	38 977	8 4	46 686	12 3	21 668	7 0
September	30 464	6 6	39,368	10 4	26 144	8 4
October	36 339	7 9	32 225	8 5	23 933	7 7
November	32 095	6 9	32 577	8 6	20 390	6 5
December	30 212	6 5	35 745	9 4	28 654	9 2
2010						
January	53 113	11 5	30 996	8 2	23 926	7 7

0

Figure 9: Proportion of deployment health assessment forms with self-assessed health status as "fair" or "poor," US Armed Forces, January - September 2009

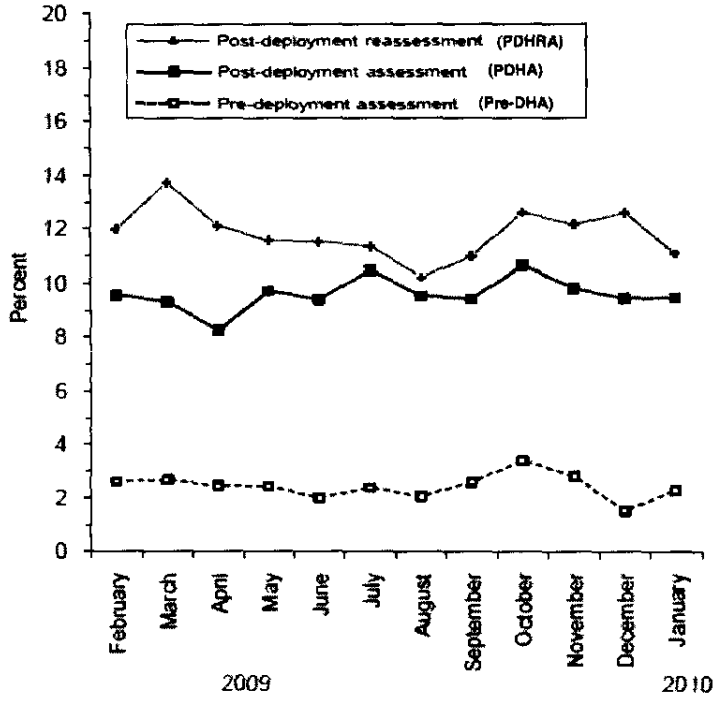


Figure 10: Total deployment health assessment and reassessment forms, by month, US Armed Forces, January 2003 - December 2009

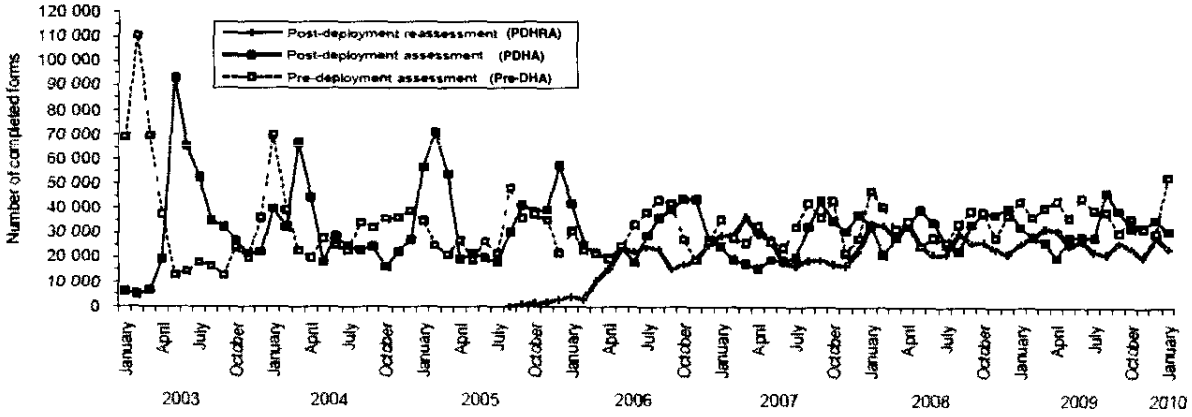


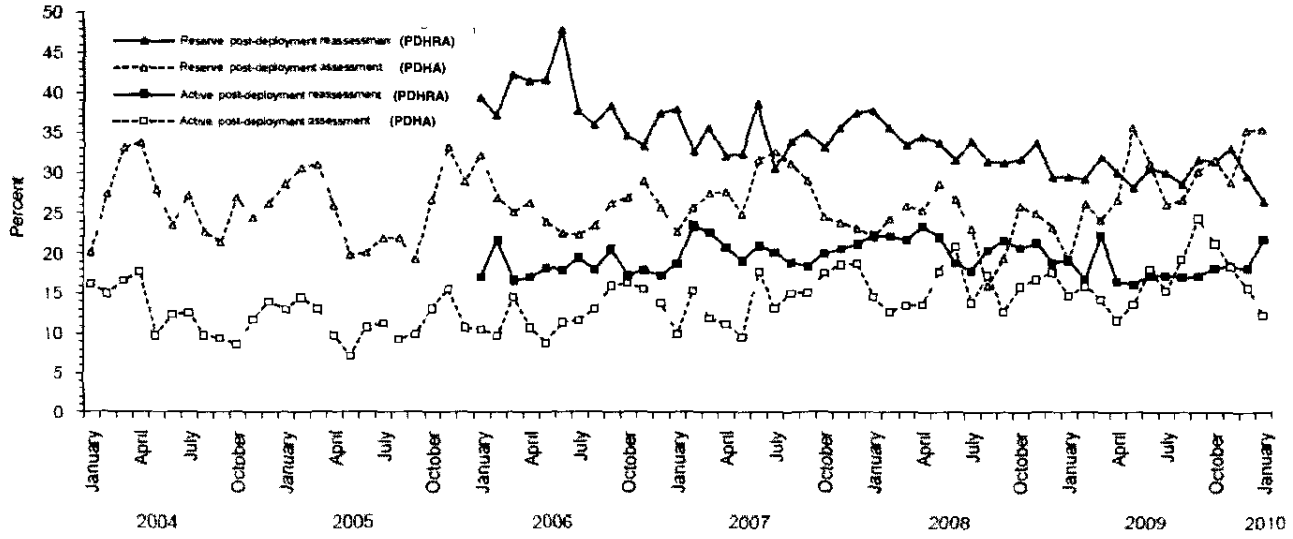
Figure 11: Percentage of Service members who endorsed selected questions/received referrals on health assessment forms, US Armed Forces, January - December 2009

Active component	Pre-DHA	PDHA	PDHRA	Pre-DHA	PDHA	PDHRA	Pre-DHA	PDHA	PDHRA	Pre-DHA	PDHA	PDHRA	Pre-DHA	PDHA	PDHRA
	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=
	153,383	133,104	120 623	19 890	10 735	14 408	59 863	52,477	51,912	34 484	22 598	36,621	287 620	218 914	223,564
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
General health "fair" or "poor"	3 9	10 6	14 7	1 3	4 7	5 9	0 5	3 5	4 2	1 7	6 9	9 4	2 7	8 2	10 8
Health concerns not wound or injury	21 3	26 1	24 2	3 6	12 6	13 5	1 3	5 7	10 5	3 1	12 1	17 2	13 2	19 1	19 2
Health worse now than before deployed	na	23 0	26 1	na	12 7	13 0	na	8 4	8 6	na	14 6	18 1	na	18 2	19 9
Exposure concerns	na	16 1	18 9	na	19 7	18 5	na	11 5	14 7	na	15 9	20 6	na	16 4	18 2
PTSD symptoms (2 or more)	na	9 4	12 3	na	4 5	6 3	na	2 3	2 3	na	5 0	8 2	na	7 0	8 9
Depression symptoms (any)	na	31 3	32 3	na	20 9	22 7	na	13 0	13 8	na	25 6	29 5	na	25 8	26 9
Referral indicated by provider (any)	5 0	34 1	21 6	5 3	21 2	15 9	1 7	10 7	6 7	3 9	19 1	25 7	4 1	26 3	18 4
Mental health referral indicated*	1 0	7 0	7 4	0 7	3 3	5 8	0 5	1 3	1 8	0 3	1 8	4 9	0 8	4 9	5 6
Medical visit following referral*	95 5	99 6	98 4	92 4	86 3	90 6	81 0	96 7	98 5	62 1	76 5	90 7	90 8	97 1	96 2

Reserve component	Pre-DHA	PDHA	PDHRA	Pre-DHA	PDHA	PDHRA	Pre-DHA	PDHA	PDHRA	Pre-DHA	PDHA	PDHRA	Pre-DHA	PDHA	PDHRA
	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=	n=
	85 966	66,762	55 632	5 989	2 730	5 118	16 035	14 858	16 957	4 741	3 914	6 359	112 731	88,264	84 066
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
General health "fair" or "poor"	1 5	12 0	17 3	0 6	9 9	8 2	0 3	5 1	4 7	1 1	7 5	10 7	1 3	10 5	13 7
Health concerns not wound or injury	16 2	34 6	43 7	1 5	35 9	30 3	0 6	8 7	14 7	3 2	21 8	35 5	12 7	29 7	36 4
Health worse now than before deployed	na	26 9	32 8	na	22 3	20 3	na	13 0	11 0	na	19 3	26 5	na	24 1	27 2
Exposure concerns	na	31 7	32 0	na	36 2	32 8	na	21 2	22 5	na	14 7	30 8	na	29 3	30 1
PTSD symptoms (2 or more)	na	8 7	19 4	na	6 0	10 7	na	2 2	3 0	na	3 1	14 5	na	7 3	15 2
Depression symptoms (any)	na	31 6	35 3	na	26 7	24 2	na	14 0	13 5	na	28 5	27 6	na	28 3	29 6
Referral indicated by provider (any)	3 6	36 6	34 1	3 2	30 1	18 0	0 5	13 5	5 7	3 4	26 7	26 9	3 1	32 1	26 9
Mental health referral indicated*	0 4	4 7	12 7	0 2	3 5	4 8	0 0	0 8	0 8	0 3	1 8	8 5	0 3	3 9	9 5
Medical visit following referral*	95 2	98 0	37 3	91 8	96 0	44 5	53 8	63 7	42 1	49 3	62 0	28 8	91 9	94 0	37 2

*Includes behavioral health combat stress and substance abuse referrals
*Record of inpatient or outpatient visit within 6 months after referral

Figure 12: Proportion of Service members who endorsed exposure concerns on post-deployment health assessments, US Armed Forces, January 2004 - December 2009



Source Medical Surveillance Monthly Report, December 2009

Deployment Occupational and Environmental Health Surveillance: 2009

The purpose of the DoD's Deployment Occupational and Environmental Health Surveillance (DOEHS) program is to identify, assess, document, and minimize the health impacts of occupational and environmental health (OEH) hazards to which our military forces (active duty, Guard, Reserve, and civilian) may have been exposed while deployed in support of U S military operations

In 2009 the DoD made considerable progress on three separate yet interrelated initiatives to improve the quality of the DOEHS program The first initiative established standardized procedures for accomplishing Occupational and Environmental Health Site Assessments (OEHSAs), in accordance with DoDI 6490 03, "Deployment Health," by which potential OEH hazards at deployed base camps are identified, assessed, and prioritized for future monitoring These "OEHSAs" now serve as the foundation of our DOEHS program and are a key metric for evaluating program execution

As shown in Figures 13 and 14, by the end of 2009, 100 percent of these OEHSAs were completed for our contingency operating bases (COBs) and contingency operating sites (COSs) in Iraq In 2010, in recognition of our shifting operations, this metric will also be applied to Afghanistan

Figure 13: Percentage of Operation Iraqi Freedom Contingency Bases and Sites with completed OEHSA Stage I Surveys

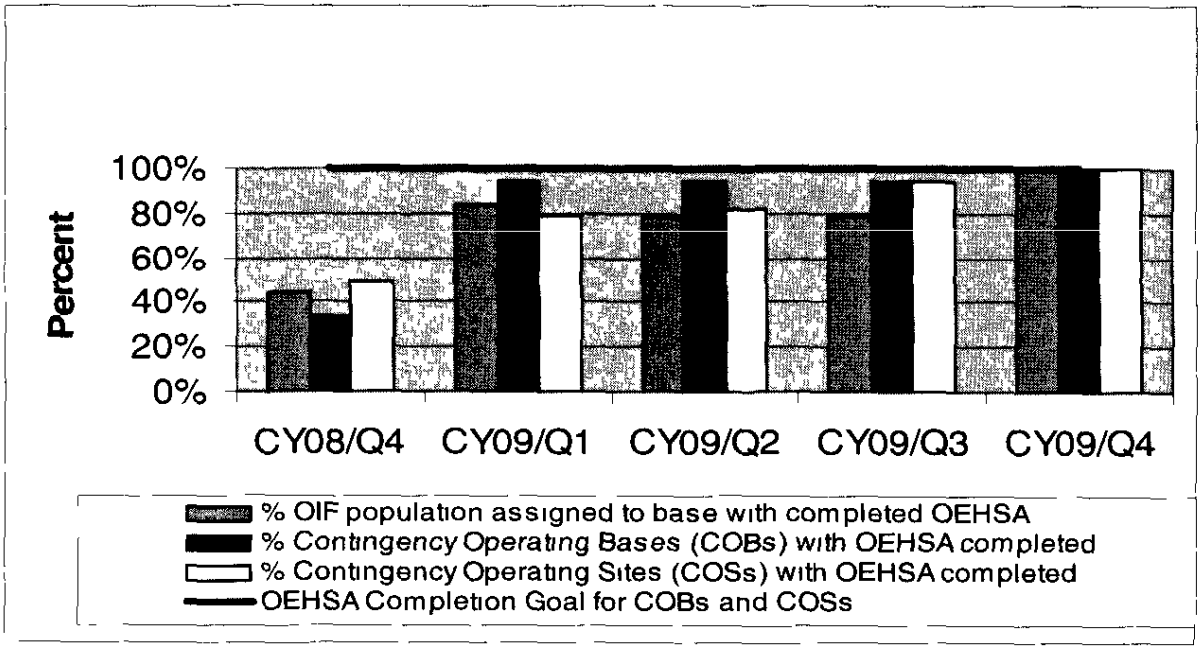


Figure 14: Number of OIF Contingency Bases and Sites with completed OEHSA Stage I Surveys

Metric	CY08/Q4	CY09/Q1	CY09/Q2	CY09/Q3	CY09/Q4
OEHSA Completion - COBs	6/18	17/18	17/18	17/18	18/18
OEHSA Completion - COSs	21/43	34/43	40/49	46/49	49/49

The second initiative, the Periodic Occupational and Environmental Monitoring Summary (POEMS), has been more recently formalized and is standardizing the process by which the overall population exposure characterization and associated short- and long-term health risks for each base camp are determined and documented The intent is to develop POEMSs for all major deployment locations, routinely review new sample data in order to update the POEMSs, and then make the POEMSs electronically available to DoD personnel (including active duty, retired, and separated personnel), their medical providers, and Veterans Affairs claims adjudicators in order to better inform the medical care and disability benefits determination processes for Service members and veterans with exposure-related health concerns In 2009, DoD began developing POEMS for several large and high-priority base camps in the USCENTCOM Area of Responsibility (AOR), and several more are expected to be published in 2010

The third initiative, increased environmental sampling and analysis to identify and quantify possible health threats (for example, burn pit smoke) affecting deployed DoD personnel, grew out of heightened awareness, emphasis, and action on the part of DoD force health protection professionals in the field

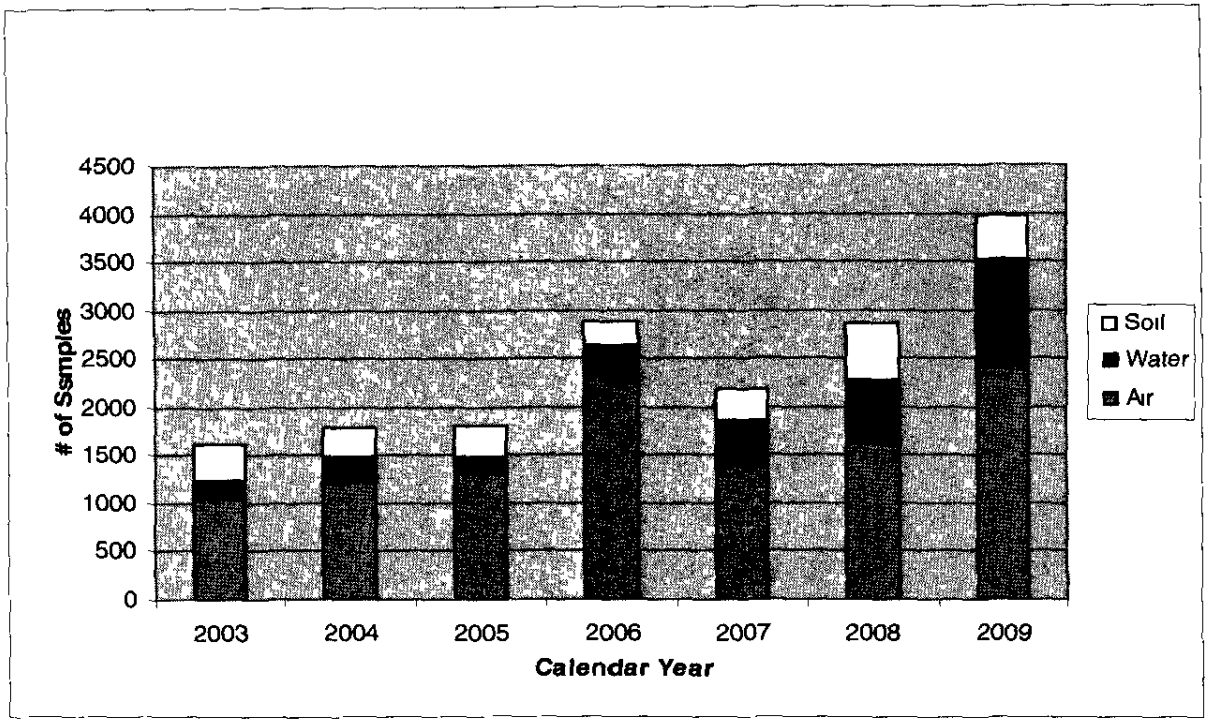
As shown in Figure 15, during 2009 nearly 4,000 samples were analyzed and reported by the laboratory of the USAPHC,[19] formerly the USACHPPM The USAPHC laboratory analyzes the bulk of the samples coming from the USCENTCOM AOR This number reflects a significant increase of nearly 38 percent from our previous highs in 2006 and 2008 when slightly less than 3,000 samples were analyzed and reported The annual total included 2,426 air samples, 1,091 water samples, and 453 soil samples, bringing the total number of samples analyzed and reported by USAPHC from January 1, 2003 through December 31, 2009 to more than 17,000

Due to ongoing military operations in the USCENTCOM AOR, the vast majority of these environmental sampling efforts occurred in Iraq, Afghanistan, and Kuwait (Figure 16) Further analysis of the data revealed that as military operations began shifting from Iraq to Afghanistan, environmental sampling efforts did as well, with a greater than 90 percent increase in sampling in Afghanistan when compared with 2008

[19] As noted previously, VETCOM and the USACHPPM were provisionally combined into the USAPHC in October 2009 The laboratory work described was conducted over time by the USAPHC (and, prior to October 2009, by the USACHPPM)

levels. Sampling in Iraq also increased nearly 20 percent despite the shift in operations – and many of the resources to conduct the sampling—from Iraq to Afghanistan

Figure 15: Number of environmental samples analyzed for USCENTCOM AOR (by sample media)

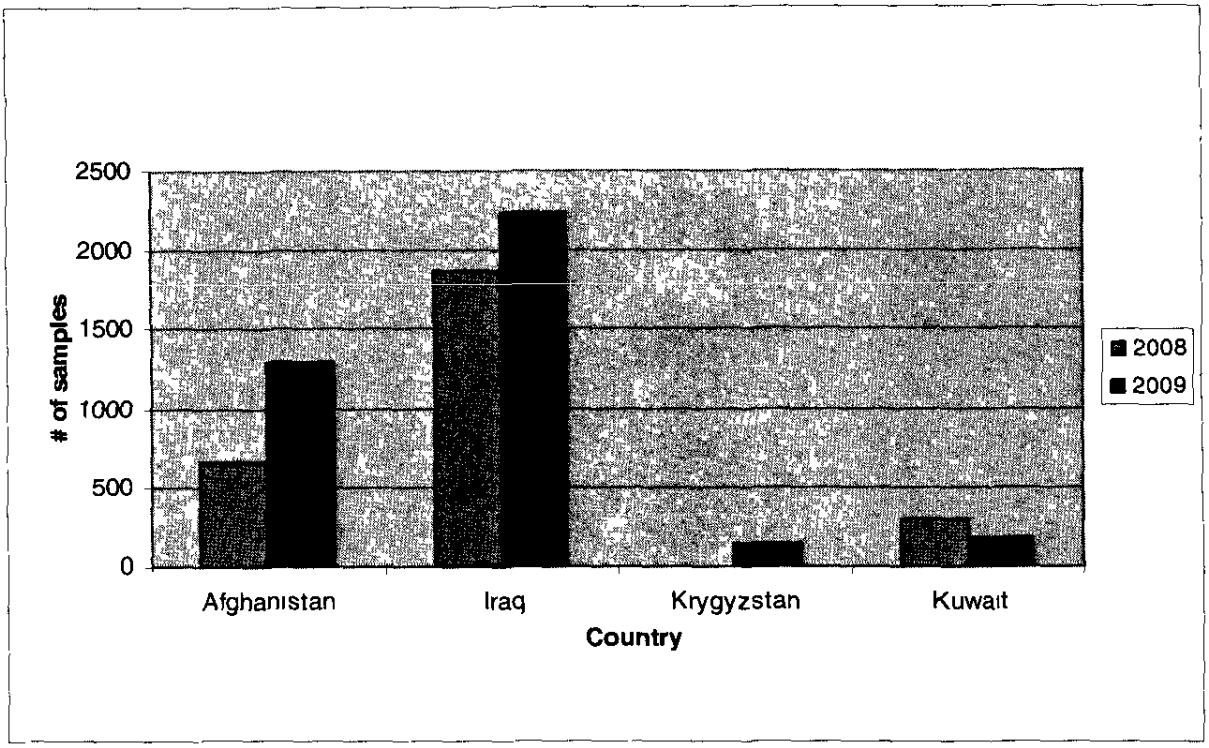


In support of the increased sampling and analysis performed by U S military force health protection professionals, USAPHC completed nearly 900 OEH sample assessments of potential exposure hazards or recognized hazard sources based on the environmental sampling performed While these assessments themselves are limited in time and location, and are thus not intended to specifically estimate the risk from long-term exposures, they are used for screening purposes to identify potential new hazard sources that may need additional assessment No new sources of potential long-term health risk to individuals were identified In order to specifically characterize and estimate the degree of potential long-term health risk from all identified hazards, the sample data from all individual OEH sample assessments for a specific deployment location will be incorporated into the POEMS for that deployment location

The sampling and analysis data and health risk assessments can be linked with the daily location data of Service members archived at the Department's DMDC While ambient environment monitoring data does not specifically represent unique individual exposures, having personnel location data available enables more accurate identification of individuals who could be included in location-specific exposure groups Compared with the extremely limited ability to identify individuals at specific deployment locations prior to 2005, this data represents a major milestone as the Department moves toward the

development of individual longitudinal exposure records and a significant improvement in the overall capability of the DOEHS program

Figure 16: Number of environmental samples analyzed for countries within the USCENTCOM AOR with more than 100 samples in either 2008 or 2009



An update on the status of various ongoing (multi-year) exposure assessments is provided below

Particulate Matter/Air Pollution

Airborne fine dust and other particulate matter are the most common environmental exposures throughout the USCENTCOM AOR The recently completed, year-long, Army-sponsored Enhanced Particulate Matter Surveillance Project (EPMSP) concluded that the measured levels of particulate matter (PM) from 15 select deployment sites in the Middle East (USCENTCOM AOR) are routinely higher than selected rural and urban sites in the southwestern United States While the study found that the dust from the Middle East showed similar chemical and mineralogical constituents as dust from the United States, the Sahara Desert, and China, there were differences in the proportions of the constituents Long-term health effects associated with exposure to particulate matter at such high levels, especially for extended periods and/or when associated with other pollutants or varying proportions of constituents, are not well understood An extensive literature review on the long-term health effects of PM on indigenous people, such as nomads, who live in such high-PM environments was

conducted by the DoD and failed to identify any documented long-term health effects in these people who would likely be at highest risk of exposure-related respiratory conditions

As a follow-up to the EPMSP, DoD requested that the National Academies of Science Institute of Medicine's Board on Environmental Studies and Toxicology Division on Earth and Life Studies review the DoD's report and provide an external expert assessment of the project and associated epidemiology Their "Review of the Department of Defense Enhanced Particulate Matter Surveillance Program Report," was made publically available on May 14, 2010[20] In the report, the committee concluded that, while the DoD's surveillance program did not provide definitive evidence that deployed personnel are at increased risk of health effects due to breathing airborne PM, "it (was) indeed plausible that exposure to ambient pollution in the Middle East theater is associated with adverse health outcomes " The committee strongly endorsed the DoD's efforts and encouraged the continuation and expansion of its surveillance and research protocols to characterize health outcomes related to air-pollution exposures during military service This report and the Committee's recommendations are currently under consideration by the DoD

Burn Pits (Solid Waste Disposal)

Open burning using pits, trenches, and barrels has been employed for solid waste disposal in the USCENTCOM AOR since the beginning of the conflicts in Afghanistan and Iraq, and it continues to be used in many locations because more desirable options are not available or are considered too risky Under certain conditions, open burning may generate a great amount of irritating and disagreeable smoke that may drift over the life support areas at these base camps depending on the location of the pit and local meteorological conditions Because of health concerns associated with burn pit smoke exposure, DoD initiated a health risk assessment during 2007 at Joint Base Balad (JBB), which at that time operated the largest burn pit in Iraq

DoD conducted ambient air monitoring and performed biomonitoring (for example, dioxin biomarker assessments) on a small number of serum samples collected from personnel who had been stationed at JBB in order to facilitate the health risk assessment In 2008, using this data, USCENTCOM completed the initial health risk assessment that concluded that no long-term health effects, including cancer, were expected from the smoke/ambient air The health risk assessment included an analysis of more than 160 air samples, and each sample was analyzed for approximately 25 different substances or characteristics resulting in more than 4,000 data points Following the completion of the JBB Health Risk Assessment, the Defense Health Board (DHB), a

[20] http //www nap edu/catalog php?record_id=12911

Federal Advisory Committee serving DoD, reviewed the assessment, including the ambient air monitoring and biomonitoring data

This board of medical experts, including university professors and renowned scientists in the fields of epidemiology, preventive medicine, and toxicology determined the DoD health risk assessment provided an accurate evaluation of airborne exposure levels for deployed Service members and confirmed that all toxic substances detected were within acceptable health standards and that no long-term health effects, including cancer, were expected Based on follow-on sampling, an additional health risk assessment for JBB was completed in 2009 This most recent health risk assessment indicated that all toxic substances detected were within acceptable health guidelines with the exception of infrequent detections of some irritants like acrolein Based on the available data, no long-term health effects, including cancer, are expected Four industrial-sized incinerators have been installed at JBB and are fully operational, and the burn pit was officially closed in October 2009 Post-burn pit closure air sampling has been conducted to document changes in air quality resulting from the use of incinerators Sample and data analysis is currently in progress

Even though the health risk assessments completed by the DoD indicate a low health risk from burn pit emissions, concerns regarding long-term health effects from burn pit smoke continue to be expressed by the White House, Congress, Service members, veterans, and the media Anecdotal reports from Veteran Service Organizations indicate that as many as 500 veterans blame smoke inhalation on a multitude of chronic ailments, and even though the contribution of burn pit smoke is unclear, there are several dozen military members with respiratory illnesses that military medical providers have attributed to inhalational exposures in theater As such, DoD is committed, in a fully transparent manner, to continue monitoring the environment and assessing any health risks associated with burn pit smoke exposures as well as other hazardous agents in the USCENTCOM AOR While the preliminary epidemiological studies do not provide evidence indicating burn pit smoke exposures are responsible for the long-term health effects that have been reported by Veterans, DoD recognizes that acute symptoms due to smoke exposure do occur, including reddened eyes, irritated respiratory passages, and cough that may persist for some time DoD also acknowledges the plausibility that a small number of Service members may be affected by longer-term health effects, possibly due to combined exposures (such as sand/dust, industrial pollutants, tobacco, smoke and other agents) and/or individual susceptibilities such as preexisting health conditions or genetic factors

To continue monitoring the environment and address these health concerns, DoD is currently engaged in a number of important efforts First, to respond to concerns that the burn pit sampling results and health risk assessment from JBB may not be directly applicable to other bases within the USCENTCOM AOR, DoD is finalizing a draft Environmental Health Characterization Concept Plan This plan will be used to develop

a more extensive air sampling plan for additional burn pit locations in the USCENTCOM AOR and to gather data to examine at the broader inhalational exposure burden and possible health risks resulting from multiple, varying air pollution sources These sources include anthropogenic and naturally occurring sources, in additional to DoD-generated air emissions/pollution

DoD will be submitting this concept plan to the DHB for its review and comment, and this surveillance effort is expected to begin in late 2010 or early 2011 Second, daily personnel location data is leveraged to conduct a number of epidemiological studies of health outcomes among Service members deployed to burn pit sites. Initial results show a modest to no significant increased risk The AFHSC will provide an assessment of these studies by early summer Third, research a number of DoD laboratories evaluates the impact of combined exposures to cause pulmonary damage and other adverse health effects. Fourth, DoD is partnering with physicians and exposure scientists to better identify, evaluate, and treat individuals experiencing adverse respiratory health events DoD is providing the GAO and the National Academies of Science Institute of Medicine, and the House Oversight and Governmental Reform Committee, with data, reports, and assistance for their ongoing burn pit studies and investigations

The issue of potential toxic exposures from burn pit operations has continued to drive other changes within the DoD In accordance with the 2010 National Defense Authorization Act (NDAA), prohibited materials can only be burned with the approval of the Secretary of Defense, and, in March 2010, USCENTCOM issued a regulation governing solid waste disposal that emphasizes the use of incineration over burn pits and implements other measures to reduce potentially harmful emissions These measures include reducing waste through recycling and sorting and directing placement of future burn pits to more suitable locations (for example, downwind and further from life support /living areas)

Within the USCENTCOM AOR, burn pits are being closed In Iraq there are now 26 solid waste and 22 medical waste incinerators installed and operational, with an additional 13 incinerators to be installed by July 31, 2010 In Afghanistan, 184 locations currently use burn pits for solid waste disposal, but all of these are targeted for conversion to incinerators In Afghanistan at present, 69 incinerators are installed with 122 more to arrive incrementally before the end of CY10

Al Mishraq Sulfur Mine Fire

Concern involving possible exposures to combustion products associated with the 2003 Al Mishraq sulfur fire was first reported in the 2005 and 2006 Force Health Protection Quality Assurance reports to Congress This fire started in June 2003 at the Al-Mishraq State Sulfur Plant located near Mosul, Iraq, and burned from June 24 to July 21, 2003 The resulting smoke plume contained atmospheric pollutants, such as

hydrogen sulfide (H_2S), and sulfur dioxide (SO_2) A number of Service members near the plume reported acute health effects during the incident. In 2006, USAPHC undertook a formal epidemiological investigation involving the review of medical data of thousands of individuals to determine whether anyone possibly exposed to the combustion products in the resulting smoke was at an increased risk of illness This analysis did not show a definitive link between sulfur fire exposure and chronic or recurring respiratory diseases However, the results did not rule out the possibility of such an association, and the Army continues to look at the possible health outcomes associated with this incident

Apart from the possible respiratory health effects associated with exposure to the sulfur fire smoke, a separate, yet significant, finding indicates that a small sample of all returning OIF and OEF veterans (regardless of any exposure to sulfur fire) appear to have experienced more respiratory problems post-deployment than before deployment While the findings are statistically significant, there are still too many variables to distinguish a single quantified cause or estimate of increased risk

Additionally, a small subset of the overall group of Service members referred to Vanderbilt Medical Center has been diagnosed with constrictive bronchiolitis Some of these individuals had been present at, or in the vicinity of, the Al Mishraq sulfur mine fire, while others had not These findings were addressed during a February 2010 meeting at the National Jewish Medical Center, which was attended by USAPHC and VA representatives, the Army Surgeon General pulmonary consultant, as well as scientists and medical professionals from civilian medical institutions to discuss the issue of standardized screening, evaluation, and follow-up of Service members who returned from deployment with possible exposure-related respiratory conditions DoD will continue to monitor the returning population for the incidence of health effects that can be attributed to sulfur fire smoke exposure

Qarmat Ali Industrial Water Treatment Plant

The other environmental exposure that received attention in 2009 involves possible exposures to sodium dichromate at the Qarmat Ali industrial water treatment plant outside Basra, Iraq. In April 2003, the U S initiated operations to restore Qarmat Ali and provide industrial-quality water for oil production Earlier looting of the plant had left the Qarmat Ali facility in disarray Kellogg Brown and Root (KBR) was the designated contractor for this operation, with military forces providing security Shortly after their arrival, KBR employees expressed concerns about exposures to what was confirmed to be sodium dichromate (containing hexavalent chromium, a carcinogen) that had been spilled in and around the plant as a result of the looting In mid-August 2003, the KBR Health, Safety, and Environment personnel collected air and soil samples and conducted medical surveillance on its employees working at Qarmat Ali

In October 2003, a U S Army Preventive Medicine team deployed to Iraq to evaluate conditions at Qarmat Ali Extensive environmental monitoring for hexavalent chromium was accomplished at Qarmat Ali, and comprehensive medical examinations, including whole blood chromium tests, were accomplished on the U S personnel from the Indiana Army National Guard (INARNG) who were providing security at that time Results of the environmental monitoring confirmed the presence of sodium dichromate and the potential for personnel exposures, but the results of the medical exams indicated no significant exposures to hexavalent chromium had occurred Only minor, temporary health effects, such as bloody noses, were identified in some individuals These minor effects could not be directly attributed to chromium exposures because acute effects usually require exposures at much higher levels over longer durations than existed at Qarmat Ali

Additionally, blood tests indicated either the absence or very low levels of chromium in the blood of the Service members As a result, it was determined that these minor health effects seen were related to existing medical conditions or exposures to desert heat, sand, dust, and wind, and because the duration of the possible exposures was very short, the overall risk for occurrence of long-term health effects was considered negligible In late 2008, after thoroughly reviewing the environmental monitoring and medical examinations results, the DHB validated these findings and conclusions stated the "field investigation was completed in an exemplary fashion and that its conclusions, recommendations, and interventions were sound and appropriate "

Despite these findings, concerns continue to be raised by individuals who had been at the site In 2008, following Congressional hearings and media reports pertaining to allegations from KBR employees that their parent company did not adequately protect them from exposure to the sodium dichromate, additional concerns were raised by some U S Service members who had provided security at Qarmat Ali These concerns continued through 2009 and into 2010 Some National Guard members also joined the suits against KBR and provided testimony regarding their exposures and health problems This has raised the possibility that more severe exposures may have occurred at Qarmat Ali

DoD has acknowledged that there is uncertainty surrounding possible exposure levels for individuals who were at the site prior to September 2003 when KBR first began cleanup actions and encapsulated the ground to eliminate further exposure Investigation by the DoD determined that Army Guard units from West Virginia, Oregon, and South Carolina had worked at Qarmat Ali providing security for KBR during the day and then returned to their base camp each evening The average time spent on site ranged from 2 days to 20 days Ten USACE members also spent time on site, bringing the total number of U S personnel who performed duties at Qarmat Ali to approximately 600 VA is encouraging former Service members identified as having possible exposure to sodium dichromate at Qarmat Ali to undergo a medical examination and clinical

assessment specifically tailored for sodium dichromate exposure under the Gulf War Registry program To assist in this effort, the Army provided a list of all military units who provided onsite security to the VA and has worked with the National Guard units to identify the specific individuals who spent time on site While there is no firm information to indicate that any of the U S Service members received exposures that could pose an increased long-term health risk, DoD will continue to collaborate with VA on Qarmat Ali and monitor the results from VA's medical surveillance on the Guardsmen

2009 Exposure Incidents

The following section highlights the two exposure incidents that were investigated and documented by USAPHC during 2009

The first incident involved a fire in a lithium battery storage warehouse in an area known as Ra Ali, Iraq The fire burned over several days starting on July 24, 2009, and local Iraqis as well as U S KBR contractors worked to control the fire U S Air Force bioenvironmental engineering and U S Army preventive medicine specialists participated in the response by assessing and documenting potential health hazards associated with the incident Air sampling detected sulfur dioxide (SO_2) at levels associated with odors and/or mild respiratory irritation To date, no adverse health effects have been associated with this incident

The second incident involved bulk water testing in Iraq using a single field water chemical agent detector kit that yielded purported positive results for cyanide and sulfur mustard agent The water test kit results were reported to the USAPHC in October of 2009 Additional samples of the bulk water source were collected and analyzed, and no contamination was found After consultation with subject matter experts, the initial field water test kit results were determined to be false positives due to known limitations of the test kit and potential operator error based on unclear guidance and/or training on how to use the test kit While no hazardous exposures occurred, the incident served to highlight the need for additional training on use of these field water chemical agent detector kits

The Way Ahead

A critically important by-product of these exposure incidents and concerns is the increased collaboration between the DoD and the VA During 2009 and continuing into 2010, a significant number of meetings between the DoD and the VA have addressed the possible health implications of environmental exposures In November 2009, in a day-long symposium on this topic, representatives from DoD and VA reviewed what was known about these issues

The Deployment Health Working Group, a joint DoD-VA forum for addressing deployment health issues, has actively engaged to support enhanced collaboration between the departments in support of force health protection and the DOEHS program. With regards to potential burn pit exposures and on-going health studies, DoD is pursuing increased collaboration with the VA for corresponding epidemiologic studies among their beneficiary population Additionally, to provide a more coordinated transition of exposure-related data, DoD is working with VA to establish a data transfer agreement (DTA) that would provide the VA with more timely and complete exposure-related information to support its medical surveillance, medical care, and benefits determination needs

The data to be transferred under this agreement include, but are not limited to, identification information for the individual(s) involved in the exposure/possible exposure, the contaminant(s) or exposure agent(s), relevant exposure history for each individual (e g , dates and duration of exposures), duties assigned at time of exposure, data related to exposure assessments (if conducted), and the results of pertinent clinical examinations and assessments, including the results of any biomonitoring The DTA is expected to be finalized in 2010

While DoD's current DOEHS program is much improved, especially when compared to the program that existed during the 1991 Gulf War, there are some limitations that continue to hinder DoD's ability to assess the long-term health impacts of deployment-related exposures For example, the once-daily personnel location data is not specific enough to establish exact location(s) of individuals at any given time during a 24-hour period, making it difficult to determine possible exposure concentrations or durations of exposure needed to more accurately assign individual exposures or dose From a practical perspective, this often requires DoD to estimate health risks based on conservative exposure assumptions regarding environmental concentrations Additionally, unless a cluster of the same health conditions develops among similarly exposed personnel, it may be difficult or impossible to draw conclusions regarding cause and effect relationships between exposures and particular health conditions, especially for rare health conditions

To address these limitations, the DoD is taking action in the areas below

- Identifying through research, exposure biomarkers for high-priority chemicals and compounds of concern
- Ensuring the collection of biological media (other than serum) is consistent with "omics" technologies (genomics, proteomics, metabalomics, etc) available today to help better characterize individual exposures for exposure assessments and future health studies and investigations

- Developing and fielding individual chemical exposure dosimeters for toxic materials likely to be encountered during deployments.
- Developing individual longitudinal exposure records as envisioned in Presidential Review Directive 5, "A National Obligation Planning for Health Preparedness for and Readjustment of the Military, Veterans, and Their Families after Future Deployments," August 1998 These longitudinal exposure records will be a key component of the DoD electronic health record and could be used for diagnosis and treatment by DoD or VA providers and by VA claims adjudicators These longitudinal exposure records will be a key component of the DoD electronic health record and could be used for diagnosis and treatment by DoD or VA providers and by VA claims adjudicators
- Ensuring individual exposure-related information is provided to the VA, removing the onus from the veteran to provide the VA with this information
- Leveraging contractual vehicles to assist with the completion of environmental analyses, monitoring of burn pit operations and incinerators, and the accomplishment of health risk assessments that cannot be completed in a timely manner given existing resource limitations (for example, availability of in-theater environmental health personnel and equipment)

Force Health Protection Quality Assurance Program Summary

In 2009, the Services and the Force Health Protection Quality Assurance program performed separate Reserve Component site quality assurance visits to specifically identify the variances which may exist between the Active and Reserve component of each Service's deployment health assessment processing programs This action was necessary due to the promulgation of DoDD 1200 17, "Managing the Reserve Components as an Operational Force" on October 29, 2008 DoDD 1200 17 mandates that the Secretaries of the Military Departments ensure that the Reserve Component meets operational readiness requirements, and that the Assistant Secretary of Defense (Health Affairs), under the authority, direction and control of the Under Secretary of Defense (Personnel and Readiness), ensure policies are in place to support medical and dental readiness Operational issues related to data integrity continued to demonstrate the need for effective communication between the Armed Forces Health Surveillance Center and Reserve Component systems as well as coordination of data methodologies

The Force Health Protection Quality Assurance program continues to conduct installation visits, review pre- and post-deployment processes, share best practices, and explore data variances The Force Health Protection Council continues to lead strategic capabilities, identify defense-wide deployment medical support, and develop metrics that lead, improve, protect and conserve the health of Service members across global military activities and operations

Appendix A: Health Assessment Questionnaires

Form Number	Acronym	Form Name
DD Form 2766	PHA	Periodic Health Assessment
DD Form 2795	Pre-DHA	Pre-Deployment Health Assessment
DD Form 2796	PDHA	Post-Deployment Health Reassessment
DD Form 2900	PDHRA	Post-Deployment Health Reassessment

Appendix B: Acronyms and Terms

Acronym	Term
AD	Active Duty
AFB	Air Force Base
AFHSC	Armed Forces Health Surveillance Center
AFRICOM	United States Army Africa Command
AKO	Army Knowledge Online
ANAM	Automated Neuropsychological Assessment Metrics
AOR	Area of Responsibility
ARW	Air Refueling Wing
ASD(HA)	Assistant Secretary of Defense for Health Affairs
BAS	Battalion Air Station
BH	Behavioral Health
BMI	Body Mass Index
BUMED	Bureau of Medicine and Surgery (US Navy)
CLG	Combat Logistics Group
COB	Contingency Operating Base
COS	Contingency Operating Site
CPAC	Civilian Personnel
CPG	Clinical Practice Guideline
CTS	Contingency Tracking System
CUSFFC	Commander, US Fleet Forces Command
CY	Calendar Year
DA	Department of the Army
DASD	Deputy Assistant Secretary of Defense
DCAPES	Deliberate Crisis Action Planning and Execution Segment (USAF Military Personnel Data System)
DD	Defense Department (used in official government form numbers)
DEET	N-Diethyl-meta-Toluamide (insect repellent)
DHA	Deployment Health Assessment
DHB	Defense Health Board
DHR	Department Human Resources
DHQA	Deployment Health Quality Assurance
DMDC	Defense Manpower Data Center

Acronym	Term
DMSS	Defense Medical Surveillance System
DoD	Department of Defense
DoDD	Department of Defense Directive
DoDI	Department of Defense Instruction
DOEHS	Deployment Occupational and Environmental Health Surveillance
DSD	Deputy Secretary of Defense
DTA	Data Transfer Agreement
EHR	Electronic Health Record
EKG	Electrocardiogram
EPMSP	Enhanced Particulate Matter Surveillance Project
ERMC	European Regional Medical Command
FHP&R	Force Health Protection and Readiness
FHPQA	Force Health Protection Quality Assurance
FY	Fiscal Year
GAO	Government Accountability Office
HA	Health Affairs
IMR	Individual Medical Readiness
INARNG	Indiana Army National Guard
JBB	Joint Base Balad
KACC	Kimbrough Ambulatory Care Center
KBR	Kellogg Brown & Root
LCSW	Licensed Clinical Social Worker
LRMC	Landstuhl Regional Medical Center
MAS	Marine Air Station
MAW	Marine Aircraft Wing
MEDCOM	Medical Command
MEDDAC	Medical Activity
MEDPROS	Medical Protection System (US Army)
MRRS	Marine Corps Medical Readiness Reporting System
MHS	Military Health System
MSMR	Medical Surveillance Monthly Report
NAF	Naval Air Facility
NAS	Naval Air Station
NCAT	Neurocognitive Functional Assessment Program

Acronym	Term
NDAA	National Defense Authorization Act
NEHC	Navy Environmental Health Center
NG	National Guard
NMCPHC	Navy and Marine Corps Public Health Center
NRC	National Research Council
ODSE	Operational Data Store Enterprise
OEF	Operation Enduring Freedom
OEH	Occupational and Environmental Health
OEHSA	Occupational and Environmental Health Site Assessment
OIF	Operation Iraqi Freedom
OPNAV N135	Office of the Chief of Naval Operations
OPR	Outpatient Medical Record
OTSG	Office of the Surgeon General
PCL-M	PTSD Check List – Military Version
PDHA	Post-Deployment Health Assessment
PDHRA	Post-Deployment Health Reassessment
PHA	Periodic Health Assessment
PIMR	Preventive Health Assessment Individual Medal Readiness System (US Air Force)
PM	Particulate Matter
POEMS	Periodic Occupational and Environmental Monitoring Summary
Pre-DHA	Pre-Deployment Health Assessment
PTSD	Post Traumatic Stress Disorder
RMC	Regional Medical Command
SIV	Site Inspection Visit
SRP	Soldier Readiness Processing
SRPC	Soldier Readiness Processing Center
TB	Tuberculosis
U S	United States
USA	United States Army
USACE	United States Army Corps of Engineers
USACHPPM	US Army Center for Health Promotion and Preventive Medicine
USAEUR	United States Army European Command
USAF	United States Air Force

Acronym	Term
USAPHC	United States Army Public Health Command
USCENTCOM	United States Central Command
USD(P&R)	Under Secretary of Defense (Personnel and Readiness)
USMC	United States Marine Corps
USN	United States Navy
VA	Department of Veterans Affairs
VETCOM	Veterinary Command

NOTES

It is the practice of the report authors to enclose an acronym in parentheses following the first use of the term and to use the acronym alone for repeated occurrences of the term The authors have repeated a limited number of terms in some cases to make the report more readable

Terms used on the cover, in section headings, captions, bibliographic citations, and quotes (especially legislation) are included in full without the associated acronym

Appendix B provides the reader with a central point of reference for all acronyms used in the report