UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301-4000

PERSONNEL AND
READINESS

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

AUG 8 2013

Dear Mr. Chairman:

The enclosed report, covering Fiscal Year 2013, is submitted in response to section 711 of the National Defense Authorization Act for Fiscal Year 2010 (Public Law 111-84), which required the Department of Defense (DoD) to develop and implement a comprehensive policy on pain management by the Military Health System and provide a report annually. Key elements include a description of the policy, changes made, ongoing research, provider training, beneficiary education, and adequacy and effectiveness of pain management services.

DoD implemented the policy on pain management in March 2011. In addition to the policy, DoD developed Patient Centered Medical Homes in primary care clinics in order to provide comprehensive care by a Primary Care Manager and a team of health care professionals, especially important to patients with chronic pain. Increased numbers of pain management specialists have been incorporated into both military treatment and purchased care facilities. Through these and other changes, DoD has achieved improved patient satisfaction with pain management.

A similar letter is being sent to the Committee on Armed Services of the House of Representatives. Thank you for your interest in the health and well-being of our Service members, veterans, and their families.

Sincerely,

Jessica L. Wright
Acting

Enclosure:
As stated

cc:
The Honorable James M. Inhofe
Ranking Member

UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301-4000

PERSONNEL AND
READINESS

AUG 8 2013

The Honorable Howard P. "Buck" McKeon
Chairman
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

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Sincerely,

Jessica L. Wright
Acting

Enclosure:
As stated

cc:
The Honorable Adam Smith
Ranking Member

REPORT TO THE CONGRESS

THE IMPLEMENTATION OF A COMPREHENSIVE POLICY ON PAIN MANAGEMENT BY THE MILITARY HEALTH CARE SYSTEM

Office of the Secretary of Defense

September 2013

The estimated cost of report or study for the Department of Defense is approximately $6,720 for the 2013 Fiscal Year. This includes $0 in expenses and $6,720 in DoD labor.
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EXECUTIVE SUMMARY

Chronic pain is a pervasive problem that affects patients, families, and society in many ways. While significant advances have been made in our understanding of chronic pain, and in our ability to perform technically advanced diagnostic procedures, currently available treatments for chronic pain rarely result in complete resolution of symptoms. Approximately 100 million adult Americans are affected by chronic pain at an annual cost of $560-635 billion in direct medical treatment costs and lost productivity. There is great variation among individuals in pain occurrence, severity, duration, response to treatment, and degree of disability. Yet despite its high prevalence, chronic pain is often undertreated. There are multiple factors responsible for the variability observed in practice, including the fact that not all physicians or healthcare providers possess the same knowledge base, skills or expertise in pain management. The Military Health System (MHS) faces the same challenges as the country as a whole with some additional unique issues because of its distinctive mission, structure and patient population with combat-related trauma.

- The Policy for Comprehensive Pain Management (Health Affairs Policy 11-003) was published on April 25, 2011, and encompasses key components of pain assessment, pain treatment and management and pain research.
- Deployment of the Patient Centered Medical Home (PCMH) model in primary care clinics incorporates a comprehensive, integrated approach to primary care and provides an effective means to manage and educate beneficiaries with acute and chronic pain. Since the last report to Congress, an additional 135 direct care PCMH practices have achieved National Committee for Quality Assurance (NCQA) recognition.
- Adoption of Clinical Practice Guidelines for Low Back Pain, Opioid Therapy for Chronic Pain, and Post-Operative Pain, along with the incorporation of electronic notification and tracking mechanisms in the Armed Forces Health Longitudinal Technology Application (AHLTA) and the development of provider toolkits has provided clinicians ready access to evidence-based practices and facilitated provision of the right care at the right time.
- The MHS has continued to work in the past year on increasing access to pain management specialists in its military treatment facilities (MTFs) and in the purchased care network for patients who require expertise beyond that available from Primary Care Managers.
- Overall Fiscal Year (FY) 2012 inpatient satisfaction with pain management in the MHS' direct care system continues to exceed national benchmarks despite a slight decrease from FY 2011 data.
- Pain management research has led to deployment in the past year of the Department of Defense (DoD) and Veterans Health Administration (VHA) Pain Rating Scale, a common DoD and VHA pain assessment tool. This common tool provides a tremendous advantage in evaluating outcomes and developing effective pain management strategies.

- Identifying opportunities to educate healthcare personnel has continued, and an ambitious training program has begun, supported by dedicated funding.

Numerous activities and efforts have occurred to ensure appropriate, timely management of pain in the MHS population. Additional efforts continue through research, provider and beneficiary education and exploration of new modalities, to ensure that every patient receives the most efficacious pain assessment and management available.

Comprehensive Pain Management Policy

Section 711 of the National Defense Authorization Act for Fiscal Year 2010 (P.L. 111-84) requires the Department of Defense to develop and implement a comprehensive policy on pain management by the military health care system. Specifically, the policy is required to cover each of the following:

- The management of acute and chronic pain.
- The standard of care for pain management to be used throughout the Department of Defense.
- The consistent application of pain assessments throughout the Department of Defense.
- The assurance of prompt and appropriate pain care treatment and management by the Department when medically necessary.
- Programs of research related to acute and chronic pain, including pain attributable to central and peripheral nervous system damage characteristic of injuries incurred in modern warfare, brain injuries, and chronic migraine headache.
- Programs of pain care education and training for health care personnel of the Department.
- Programs of patient education for members suffering from acute or chronic pain and their families.
- Section 711 further requires the Secretary to revise the policy on a periodic basis in accordance with experience and evolving best practice guidelines. The Department is also required to submit a follow-up report on October 1 each year thereafter through 2018. Each report shall include the following:
- A description of the policy implemented and any revisions made to the policy.
- A description of the performance measures used to determine the effectiveness of the policy in improving pain care for beneficiaries enrolled in the military health care system.
- An assessment of the adequacy of Department pain management services based on a current survey of patients managed in Department clinics.

- An assessment of the research projects of the Department relevant to the treatment of the types of acute and chronic pain suffered by members of the Armed Forces and their families.

- An assessment of the training provided to Department health care personnel with respect to the diagnosis, treatment, and management of acute and chronic pain.

- An assessment of the pain care education programs of the Department.

- An assessment of the dissemination of information on pain management to beneficiaries enrolled in the military health care system.

INTRODUCTION

Everyone is at risk for chronic pain. It can result from the natural process of aging, from genetic predisposition, as a component of another chronic disease, as a result of surgery, or following an injury. Pain is a uniquely individual, subjective experience, and because of this, must be treated using multidisciplinary, biopsychosocial approaches. Chronic pain is both physically and emotionally debilitating, and patients with chronic pain are five times more likely to utilize health care services than those without chronic pain. These patients experience significant impairments in their quality of life, to include their physical, social, and psychological well-being. It's been estimated that over 50 percent of chronic pain patients also suffer from coexisting symptoms of depression or anxiety that also affect the utilization of healthcare services.

Chronic non-cancer pain is defined as pain that lasts longer than three months or beyond the period of time normally expected for healing of the affected tissues. Pain severity, however, cannot be correlated with the amount of damage that has occurred. In its 2011 report entitled "Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research," the Institute of Medicine (IOM) identified several key barriers that impede the provision of effective pain management in the primary care setting. These include the high prevalence of chronic pain in the US population, which adversely affects the ability to take effective actions on a national scale; provider attitudes and training, which can impede the delivery of high-quality care; patient attitudes which may interfere with their ability to recognize their need to address pain early on; and geographic barriers, which place residents of rural communities at a disadvantage. The IOM also identified a need to provide educational opportunities for primary care practitioners and other providers to improve their knowledge and skills in pain assessment and treatment, to include safe and effective opioid prescribing, as well as for better collaboration between pain specialists with primary care practitioners and teams when primary care providers have exhausted their expertise and the patient's pain persists.

Based on results of the August 2009 Army Pain Management Task Force, the DoD developed a comprehensive pain management policy to improve clinical, administrative and research processes involved with the provision of pain management care and services within the DoD. The DoD/VA Joint Executive Council, in turn, chartered a work group to actively collaborate on a standardized DoD/VA approach to pain management that would improve the quality and effectiveness of care to beneficiaries of the Veterans Health Administration and the Military Health System. This DoD/VA Pain Management Work Group has built upon the work initiated by the Army task force and expressed in the DoD's comprehensive pain management policy. As presented in section 711 of the National Defense Authorization Act for Fiscal Year 2010 (P.L. 111-84), this report is an update to our report of 2012 on the implementation of DoD's comprehensive pain management policy.

COMPREHENSIVE PAIN MANAGEMENT POLICY

1. Policy Description

The comprehensive pain management policy encompasses several key components, among which are pain assessment, pain treatment and management, and pain research. Each of these components in turn focuses on several key sub-components. The policy strives to reinforce that pain is not only a symptom of disease, but is often, in fact, a disease process in itself. As is the case for all disease processes, the approach taken towards treatment needs to be evidence-based and utilize best practices. Although the policy was not formally revised during the past year, progress has continued on meeting the goals outlined in the document.

Assessment of Pain:

The assessment of pain is frequently referred to as "the fifth vital sign." DoD Instruction (DoDI) 6025.13, "Medical Quality Assurance (MQA) and Clinical Quality Management in the Military Health System," which addresses MTF accreditation, clarifies the requirements for the assessment of pain management within Military Treatment Facilities (MTF). All fixed hospitals and free-standing ambulatory clinics are required to maintain accreditation; therefore, all are reviewed and accredited by either The Joint Commission or the Accreditation Association for Ambulatory Health Care. Both of these accrediting organizations include standards that focus on a patient's right to pain management, patient education about pain and pain management, pain assessment in all patients, and a facility's collection of data on the effectiveness of pain management.

The Code of Federal Regulations, title 32, section 199.6, requires all civilian hospitals (acute care, general and special) that provide inpatient and outpatient services (to include clinical and ambulatory surgical services) under TRICARE "to be accredited by The Joint Commission [TJC] or meet other such requirements as the Secretary of Health and Human Services, the Secretary of Transportation, or the Secretary of Defense finds necessary in the interest of the health and safety of patients who are admitted to and furnished services in the institution." Therefore, all institutional providers that are contracted into the TRICARE network by one of the regional Managed Care Support Contractors (MCSC) must also be accredited. As with DoD's MTFs, these facilities must also meet the rigorous pain management standards set forth by their accrediting organization.

As noted in prior reports to Congress, the DoDI does not specify what tool should be used to assess pain within the DoD, only that an assessment is performed. Both the August 2009 Army Pain Management Task Force Report and the October 2010 Army Surgeon General's OPERATION ORDER (OPORD) 10-76 (USAMEDCOM COMPREHENSIVE PAIN MANAGEMENT CAMPAIGN PLAN) noted that the most commonly used pain assessment tool, the 11 point, 0-10 Visual Analog Scale (VAS), was inadequate to meet patient and provider needs. Therefore, development was begun on a

new tool that would be able to measure pain intensity, mood, stress, biopsychosocial impact and functional impact. A more complete description of this tool, which concluded development and began its initial deployment during the past year, can be located under the research section of this report.

Pain Management and Treatment:

Patient Centered Medical Home:

A 2010 survey by Breuer et al. reported that primary care practitioners are responsible for treating 52 percent of chronic pain patients in the United States. Appropriate management by the primary care practitioner may be crucial in providing timely relief and in preventing acute pain from progressing to a persistent or chronic pain state. The Patient Centered Medical Home (PCMH) provides a comprehensive, integrated approach to primary care, to include treatment for acute and chronic pain. It incorporates a number of principles that facilitate a holistic approach to patients with simple and complex medical needs and also facilitates partnerships among individual patients, their primary care physicians (PCP), and when appropriate, their families. In the PCMH model, the PCP leads a team of healthcare professionals who collectively take responsibility for the ongoing care of the patient. The PCP is responsible for either personally providing care for the patient, or for appropriately arranging treatment by other qualified healthcare professionals. The patient's care needs are coordinated and/or integrated across the entire health care system (acute and subspecialty care, inpatient care, home health care, skilled nursing care) and the patient's community (family, public and private community-based services). The PCMH facilitates education of both the patient and his/her family on the etiology and management of acute and chronic pain, which may reduce the likelihood of disability, address the under-treatment of pain, and provide for individual tailoring of treatment plans.

In September 2009, the Assistant Secretary of Defense (Health Affairs) directed all MTFs to implement the PCMH model in their primary care clinics. In response to this directive, the TRICARE Management Activity (TMA), with concurrence from the three Services, contracted with the National Committee for Quality Assurance (NCQA) to survey all MTFs world-wide to assess their readiness to function as a PCMH. Subsequently, each MTF primary care clinic was surveyed to determine whether they had met the standards to become an NCQA-recognized medical home. There are approximately 435 PCMH practices in the MHS' Direct Care System, which include family medicine, primary care, pediatrics, internal medicine, flight medicine and undersea medicine clinics. To date, NCQA has surveyed and recognized 172 practices as part of its formal recognition process, of which 92 percent have achieved Level 3, NCQA's highest level of recognition. By the end of calendar year 2013, an additional 157 practices will have undergone the survey process.

Clinical Practice Guidelines:

In 1990, the Institute of Medicine defined Clinical Practice Guidelines (CPGs) as "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances." CPGs provide guidance on the diagnosis, treatment and management of patients based upon clinical evidence obtained from an intensive, comprehensive review and analysis of the published medical literature. The recommendations within a CPG should not be viewed as sacrosanct, since a provider's clinical judgment regarding the appropriate management of each individual patient should remain paramount. Clinicians and patients must develop individual treatment plans that are customized to the specific needs and circumstances of each patient.

In 2004, the DoD/VA Health Executive Council (HEC) chartered the DoD/VA Evidence-Based Practice Work Group (EBPWG) to advise providers on the use of clinical and epidemiological evidence to improve the health of the population across the MHS and VHA. The EBPWG selects topics for the development of CPGs based on high cost, high volume, high risk, and problem prone conditions. To date, three CPGs have been developed related to the treatment of acute and chronic pain. These are: Opioid Therapy (OT) for Chronic Pain, Lower Back Pain (LBP), and Post-Operative Pain (POP). There are currently two additional CPGs under development related to pain management; these are: Perioperative Pain Control and Degenerative Joint Disease (DJD). It is anticipated that the perioperative pain guideline, which is under development in collaboration with the American Pain Society, should be completed by the end of calendar year 2013; work on the DJD guideline has begun and should also be completed by the end of calendar year 2013.

While it is important to develop and implement CPGs as educational tools to align medical practice patterns with the most currently available clinical evidence, it is also important to make them easy to use and integrate into routine provider practice. The report of the Army task force revealed that many DoD providers were unaware of the CPGs for pain management, and of those who were, many found them difficult to use or integrate into their practices. To address this problem, electronic solutions were developed to embed in the military's computerized patient medical record, the Armed Forces Health Longitudinal Technology Application (AHLTA) that would simplify the use of these CPGs by military providers. To date, Alternate Input Method (AIM) forms have been developed within AHLTA that detail an evidence –based approach to the treatment of low back pain for providers to follow. Additional AIM forms are under development for the remaining pain-related CPGs. To assist DoD providers utilize the OT CPG "at the bedside," a provider tool kit was developed this year which is available electronically by accessing the VHA web-site and in hard copy as well. The tool kit consists of an Opioid Tapering Fact Sheet; an Opioid Therapy for Chronic Pain Patient Guide; an Opioid Consult Referral Fact Sheet; a guide for Opioid Therapy and Methadone Use in Primary Care for Chronic Non-Cancer Pain; a fact sheet for managing opioid side effects; an Opioid Therapy for Chronic Pain Pocket Guide (tabbed booklet);

and a guide for the conversion from one opioid to another. In addition, the PMWG is working to ensure that any future electronic medical record system is designed with the CPG algorithms embedded within them, enabling providers to more easily follow these evidenced based practices and to deviate from them if clinically appropriate.

Specialty Care Referral:

In October 2009, the VHA established an integrated, biopsychosocial Stepped Care Model of Pain Management in which care for most pain conditions is delivered in the primary care setting. This Biopsychosocial Model posits that the causes and outcomes of many illnesses, including pain, often involve the interaction of physical and pathophysiologic factors, psychological traits and states, and social-environmental factors. The model incorporates, and is supported by, timely access to secondary consultation and collaborative care from multiple specialties to include pain management, behavioral health, physical and rehabilitative medicine, and other specialties. It is an effective approach to providing a continuum of care to a population of patients with a spectrum ranging from acute pain caused by injuries or diseases to chronic pain diseases and disorders that may be expected to persist for more than 90 days, and in some instances, for the patient's lifetime. While the goal is for the primary care provider to render as much of the care as possible, consultation with pain medicine, as well as other specialists, in managing complex, severe and high risk patients may be needed. Based upon recommendations made in the Army's pain task force report strongly recommending adaptation of the stepped care model by the DoD, all three Services have begun to deploy this model within their MTFs.

In an effort to successfully implement the stepped care model, the MHS has increased the number of pain management specialists in its MTFs and in its purchased care networks to provide specialized treatment for patients who require treatment beyond that available from the primary care manager. During 2012 the Army has continued to deploy pain management providers to regional interdisciplinary pain management centers located at their larger facilities. Patients are either referred to a regional center, receive care at their parent facility via telemedicine, or are seen by a traveling specialist. During the FY 2012 the Navy has been developing its comprehensive pain program comprised of locally embedded pain teams in primary care facilities supported by regional subspecialty care pain teams and telemedicine services. Both the Army and Navy programs have provided improved access to pain care services for beneficiaries regardless of whether they are located near a major Military Treatment Facility or in a more remote location world-wide.

DoD is currently exploring new technologies to address the problem of providing access to specialty care for patients with complex chronic diseases such as chronic pain, who reside in areas that are relatively inaccessible to or remote from these specialized services. The Extension for Community Healthcare Outcomes (ECHO^{TM}) program which was pioneered at the University of New Mexico employs an 'academic detailing' intervention using video technology. The program offers local providers the opportunity to co-manage difficult and complex patients, while simultaneously affording them with

the training and technical skills that over time allows them to become highly skilled in the treatment of these chronic and complex diseases. Ultimately, this creates a center of excellence in their own community, and diminishes the need to obtain specialty evaluations in these remote areas. ECHO™ has demonstrated lower costs and improved outcomes in the treatment of chronic diseases such as Hepatitis C. The VHA has adopted the ECHO™ model, and has begun transforming their Specialty Care Services program by developing Specialty Care Access Networks (SCAN), so that all veterans, even those distant from medical centers, will have access to specialty level care for chronic disease management when needed. DoD is currently adapting the ECHO™ program to provide pain management services in remote sites and smaller MTFs. A pilot project was implemented in Calendar 2012 at the Walter Reed National Military Medical Center. This successful pilot was followed up by establishment of a sustainable ECHO™-like pain training program by the Navy Comprehensive Pain Management Program (NCPMP); to date, over 50 training sessions have been completed at 28 Tri-service and VHA sites. This program is a component of a tiered tele-pain consultation program stood up by the NCPMP to ensure beneficiary access to standardized interdisciplinary pain management at remote Navy and other service MTFs. To date, over 300 direct pain consultations with patients at remote sites have been conducted.

Education and Training:

Many health care professionals have little or no training in pain management and are unable to effectively respond to the pain care needs of their patients. As noted in prior reports to Congress, pain management receives very little attention in the curricula of many U.S. medical and allied health professions schools, and in fact, health care professional programs at most major medical educational and training sites do not include a dedicated pain management curriculum. The military medical training programs are no exception, and consistently mirror these deficiencies. The lack of a consistent approach to pain management education results in considerable variation in pain management understanding and practice within all medical professions.

In IOM's 2011 report entitled "Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research," IOM recommended "health professions education and training programs, professional associations, and other groups that sponsor continuing education for health professionals should develop and provide educational opportunities for primary care practitioners and other providers to improve their knowledge and skills in pain assessment and treatment, including safe and effective opioid prescribing." DoD concurs with the IOM's recommendations that providers need additional training in the areas of pain management and medication misuse. A more detailed description of DoD's efforts can be found below in the 'Training and Healthcare Education' section.

One of the major goals of DoD's comprehensive pain management program is to aid in the restoration of function and relief of pain by broadening access to state-of-the-

art, evidence-based, standardized, multimodal, and interdisciplinary pain care across Military Medicine, ensuring treatment efficacy through practice guidelines, education, and analysis of treatment outcomes. Although DoD's efforts to date have been based on the best available evidence currently available, a patient data screening and outcomes repository system which is capable of gauging the effectiveness of existing programs or guiding future implementation strategies and the development of clinical practice guidelines (CPG) is lacking.

DoD has begun work on integrating the National Institutes of Health (NIH) Patient Reported Outcomes Measurement Information System (PROMIS) as part of a MHS Pain Assessment Screening Tool and Outcomes Registry (PASTOR). Further information on PASTOR can be found in Section six below. When completed, the PROMIS program will provide a tremendous advancement in standardization of patient assessments, and will assist in educating health care providers in the provision of truly effective pain management care to MHS beneficiaries. The program will (1) provide pain patient focused outcomes data to improve clinical decision making, (2) develop data driven and military specific clinical practice guidelines, (3) obtain critical data to assure needs based alignment of resources, and (4) integrate existing validated outcomes measures into the PASTOR.

In order to maximize training opportunities while standardizing care, an annual pain skills training event is held. Alternating in location, the event includes guest instructors and attendees from all of the services, as well as the VA. Each course during the event teaches a specific skill that can be applied directly for patient care, and continuing medical education credits and a certificate suitable for credentialing are granted. Topics include auricular acupuncture, regional anesthesia, behavioral health modalities, manipulation therapy, advanced chronic pain procedures, ultrasound for procedures, trigger point injections, massage therapy, and use of new technology.

Research:

DoD is actively engaged in research, as demonstrated by the multitude of research publications, presentations, and projects that DoD providers and educators participate in. Section four and the appendix below describe in more detail the Department's considerable focus on pain management research.

2. *Performance Measures*

Like most organizations, DoD strives to continuously improve its performance and the quality of care provided to its beneficiaries. Performance measures are tools that provide senior leaders and other stakeholders with data that enables them to evaluate their health plan's overall performance across key dimensions of quality and value, and also drive strategic quality improvement initiatives.

Congress has requested a description of the performance measures used to determine the effectiveness of DoD's pain management policy in improving pain care for

beneficiaries enrolled in the military health care system. DoD tracks numerous performance measures, yet in the area of pain management, the number and breadth of measures is still quite limited. DoD, working in conjunction with the PMWG has continued to work on identifying and developing relevant measures that will enable an appropriate assessment of the effectiveness of its pain management policy in improving pain care for beneficiaries enrolled in the military health care system. This entails the development of measures that assess care in both the inpatient and outpatient settings.

DoD is currently working on gathering data from each of the Services to address the following measures. Unfortunately, validated data was not available to present for publication at the time this report to Congress was prepared for submission. However, the Navy has completed a report on pain disease burden and cost in the Navy and Marines Corps which is currently undergoing release approval; it provides a comprehensive assessment of the problem of pain in the military and an updated version (planned annually) will be available for inclusion in next year's report. In addition, the following measures (subject to change) will be reported based upon limitations in data collection and validity.

- Number of chronic pain patients on chronic opioid therapy
- Percent of chronic pain patients on chronic opioid therapy
- Number of chronic pain patients with adverse duty boards
- Number of clinical encounters for chronic pain
- Outcomes from ambulatory pain surveys

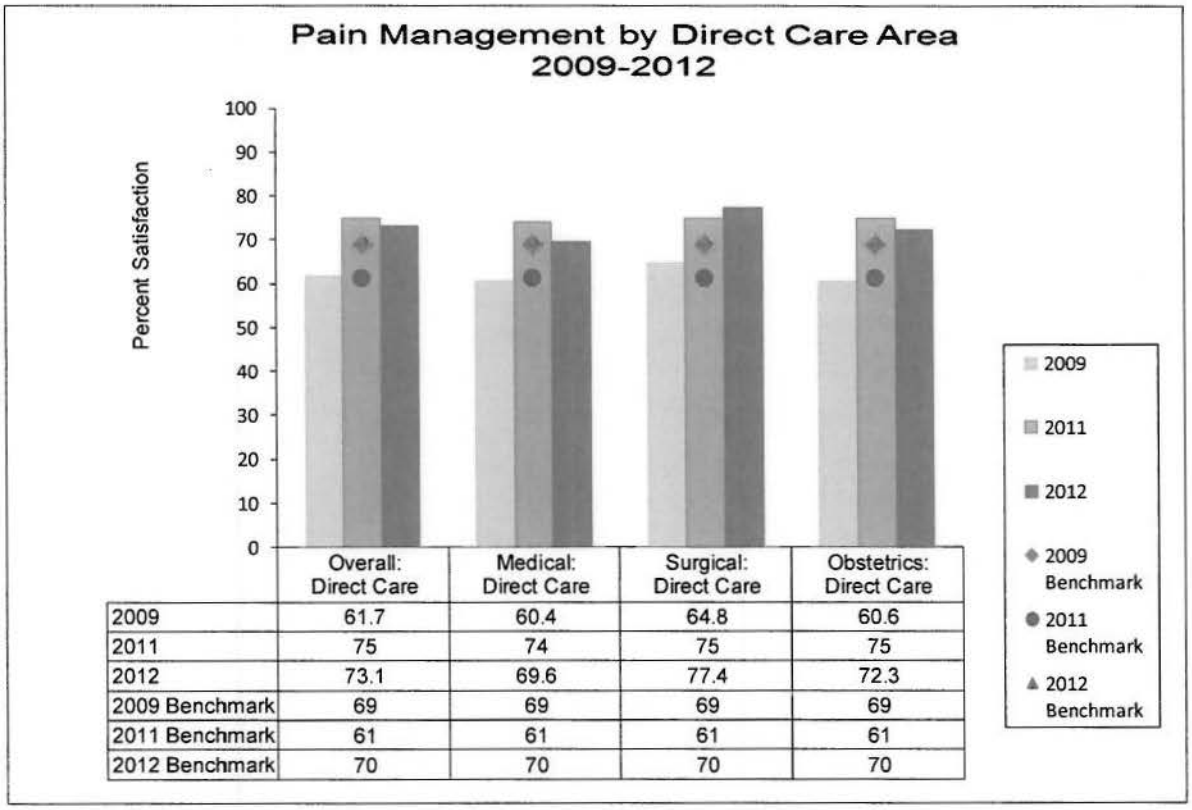
3. *Adequacy of Pain Management Services*

Congress has requested an assessment of the adequacy of DoD's pain management services be included in this annual report based on a current survey of patients managed in Department clinics. While there is no standardized survey across the DoD for patient satisfaction in the outpatient setting, the Services do measure patient satisfaction with pain management in primary care and some specialty care clinics. The PMWG is working on developing a standardized survey instrument for beneficiaries to provide this feedback in the future.

DoD has been assessing beneficiary satisfaction with inpatient pain management as part of its annual Hospital Consumer Assessment of Healthcare Provider and Systems (HCAHPS) survey. This survey was developed in partnership between the Centers for Medicare and Medicaid Services (CMS) and the Agency for Healthcare Research and Quality (AHRQ). Data are collected on a sample of inpatients treated for medical, surgical, or obstetrical diagnoses during each fiscal year (prior to 2010, samples were obtained on a calendar year basis). Overall patient satisfaction with pain management is based upon responses to two pain related questions: "During this hospital stay, how often was your pain well controlled?", and "During this hospital stay, how often did the hospital staff do everything they could to help you with your pain?" The survey question responses are grouped into four broad categories: Medical, Surgical, Obstetrical, and

Overall. Results in each category form an aggregate score which can be compared to the national benchmark in each category for all hospitals reporting results from this survey.

The below chart depicts DoD's performance on inpatient satisfaction from 2009 through 2012. Performance overall has improved from 61.7 percent satisfaction in 2009 (national benchmark 69 percent) to 73.1 percent satisfaction in 2012 (national benchmark 70 percent), with DoD satisfaction now exceeding the national benchmark in all four categories.



	Overall: Direct Care	Medical: Direct Care	Surgical: Direct Care	Obstetrics: Direct Care
2009	61.7	60.4	64.8	60.6
2011	75	74	75	75
2012	73.1	69.6	77.4	72.3
2009 Benchmark	69	69	69	69
2011 Benchmark	61	61	61	61
2012 Benchmark	70	70	70	70

4. *Pain Research*

DoD performs numerous research projects which are relevant to treating the types of acute and chronic pain suffered by members of the Armed Forces and their families. Acute and chronic pain is ubiquitous in trauma patients, and there is a high cost for pain management in Wounded Warriors. Prior to 2010, pain management was seriously underrepresented in DoD's research investment strategy, and the widespread patient dissatisfaction with pain control and other outcomes measures suggested an urgent need

for a change in this strategy. In fiscal year 2010, funding was allocated to create the Defense and Veterans Pain Management Institute (DVPMI) which allowed DoD to perform research, development, test and evaluation specifically for pain management. On May 13, 2011, the Assistant Secretary of Defense for Health Affairs designated the DVPMI as a Center of Excellence, and the organization was renamed as the Defense and Veterans Center for Integrative Pain Management.

Since 2003, DoD personnel have written and published multiple articles in world-renowned peer reviewed journals regarding the management of both acute and chronic pain; several articles are also currently pending publication (see Appendix for details on interval research and publications since submission of our 2012 report). In addition, several clinical protocols have been developed and are currently undergoing clinical trials in both battlefield and non-battlefield pain management. These protocols will greatly enhance the knowledge and management of acute and chronic pain, particularly for soldiers wounded on the battlefield where early intervention may prevent long term chronic pain and narcotic dependence. A protocol is currently under Institutional Review Board (IRB) review for a joint research effort to assess the efficacy and safety of non-pharmacologic and non-procedural complementary and alternative medicine (CAM) therapeutic modalities (for example, auricular acupuncture, therapeutic massage) for beneficiaries with chronic low back pain. Another joint protocol is under IRB review aimed to comprehensively assess effectiveness of pain management efforts; this project will provide detailed data on effects on clinical outcome, quality of care, readiness, patient and provider satisfaction, and cost (return on investment (ROI)).

Work continued in the past year on the VA/DoD Regional Anesthesia Military Battlefield Pain Outcomes Study collaborative research project. This is currently the only long term outcomes study looking at both the physical and biopsychosocial aspects of pain in wounded warriors. This study is providing valuable information on the pain experience of wounded warriors and insight into the effectiveness of traditional and novel pain management techniques. This project also represents a template for additional research collaboration between the DoD and VHA that will enhance wounded warrior care throughout the federal healthcare system.

As noted above, since our last report to Congress DoD has completed the Defense and Veterans Pain Rating Scale (DVPRS) validation study, which was the first attempt by a major medical system to develop a new pain scale and will now provide a standardized methodology to measure pain throughout the military care continuum. The Pain Management Task Force (PMTF) report of May 2010 called for a standardized pain assessment tool to provide a common set of pain measurement questions and visual cues (PMTF – 4.1.2). As a newly developed tool, the DVPRS required validation of its accuracy and utility prior to deployment in the field. Validation testing was completed, and the results were published (see appendix for reference), documenting its value to clinicians. Deployment of this tool to DoD healthcare facilities has begun, and further validation will continue as its utilization increases within both the DoD and VHA. It is expected that standardization of how patients are queried about their pain will provide the

DoD and VHA a tremendous advantage in evaluating treatment outcomes and developing effective pain treatment strategies.

5. *Training, Education and Healthcare Personnel*

Integral to achieving and maintaining a successful pain management program within the DoD is the provision of appropriate training to health care personnel with respect to the diagnosis, treatment, and management of acute and chronic pain. Further, the DoD was tasked with collaborating with the Veterans Health Administration to ensure patients receive the same type and standard of care for pain management regardless of whether they are seen in a VA or DoD facility, and that an interruption in treatment does not occur as a result of moving between health care systems. To accomplish this goal, a standardized pain management curriculum and training program are required. Since our last report, the VA and DoD have continued their collaboration, and working with the PMWG have received funding from the Healthcare Executive Council to develop a joint training and education program for providers in both systems. Work on this program has begun, and will create a basic, shared conceptualization of strong pain care practices that will be the standard in both organizations; will disseminate the pain care model throughout both systems; and will enhance continuation of pain care processes and procedures for individuals transitioning care from one organization to the other. Furthermore it will reduce inefficiencies, and it will lead to a common pain education and training curriculum that will enhance not only pain care, but also the general health care of all individuals with complex comorbidities such as traumatic brain injury, depression, and substance abuse. The program should be fully developed within the next twelve months, and implemented across both DoD and the VA within the next eighteen months.

Complementary and alternative medicine includes such modalities as acupuncture, aroma therapy, yoga, biofeedback, and therapeutic massage. While scientific evidence exists regarding some CAM therapies, for most, there are key questions that have yet to be answered through well-designed scientific studies – questions, such as whether these therapies are safe and effective for the purposes for which they are used. It is well known that there are medically acceptable practices in both complementary and traditional western medicine that are utilized which lack adequate evidence of both safety and effectiveness from well-designed research and data. Among these, CAM practices in particular are often debunked as being ineffective or as effective merely due to their placebo effect. Given this as background, DoD has been working with the VA through an educational subgroup of the PMWG to develop a tiered, standardized training and certification curriculum for acupuncture that will be tailored to the education level of the provider. Training will range from simple acupuncture such as auricular stimulation for use by technicians in the battlefield and in clinics, to advanced training for clinicians. As part of this effort, data will be collected regarding the safety and efficacy of these procedures to determine the true utility of this pain management modality. Though acupuncture is currently not a TRICARE benefit, the Services are moving forward with implementing this treatment option within MTFs. It is their belief that despite the lack of conclusive peer-reviewed scientific literature, acupuncture, as

well as other forms of CAM (that is, orthopedic manipulation therapy (OMT)), has clinical utility as an alternative to such potentially harmful treatments as chronic opioid therapy.

6. *Patient Education*

In response to the PMTF report (May 2010 – 4.1.9) recommendation for a Pain Assessment and Outcome Registry (PASTOR), DVCIPM launched the Chronic Pain Impact Network (CPAIN) PASTOR demonstration project between Walter Reed National Military Medical Center, Madigan Army Medical Center, and the University of Washington. Work has continued on the development and testing of this system during the past year. PASTOR is a patient self-reported, Internet based information system designed to support primary care physicians and pain specialists. Efficient for both patient and provider, the system generates information that can assist the provider in enhancing care by increasing awareness of real or potential pain-related health problems. Questions within the system explore substance abuse issues, behavioral health, and pain therapy effectiveness to name just a few of the topics that are addressed. The system will also aid providers in delivering effective patient-centric pain management education. PASTOR's development, which is supported by all three Services, will be the key resource for pain management outcomes data for both the DoD and VHA. PASTOR is also being designed to work with and complement the Patient Centered Medical Home.

Other patient education projects are also in place or in development at the time of this report. The Navy has developed a lecture series to assist providers in educating patients, has produced a handout on pain management to assist patients and their families better understand the pain management process, and developed an interactive video training tool aimed to be released as "General Medical Training" about prescription medication misuses for all Service members. DoD will continue to collaborate with the VA to determine if some of the projects they have already developed or that are in development process can be adapted to meet the needs of their beneficiary population. Examples of these projects include patient education materials currently available on the "My HealtheVet" website, and an on-line interactive pain evaluation, that includes a pre- and post-test, and provides the Veteran with an individualized assessment of their pain awareness and understanding. The Navy's Health Promotion and Wellness Wounded, Ill, and Injured team at the Navy and Marine Corps Public Health Center developed a patient information website with the objective of facilitating effective pain management, improved level of functioning and return to mission through the provision of resources to meet the needs of those who are wounded, ill, and injured, their family members and caregivers.

APPENDIX

Current Research Protocols

1. Regional Anesthesia Military Battlefield Pain Outcomes Study. 2008-Present
2. Study Measuring Total Plasma Ropivacaine Levels during Continuous Peripheral Nerve Catheter Infusion. 2010-Present (Study completed and preparing manuscript)
3. The Effect of Brachial Plexus Nerve Block on Distal Peripheral Nerve Conduction . 2012-Present
4. Impact of Regional Anesthesia versus General Anesthesia on Immune Modulation and Clearance of Circulating Tumor Cells in Subjects Undergoing Surgery for Primary Nonmetastatic Breast Cancer. 2011-Present
5. Sciatic Expression and Identification of differential proteins in traumatized versus non-traumatized nerves. 2011-Present
6. VIPER: Veteran Integrated Pain Evaluation Research. 2011-present
7. Randomized, double-blind, comparative-effectiveness study comparing epidural steroid injections to gabapentin in patients with lumbosacral radiculopathy. 2011– Present.
8. Ambulatory Continuous Peripheral Nerve Blocks for Treatment of Post-Amputation Phantom Limb and Stump Pain. 2011-present
9. CPAIN-(Chronic Pain Impact Network). 2011-Present
10. Study to Identify the Genetic Variations Associated with Phantom Limb Pain. 2011 - Present
11. Standard care with and without auricular acupuncture, therapeutic massage, or both for treatment of military beneficiaries with persistent low back pain. 2013-Present.
12. Comprehensive assessment of pain disease burden and effectiveness of Navy Comprehensive Pain Management Program (NCPMP) efforts throughout Navy Medicine.
13. Randomized, double-blind, comparative-effectiveness study comparing corticosteroid injections to pulsed radiofrequency for occipital neuralgia. 2012 – Present.
14. Randomized, double-blind, comparative-effectiveness study comparing epidural steroid injections to gabapentin in patients with lumbosacral radiculopathy. 2012 – Present.

15. Treating Intractable Post-Amputation Phantom Limb Pain With Ambulatory Continuous Peripheral Nerve Blocks. 2013.

16. Comparative Outcomes- Intradiscal biacuplasty versus lumbar fusion. 2010-Present

17. Comparison of the Efficacy of Two Techniques for Piriformis Muscle Injection: Ultrasound-Guided versus Nerve Stimulator with Fluoroscopic Guidance. 2011-Present.

18. Comparison of the Efficacy of Two Techniques for Sacroiliac Joint Injection: Ultrasound Guidance versus Fluoroscopic Guidance. 2012-Present.

Publications

1. Hanling S et al. Navy Medicine's Solution to Chronic Pain. Mil Med (in press).

2. Buckenmaier III C, Polomano R, Galloway K, McDuffie M, Kwon N, & Gallagher R. Preliminary Validation of the Defense and Veterans Pain Rating Scale (DVPRS) in a Military Population. Pain Medicine 2013 January; 1-14.

3. Buckenmaier III C. The Role of Pain Management in Recovery Following Trauma and Orthopedic Surgery. Journal of the American Academy of Orthopedic Surgeons 2012 August; 20(Supplement 1): S35-S38.

4. Buckenmaier III C, Mahoney P, Anton T, Kwon N, Polomano R. Impact of an Acute Service on Pain Outcomes with Combat Injured Soldiers at Camp Bastion, Afghanistan. Pain Medicine 2012 July; 13(7): 919-26

5. Polomano R, Chisolm E, Anton T, Kwon N, Mahoney P, Buckenmaier III C. A survey of Military Health Professionals' Perceptions of an Acute Pain Service at Camp Bastion, Afghanistan. Pain Medicine 2012 July; 13(7): 927-36.

6. Buprenorphine/Naloxone Therapy for Opioid Refractory Neuropathic Pain Following Traumatic Amputation. Military Medicine. In Press.

7. Ultrasound-Guided Peripheral Nerve Stimulator Placement in Two Soldiers with Acute Battlefield Neuropathic Pain. Anesthesia and Analgesia. 2012. 114(4): 875-878.

8. The Clinical Significance of QT Interval Prolongation in Anesthesia and Pain Management: What You Should and Should Not Worry About. Pain Medicine. 2012. Aug;13(8):1072-80

9. Clinical Advances in Pain Management: Federal Practitioner. 2012. 29 Supplement August.

10. Fowler IM, Tucker AA, Mendez, RJ. Treatment of Meralgia Paresthetica with Ultrasound –Guided Pulsed Radiofrequency Ablation of the Lateral Femoral Cutaneous Nerve. Pain Practice. 2012. 12(5):394-398.

11. Ilfeld, B. M., Moeller-Bertram, T., Hanling, S. R., Tokarz, K., Mariano, E. R., Loland, V. J., Madison, S. J., Ferguson, E. J., Morgan, A. C. and Wallace, M. S. (2013), Treating Intractable Phantom Limb Pain with Ambulatory Continuous Peripheral Nerve Blocks: A Pilot Study. Pain Medicine May 2013 . doi: 10.1111/pme.12080

Posters

1. Hemodynamic changes following administration of intravenous lipid emulsion in swine.
   Bedocs P, Capacchione J, Sanders C, & Buckenmaier III C. American Society of Anesthesiologists, October 2012. Poster Presentation

2. Serum Free Ropivacaine Concentrations in Trauma Patients Receiving Long-Term Continuous Peripheral Nerve Catheters.
   Blecker L, Solla C, Edwards H, Fileta B, Howard R, Morales C, & Buckenmaier III C. American Society of Anesthesiology, October 2012. Poster Presentation

3. Serum Free Ropivacaine Concentrations in Trauma Patients Receiving Long-Term Continuous Peripheral Nerve Catheters.
   Blecker L, Solla C, Edwards H, Fileta B, Howard R, Morales C, & Buckenmaier III C. Uniformed Services University, May 2012. Poster Presentation

4. Hemodynamic changes following administration of intravenous lipid emulsion in swine.
   Bedocs P, Capacchione J, Sanders C, & Buckenmaier III C. Uniformed Services University, May 2012. Poster Presentation

News

1. Featured in Montreal Gazette, April 2012, entitled "Better armour, treatment saves more wounded soldiers, but many left in chronic pain" by Sharon Kirkley

http://www.montrealgazette.com/news/Better+armour+treatment+saves+more+wounded+soldiers+many+left+chronic/6479598/story.html

2. Featured in U.S. Medicine, October 2012, entitled "Ketamine Resets System for Normal Pain Processing in Complex Syndrome Patients" by Annette Boyle; http://www.usmedicine.com/ketamine-resets-system-for-normal-pain-processing-in-complex-syndrome-patients.html

Oral Presentations

1. Yoga Therapy for Rehabilitation.
   Schoomaker A, Buckenmaier III C, & McGhee L. State of the Science Symposia, November 2012.

2. Serum Free Ropivacaine Concentrations in Trauma Patients Receiving Long-Term Continuous Peripheral Nerve Catheters.
   Blecker L, Solla C, Edwards H, Fileta B, Howard R, Morales C, & Buckenmaier III C. American Society of Anesthesiology, October 2012.

3. War on Pain: Research Programs by Defense and Veterans Center for Integrative Pain Management (DVCIPM)
   Polomano R, Kwon K, Edwards H, & Vaughan M. American Society for Pain Management Nursing (ASPMN), September 2012

4. Society of Education in Anesthesia Annual Meeting, Washington, D.C. Legal and Ethical Education Update, October 2012.

5. Demonstrating Coordinated Quality Pain Care to our services members and Veterans. Hanling S, Tiede J. 29th Annual Meeting of the American Academy of Pain Medicine, April 2013.

6. Navy Comprehensive Pain Management Program: Readiness, Restoration of Function, Relief of Pain and Research. Military Health System Research Symposium 2012, August 2012.

7. Chronic Opioid Therapy: Best Practices. Hanling SR Wounded Warrior 2012 Pain Care Symposium. Hosted by Naval Medical Center San Diego, CA. Sep 2012.

8. National Pain Endeavors. Hanling SR. Wounded Warrior 2012 Pain Care Symposium. Hosted by Naval Medical Center San Diego, CA. Sep 2012.

Training Symposiums

1. Wounded Warrior Pain Care Symposium 2012 - Annual Joint Service Symposium focused on all providers that care for pain patients. Program consists of best practice updates and skills training/certification for non-pharmacologic treatments of pain. Naval Medical Center San Diego. September 2012.