

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE (DD-MM-YYYY) 04-04-2010		2. REPORT TYPE FINAL REPORT		3. DATES COVERED (From - To) March 2009 - April 2010	
4. TITLE AND SUBTITLE Business Case Analysis: Establishment of an Interdisciplinary Pain Center at Dwight D. Eisenhower Army Medical Center; Projections for Fiscal Years 2010 - 2014				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
6. AUTHOR(S) David W. Webb					
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Dwight D. Eisenhower Army Medical Center East Hospital Road Fort Gordon, GA 30905				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) US Army Medical Department Center and School Building 2841 3151 Scott Road, Suite 1411 Fort Sam Houston, Texas 78234				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release. Distribution is unlimited.					
13. SUPPLEMENTARY NOTES None					
14. ABSTRACT This project analyzes the likely costs and benefits associated with the establishment of an Interdisciplinary Pain Center (IPC) in order to reduce Purchased Care System (PCS) costs from the local network, increase patient continuity of care and improve patient outcomes. Two options were analyzed: (1) establishment of an IPC, Most Likely (IPC ML) and (2) establishment of an IPC, Worst Case (IPC WC). The IPC ML option projects a net present value (NPV) of positive \$998,670 at a 2.3 percent discount rate and return on investment (ROI) of positive 21.4% over the 60 month evaluation period versus the IPC WC option which projects a net present value (NPV) of negative (\$600,130) at a 2.3 percent discount rate and return on investment (ROI) of negative (13.6) percent over the 60 month evaluation period. The IPC ML scenario breaks even in less than 24 months and is profitable the first year versus the IPC WC scenario which does not break even or become profitable during the 60 month evaluation period.					
15. SUBJECT TERMS Business Case Analysis, Interdisciplinary Pain Center					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 47	19a. NAME OF RESPONSIBLE PERSON Education Technician
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U			19b. TELEPHONE NUMBER (Include area code) (210) 221-6443

Running Head: ESTABLISHMENT OF AN IPC

Army-Baylor University Graduate Program
In Health and Business Administration

Business Case Analysis: Establishment of an Interdisciplinary
Pain Center at Dwight D. Eisenhower Army Medical Center;
Projections for Fiscal Years 2010 - 2014

Graduate Management Project

Presented To

LTC James A. Laterza, MHA, FACHE, Preceptor

LTC Lee W. Bewley, Ph.D., FACHE, Faculty Reader

In Partial Fulfillment of
Masters of Health Administration

By

MAJ David W. Webb

Dwight D. Eisenhower Army Medical Center, Fort Gordon, Georgia

Date Complete: April 04, 2010

Date Submitted: April 04, 2010

Disclaimer

The views expressed in this document are those of the author and do not reflect the official policy or position of Dwight D. Eisenhower Army Medical Center, the Department of Army, the Department of Defense, the United States Government, or Baylor University.

Acknowledgements

I would like to express my appreciation to LTC James Laterza, Deputy Commander for Administration, for his guidance in the development and completion of this project. I would also like to thank the following personnel for their assistance with the data collection, analysis, and / or guidance in the development and completion of this project: Mr. Keith Sickafoose, Ms. Toni Cosby, and Ms. Karen Coleman in the Managed Care Division; MAJ Matthew Gorski, Ms. Camilla Miranda, Mrs. Pamela Givens, Ms. Deborah Tippit, and Ms. Yolanda Kelly in the Resource Management Division; LTC David Wilkie, LTC Mary Earwood, and Mrs. Tammy Price in the Neurology and Physical Medicine Clinics; COL Edward Schowalter, MAJ Jeffrey Neigh, and Ms. Claudia Douglas-Smith in Pharmacy; Mr. Robin Haire in the Logistics Division; LTC Stacia Spridgen and Dr. Eugene Moore with the DoD Pharmacoeconomic Center and Mr. Kevin Book with the MEDCOM Program Analysis and Evaluation Directorate. Finally, a special thanks to CPT Bradford Membel, Baylor resident, for his support as a sounding board and friend through the completion of this project and residency.

Abstract

This project analyzes the likely costs and benefits associated with the establishment of an Interdisciplinary Pain Center (IPC) in order to reduce Purchased Care System (PCS) costs from the local network, increase patient continuity of care and improve patient outcomes. The recommendation is to establish an IPC no later than 01 October 2009. Two options were analyzed: (1) establishment of an IPC, Most Likely (IPC ML) and (2) establishment of an IPC, Worst Case (IPC WC). The IPC ML option projects a net present value (NPV) of positive \$998,670 at a 2.3 percent discount rate and return on investment (ROI) of positive 21.4% over the 60 month evaluation period versus the IPC WC option which projects a net present value (NPV) of negative (\$600,130) at a 2.3 percent discount rate and return on investment (ROI) of negative (13.6) percent over the 60 month evaluation period. The IPC ML scenario breaks even in less than 24 months and is profitable the first year versus the IPC WC scenario which does not break even or become profitable during the 60 month evaluation period.

Business Case Analysis

**Establishment of an Interdisciplinary Pain Center for
Dwight D. Eisenhower Army Medical Center**

Table of Contents

	Page
Disclaimer.....	2
Acknowledgements.....	3
Abstract.....	4
List of Tables.....	7
List of Figures.....	8
Executive Summary.....	9
A. Introduction.....	10
A.1 Background and Literature Review.....	10
A.2 Subject of the case.....	19
A.3 Purpose of the case.....	20
B. Methods and Assumptions.....	22
B.1 Scenarios and data.....	22
B.2 Scope of the case.....	25
B.3 Financial metrics.....	28
B.4 Benefits.....	29
B.5 Cost.....	29
B.6 Major Assumptions.....	30
C. Business Impacts.....	30
C.1 Overall results.....	30
C.2 Benefits.....	34
C.3 Costs.....	36

D. Sensitivities, Risks, and Contingencies.....	42
D.1 Sensitivities.....	42
D.2 Risks.....	42
D.3 Contingencies.....	43
E. Recommendations and conclusions.....	43
F. Appendix A (OTSG Benchmarks).....	45
G. References.....	46

List of Tables

Table 1	32
IPC ML Summary Costs and Benefits	
Table 2	33
IPC WC Summary Costs and Benefits	
Table 3	34
IPC ML Network/Purchased Care Savings Projections	
Table 4	34
IPC ML Network/Purchased Care Savings Projections	
Table 5	35
IPC ML Prescription Purchased Care Avoidance Projections	
Table 6	35
IPC ML Prescription Purchased Care Avoidance Projections	
Table 7	36
IPC ML Revenue Benefits	
Table 8	36
IPC WC Revenue Benefits	
Table 9	37
IPC ML and IPC WC Capital Asset Expenses	
Table 10	38
IPC ML and IPC WC Operating Expenses	
Table 11	39
IPC ML and IPC WC General Services (GS) Personnel Costs	
Table 12	39
IPC ML and IPC WC Annual Total Personnel Costs by FTE	
Table 13	40
IPC ML Marginal Supply Costs	
Table 14	41
IPC WC Marginal Supply Costs	

List of Figures

Figure 1 27
DDEAMC 40 Mile Catchment Area

**Business Case Analysis: Establishment of an Interdisciplinary
Pain Center for Dwight D. Eisenhower Army Medical Center**

Executive Summary

This business case analysis is intended to identify and examine the expected costs and benefits associated with the proposed establishment of an Interdisciplinary Pain Center (IPC) at Dwight D. Eisenhower Army Medical Center (DDEAMC) for Fiscal Years (FY) 2010 - 2014. The implementation of the IPC is expected to increase the efficiency of medical services provision and continuity of care for 100 percent of Active Duty (AD) beneficiaries and 75 percent of non-active duty beneficiaries through the recapture of purchased care services to DDEAMC.

The purpose of this analysis is to provide the DDEAMC Executive Committee with the required costs and benefits projections to decide if the organization should pursue the IPC venture or continue to refer the majority of pain service to the purchase care system.

The IPC most likely option projects a net present value (NPV) of positive \$998,670 at a 2.3 percent discount rate and return on investment (ROI) of positive 21.4% versus the IPC worst case option which projects a net present value (NPV) of negative (\$600,130) at a 2.3 percent discount rate and return on investment (ROI) of negative (13.6) percent over the 60 month evaluation period.

A. Introduction

A.1 Background

Dwight D. Eisenhower Army Medical Center (DDEAMC)

DDEAMC is located at Fort Gordon on the southwest side of Augusta, Georgia. DDEAMC is part of the Southeast Regional Medical Command (SERMC), which is headquartered at Fort Gordon. This is noteworthy since the DDEAMC Commander and many other staff members are dual hatted as the SERMC equivalent and responsible for operational oversight of five other Military Treatment Facilities (MTF).

Augusta, GA

Augusta's largest employment base is its medical services industry, which has been referred to as the "economic engine" for the area (CSRA 2009 Master Plan, PG 16). The majority of health services for the area are delivered by six facilities; University Hospital, Doctor's Hospital, Trinity Hospital, the Medical College of Georgia, the Charlie Norwood Veteran Affairs Medical Center (CNVAMC) and DDEAMC.

Previous IPC Proposal

The idea of an IPC was originally proposed through a Joint Incentive Fund (JIF) venture between DDEAMC and CNVAMC in January 2009. The proposal established the center at both locations with coordination and sharing of resources between the two. However, that venture was not approved by the US Army Medical Command (MEDCOM) due to a much higher operating cost for

two facilities and led to this revision of the previous business case analysis as a single facility venture.

Population Characteristics / Risk Factors

Access to Care (ATC)

The primary concern within the Military Health System (MHS) at this time appears to be Access to Care (ATC) and the negative effects if it is not adequate for beneficiaries. Since 2003, the MHS Purchased Care Services (PCS) have significantly increased from around 30 percent to nearly 70 percent (Phillpot, 2008).

Review of the Managed Care Referral Management Database suggests DDEAMC's pain care referrals to PCS increased 13% on average for FY 06-08.

Military Deployments

The extended GWOT campaign results in a notable number of service members who deploy multiple times which increases the likelihood of injury and the experience of pain. Extended deployments may be associated with significant psychosocial stressors that increase the likelihood of the development of chronic pain syndromes, even in the absence of identifiable injury (Gironde, Clark, Massengale & Walker, 2006).

Combat survival rates are increasing with the availability of battlefield surgical care, advances in medical equipment/supply technology, and expedient medical evacuation to higher levels of care. This higher survival rate results in a greater

number of injured service members the Military Health System must be prepared to care for upon evacuation or redeployment (Clark, Bair, Buckenmaier, Gironda, & Walker, 2007).

Pain

Pain is categorized from acute to chronic.

Acute pain is the normal, predicted physiological response to a noxious chemical, thermal or mechanical stimulus and typically is associated with invasive procedures, trauma and disease. It is generally time-limited.

Chronic pain is a state in which pain persists beyond the usual course of an acute disease or healing of an injury, or that may or may not be associated with an acute or chronic pathologic process that causes continuous or intermittent pain over months or years (DHSS, May 06, 2009).

Among individuals with chronic conditions, the most frequent site of primary pain was the back (46.6%), followed by the lower limbs (31.3%), upper limbs (7.5%), neck (6%), abdomen (1.6%), and genitals (1.5%). Headache and generalized pain were the primary conditions for 4.5% and 1.5% of the chronic participants, respectively. A substantial majority (81.8%) of the chronic pain subsample had diagnoses of musculoskeletal and connective tissue disorders (Gironda, et al., 2006).

A study of 15,000 Persian Gulf War (PGW) veterans revealed high prevalence of headaches (54%), joint pain (45%), back pain (44%), muscle pain (33%), and abdominal pain (23%). The most

frequently diagnosed medical conditions were musculoskeletal and connective tissue diseases (25% and 36%, respectively) (Girona, et al., 2006).

There are several factors that may place OEF/OIF veterans at a higher risk than those who served in the PGW. High-explosive blast injuries, gunshot wounds, and injuries resulting from motor vehicle accidents, all of which have been associated with persistent pain conditions, have claimed many more casualties than in the PGW. The extended duration of hostilities in Afghanistan and Iraq coupled with lengthy and repeated deployments for many units has increased exposure to these and other risks such as the typical noncombat injuries incurred during field operations.

Pain and Interdisciplinary Pain Management

Pain Management

Pain is a multidimensional phenomenon usually associated with injury or disease and involving the experiences of pain and suffering, and is commonly associated with disability and emotional distress. Effective pain management requires a comprehensive assessment that considers multiple biomedical, psychological, interpersonal, and spiritual factors; the development of an individually tailored plan for care; ongoing reassessment of the effectiveness of pain interventions; and patient and family education. Particular challenges are associated with assessment and management of pain in the

cognitively-impaired veteran, and with efforts to balance optimal pain management with rehabilitation goals. Consultation with a range of specialists with expertise in the management of specific pain conditions may routinely be necessary (VHA Handbook, 2005).

Interdisciplinary Team (IDT)

An interdisciplinary team is characterized by a variety of disciplines working together as a team in the assessment, planning, and implementation of a person's care plan. To avoid fragmented care, continuous communication, collaboration, and coordination is critical. IDT functions as a unit, cooperating among disciplines to achieve maximum patient and family outcomes (VHA Handbook, 2005).

Based on evidence of the effectiveness of multidisciplinary and cognitive-behavioral therapy treatment of Persian Gulf War (PGW) syndrome conditions, greater access to these interventions should be made available to OEF/OIF veterans, particularly those who do not respond to alternative pain interventions (Clark, 2004). The US Army Office of the Surgeon General (OTSG) and US Army Medical Command (MEDCOM) provide the following policy guidance in OTSG/MEDCOM Policy Memo 09-063, August 04, 2009.

Although the modalities traditionally used in the treatment of pain can be part of efficacious, safe and appropriate treatment plans, providers should consider treatment plans which include multidisciplinary, multimodal approaches to pain management. These plans should include complimentary, alternative, and cutting edge methods and technologies when

deemed appropriate by the multidisciplinary team and the patient.

Providing a holistic and multidisciplinary approach for patients with potentially chronic issues has shown promise in effecting positive outcomes. Creating a comprehensive approach to care that incorporates best practices will enable soldiers and their families to receive state of the art care.

Several types of healthcare interventions have been shown to be effective means of reducing the disability of pain once it has already occurred. Loisel et al., (1997) compared the effectiveness of usual care with clinical and occupational interventions on Canadian employees and found that those receiving both clinical and occupational interventions returned to work nearly twice as quickly as those receiving usual care (Pizzi, Carter, Howell, Vallow, Crawford, & Frank, 2005).

Multidisciplinary approaches have also been shown to reduce work loss associated with chronic pain. Thomsen, et al., (2002) evaluated the effectiveness of multidisciplinary care for patients with chronic pain, which included physicians, nurse case managers, social workers, psychologists, physical therapists, and pharmacists. Results demonstrated that the intervention reduced welfare and sickness benefit costs. Another study demonstrated that patients who participated in interdisciplinary pain rehabilitation programs experienced similar pain reductions to other management methods, but better outcomes in the areas of medication and hospital utilization (Pizzi, et al., 2005).

The DoD and VA have been developing and implementing strategies to emplace required services to treat our service members which facilitate return to duty or transition from the service.

Implications for Pain Conditions

Twenty-three percent of soldiers evacuated to Landstuhl Army Medical Center for additional medical care return to duty from the medical center in Germany while the remaining 77 percent are evacuated to the United States. 51.4 percent return to duty, the remaining 25.6 percent go before a medical board to determine if they will be separated from military service or can return to duty (AUSA, 2008). The impact is 19.7 percent of evacuated service members are medically boarded and the ability to retain these personnel on active duty results in a disability and DoD recruitment/retraining cost savings.

As improvements in the early identification of pain-related problems continue, increased demands on pain care resources must be expected. By anticipating the needs of returning OEF/OIF military personnel and implementing corresponding changes in healthcare systems responsible for their care we may be able to minimize their suffering while maximizing their potential for improvement (Clark, 2004).

Additionally, if the high rates of pain-related problems among OEF/OIF returnees enrolling for VA medical care are replicated

Running Head: ESTABLISHMENT OF AN IPC

among OEF/OIF veterans not seeking VA treatment, community practitioners will need to be aware of the importance of assessing for the presence of pain, as well as other unexplained illness symptoms, among post-deployment military personnel (Clark, 2004).

Goals and Objectives

The goals of the DDEAMC Interdisciplinary Pain Center are:

1. To provide health services more efficiently and conveniently to our beneficiaries while increasing their quality of care.

The objectives to accomplish this goal will be increased access to and quality of care for pain patients through timely delivery of integrated pain management services and improved patient outcomes. The IPC mission will be to provide and promote innovative, integrative, high quality, multidisciplinary bio-psycho-social clinical care that incorporates the integration of conventional medical care.

2. To reduce purchased health care costs and increase the continuity of care for our beneficiaries.

Objectives to accomplish this goal will be the reduction of referred services by DDEAMC Primary Care Managers (PCM) to PCS for 100 percent of Active Duty (AD) beneficiaries and 75 percent of Active Duty Family Members (ADFM), Retirees (RET), and Retiree Family Members (RETFM) beneficiaries. A 90 day period is the target for transitioning patients from PCS to

direct care services in the IPC.

Decreased cost of healthcare delivery through reduced surgical interventions and procedures for musculo-skeletal pain-related conditions. The IPC will focus on musculoskeletal pain-related conditions. As musculoskeletal pain impedes military readiness, retention, and overall wellness, targeting improved treatments for musculoskeletal pain will improve quality of care in our beneficiary population. Recapture of patients into this type of operation should result in decreased AD patient treatment times (increased productivity) and decrease the retail pharmacy prescription costs (ADFM, RET, and RETFM). A staff of civilian employees should provide greater continuity of care for our beneficiaries.

3. To recapture direct care market share and decrease reliance on the use of external providers for the provision of pain management services for DDEAMC beneficiaries.

The objective to meeting this goal is the recapture of 151 AD and 1281 ADFM, RET, and RETFM beneficiaries that are currently referred to the network for care. The impact will be increased continuity of pain management services, especially during the transition of AD service members to Return to Duty (RTD) or Veteran status.

4. To improve the operational efficiency of the MHS. An explicit goal of the team, once trained, is for each patient

to have minimal number of clinical referrals and encounters in order to achieve optimal clinical outcome in terms of symptoms, function, and reduction in overall utilization of medical services.

In order to meet this goal, the IPC will recruit and train a full clinical team of conventional medical clinicians whose practice will focus on improved quality of care for musculoskeletal pain conditions and deliver patient focused, coordinated, comprehensive, efficient medical care. The team will utilize data evaluation and analysis tools for care provided by the IPC, while providing state-of-the-art education to providers and patients in the areas of integrative pain medicine.

A.2 Subject of the case

This business case analysis is intended to identify and examine the expected costs and benefits associated with the proposed establishment of an Interdisciplinary Pain Center (IPC) at Dwight D. Eisenhower Army Medical Center (DDEAMC). The implementation of the IPC is expected to increase the efficiency of medical services provision and continuity of care for 100 percent of Active Duty (AD) beneficiaries and 75 percent of non-active duty beneficiaries through the recapture of purchased care services to DDEAMC. Pain related medical services continue to exceed DDEAMC's capability; purchased care services for pain in the local community has increased 39 percent over the last

three years. This proposed IPC is designed to expand the existing Physical Medicine and Rehabilitation (PM&R) services by developing a team of providers and support staff with multidisciplinary skills. This team will conduct comprehensive assessments of the patient conditions; develop a treatment plan; coordinate and review care requirements; monitor progress; and maintain open lines of communication to ensure the most effective and efficient treatments are provided in one convenient location. The analysis covers fiscal years 2010 through 2014.

A.3 Purpose of the case

The intent of this analysis is to provide the DDEAMC Executive Committee with the required costs and benefits projections to decide if the IPC venture is of value to the organization and if DDEAMC will submit this analysis to the U.S. Army Medical Command to obtain funding through the Military Health System Support Initiative (MHSSI) program starting in fiscal year 2010 or continue to purchase care from network providers.

Opportunities

1. No center like this exists in Augusta. A market analysis was conducted to determine the existence of similar clinics within the Augusta, Georgia area and none were located.

2. Decrease in Outpatient Prospective Payment System (OPPS) reimbursement. Reimbursement rates will decrease from 200 percent to 100 percent over the next four year period (2009 -

2012) which could result in network providers terminating acceptance of TRICARE beneficiaries as patients or limiting the number accepted.

3. Current economic conditions could make it more cost efficient for beneficiaries to receive care at DDEAMC. TRICARE Standard and Extra beneficiaries could receive pain services at no cost (e.g. no co-pay) on a space available basis.

4. Increasing number of beneficiary population requiring services. DDEAMC's purchased pain care has increased 13% on average over the last three years. (Data Source: Managed Care Referral Management Database 04 MAY 09)

5. Regional Referrals can be accepted from other medical Treatment facilities in the SERMC (e.g. Fort Jackson, Fort Benning, Fort Stewart, and CNVAMC) which are currently referring patients to local PCS.

6. Current capabilities within the Neurology Section (e.g. TBI and Physical Medicine and Rehabilitation) and other DDEAMC sections facilitate the establishment of an Integrated Pain Center.

Threats

1. The discontinuation of MEDCOM funding for this venture due to MHS budget constraints or sub-standard IPC performance.

2. Ineffective management of the IPC that does not achieve and/or sustain the required level of performance.

Problems

1. Access to care capacity for pain services cannot meet increasing demand and will likely continue to exceed capacity even with the implementation of the IPC.

2. Continuity of care is compromised as more beneficiaries are referred outside the direct care system and into the purchased care system.

Historical Factors

Pain studies and DDEAMC data analysis suggest an increasing prevalence of conditions requiring pain intervention within our beneficiary population.

Limitations or Constraints

1. The ability to recruit and retain IPC staff personnel based on MHS financial compensation limits.

2. The two year MEDCOM funding timeline, if the IPC is approved as a Military Health System Support Initiative (MHSSI).

B. Methods and Assumptions

B.1 Data Sources and Scenarios

Data Sources

The Charlie Norwood Veteran Affairs Medical Center (CNVAMC) and DDEAMC Joint Incentive Fund (JIF) proposal contributed to the development of costs, benefits, goals, and objectives for this proposal.

The Army Medical Department (AMEDD) Business Case Analysis

Running Head: ESTABLISHMENT OF AN IPC

(BCA) Tool, FY09, version 2C, was used to calculate cost and benefit data utilizing the Prospective Payment System (PPS) estimated FY09 reimbursement rates; the 2009 General Schedule (GS) employee salary rates; and the average reduced PCS cost per Relative Value Unit (RVU) rates by beneficiary category.

The MHS Medical Management (M2) Database provided the FY08 PCS encounters by beneficiary category used to calculate the PCS cost savings/avoidance in the AMEDD BCA Tool.

The Expense Assignment System IV (EAS IV) provided the total marginal supply costs for FY08 used to calculate the average marginal supply cost per RVU for the DDEAMC Physical Medicine and Rehabilitation (PM&R) and Neurology clinics. However, it is important to clarify that this figure includes outpatient prescription costs associated with care where the PCS costs do not include the prescription costs.

The DoD Pharmacoeconomics Center (PEC) provided the FY08 data for the DDEAMC area used to calculate the average purchased care avoidance difference for DDEAMC provided prescriptions versus retail pharmacy provided prescriptions. The data are for ingredient cost only to facilitate an accurate comparison.

Scenarios

The expected costs and benefits for two scenarios were used to develop this analysis. The analysis only uses the beneficiary population assigned to a DDEAMC Primary Care Manager (PCM) which

refers their care to the PCS due to non-availability of direct care services. Therefore, it is expected that the implementation of an IPC will provide DDEAMC capacity for direct care referrals unless beneficiaries elect to switch their TRICARE category and/or pay for a portion of pain services received in the PCS.

Likely increases in demand for IPC services (Avg. 13% per year) were not included in the analysis because the ability of the IPC to absorb the additional workload is uncertain without additional facility space for expansion. However, it is assumed that if the IPC is successful, additional space and resources for increased demand will be justified.

Scenario one, IPC Most Likely (IPC ML) establishes an operation within DDEAMC that recaptures 100 percent of AD beneficiaries and 75 percent of ADFM, RET, and RETFM beneficiaries. This scenario uses prescription cost avoidance for 25 percent of ADFM, RET, and RETFM beneficiaries.

Scenario two, IPC Worst case (IPC WC) establishes an operation within DDEAMC that recaptures 90 percent of AD beneficiaries and 50 percent of ADFM, RET, and RETFM beneficiaries. This scenario uses a prescription cost avoidance for 10 percent of ADFM, RET, and RETFM beneficiaries.

The financial projections for these two scenarios are based on the establishment of an IPC versus maintaining the status quo of referring the majority of pain services to the PCS.

Both the IPC ML and IPC WC scenarios require the installation of automation, furniture, physical fitness machines, and an electromyography (EMG) machine.

B.2 Scope of the case

Time

The analysis period for this project is five fiscal years (FY), 01 October 2009 - 30 September 2014. It is important to mention that if this analysis is submitted to MEDCOM for funding through the Military Health System Support Initiative program, a positive return on investment (ROI) is required by the first day of the 25th month.

Assuming successful implementation of this project, it is expected that DDEAMC will have to look five or more years out to estimate equipment replacement costs. Therefore the following time periods are provided as estimated equipment replacement timelines; EMG machine - eight years; Physical Fitness equipment - three years; automation equipment - three years; and furniture - ten years.

Organizations

The scope of this analysis is limited to DDEAMC; however benefits of the IPC will be realized at higher organizations (e.g. US Army and DoD).

Functions or Positions

The IPC requires a team of personnel to successfully meet the goals, objectives, and financial projections of the proposed

venture. The team requires one each of the following specialties: Pain Management Physician, Clinical Psychologist, Social Worker, Certified Occupational Therapy Assistant, Licensed Practical Nurse, Physical Therapy Assistant, Medical Support Assistant, and Physician Assistant with consultation from Drug and Alcohol Detoxification services, Neurosurgery, Orthopedic Surgery and Gynecology. In this analysis, only unstaffed or increases in staff requirements are included in the personnel costs.

B.3 Financial metrics (\$ US Dollars)

Net Present Value (NPV)

The total net present value of cash flow is discounted at 2.3 percent for the 60 month analysis period. The 2.3 percent discount rate is established by the Office of Management and Budget (OMB) and is the standard rate in the AMEDD Business Case Analysis Tool FY09 version 2C.

Simple Return on Investment (ROI)

The simple ROI is derived using this formula (BCA Tool):

$$\text{Simple ROI} = (\text{Total Benefits} - \text{Total Costs} / \text{Total Costs})$$

Payback Period

The number of years required for the initial investment costs to be recovered from the gains (Schmidt, 2002).

Average Non-Active Duty Prescription Cost Avoidance

The average non-active duty prescription cost avoidance is derived using this formula:

$$\frac{\text{Average Non-Active Duty Retail Prescription Costs} - \text{Average Non-Active Duty DDEAMC Prescription Costs}}{\text{Average Non-Active Duty Retail Prescription Costs}}$$

B.4 Benefits

The financial benefits expected to be realized by DDEAMC with the establishment of an Interdisciplinary Pain Center are decreased referrals of pain service from the direct care system to the PCS, decreased prescription medication costs of non-active duty beneficiaries, and increased third party collections.

Additional financial benefits that are expected to be realized outside the DDEAMC organization or that could not be estimated with available data include: Increased productivity of active duty personnel with an approximate value of \$3,500.00 per soldier per year; Decreased recruitment/training cost of approximately \$119,000 per soldier; Decreased Medical Evaluation Board (MEB) costs; Decreased disability costs; and Decreased surgery and procedure costs.

The non-financial benefits are increased access to care, increased continuity of care, and increased patient satisfaction.

B.5 Costs

The fixed costs associated with this analysis include: personnel, physical fitness equipment, medical equipment maintenance, and personnel training costs. The only variable cost associated with this analysis is supply cost.

B.6 Major Assumptions

1. Recapture rates are achievable since beneficiaries are assigned to DDEAMC PCMs which will refer them to the IPC versus having to recapture from a PCS PCM. Additionally, it is expected that non-active duty beneficiaries are likely to accept referral to the IPC based on the comprehensive services provided and the unwillingness to switch to a TRICARE beneficiary status that requires them to pay a portion of the services received in the PCS.

2. Prescription cost avoidance is achievable since patients are likely to fill prescriptions at DDEAMC out of convenience when they are already in the facility as opposed to going to a retail pharmacy which requires additional travel time and a co-pay.

3. Third party collections rates remain at or above recent levels.

4. Inflation rate will not exceed 2.3 percent.

5. DDEAMC's ability to staff the IPC team and transition patients from the PCS within the proposed 90 day period.

C. Business Impacts

C.1 Overall results

The expected financial projections for the two IPC scenarios are displayed in Table 1, page 32 and Table 2, page 33.

The critical data required for decision by the DDEAMC

Running Head: ESTABLISHMENT OF AN IPC

Executive Committee and MEDCOM are the NPV, ROI, and payback period. The IPC ML option projects a NPV of positive \$998,670 at a 2.3 percent discount rate and ROI of positive 21.4% over the 60 month evaluation period versus the IPC WC option which projects a NPV negative \$(600,130) at a 2.3 percent discount rate and ROI of negative (13.6) percent over the 60 month evaluation period.

The IPC ML scenario breaks even in less than 24 months and is profitable the first year versus the IPC WC scenario which does not break even or become profitable during the 60 month evaluation period.

Table 1

IPC ML Summary Costs and Benefits

Interdisciplinary Pain Center – Most Likely

\$ Dollars in 1,000s

ANNUAL COSTS	FY10	FY11	FY12	FY13	FY14
Personnel					
GS/NSPS	\$ 501.45	\$ 668.60	\$ 668.60	\$ 668.60	\$ 668.60
Contract	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Expenses	\$ 265.36	\$ 341.90	\$ 341.90	\$ 341.90	\$ 341.90
Capital Assets	\$ 80.70	\$ 5.00	\$ 5.00	\$ 10.75	\$ 5.00
Total Costs	\$ 847.51	\$ 1,015.50	\$ 1,015.50	\$ 1,021.25	\$ 1,015.50
ANNUAL BENEFITS					
Savings/Revenue					
Personnel Reductions					
GS/NSPS	\$ -	\$ -	\$ -	\$ -	\$ -
Contract	\$ -	\$ -	\$ -	\$ -	\$ -
O&M	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Assets	\$ -	\$ -	\$ -	\$ -	\$ -
Revenue (Non-PBAM)	\$ 16.89	\$ 22.52	\$ 22.52	\$ 22.52	\$ 22.52
Purchased Care Savings	\$ 783.90	\$ 1,045.20	\$ 1,045.20	\$ 1,045.20	\$ 1,045.20
Sub-Total Savings/Revenue	\$ 800.79	\$ 1,067.72	\$ 1,067.72	\$ 1,067.72	\$ 1,067.72
Other					
Cost Avoidance	\$ -	\$ -	\$ -	\$ -	\$ -
Productivity Improvement	\$ -	\$ -	\$ -	\$ -	\$ -
Purchased Care Avoidance	\$ 141.28	\$ 188.37	\$ 188.37	\$ 188.37	\$ 188.37
Sub-Total Other	\$ 141.28	\$ 188.37	\$ 188.37	\$ 188.37	\$ 188.37
Total Benefits	\$ 942.07	\$ 1,256.09	\$ 1,256.09	\$ 1,256.09	\$ 1,256.09
Net Comparison (Benefits - Costs)					
Annual Net	\$ 94.56	\$ 240.59	\$ 240.59	\$ 234.84	\$ 240.59
Cumulative Net	\$ 94.56	\$ 335.15	\$ 575.74	\$ 810.58	\$ 1,051.18
Prospective Payment System					
Adjusted PPS - 68%	\$ 699.21	\$ 932.28	\$ 932.28	\$ 932.28	\$ 932.28
Summary Analysis for 5 Years					
Total Costs	\$ 4,915.27	Net Return		\$ 1,051.18	Break Even
Total Benefits	\$ 5,966.44	Simple ROI		21.4%	\$ 3,899.77
Net Present Value (NPV) at 2.3%	\$ 998.67	Projected Payback in Years		0.0	Years

Table 2

IPC WC Summary Costs and Benefits

Interdisciplinary Pain Center - Worst Case
\$ Dollars in 1,000s

ANNUAL COSTS	FY10	FY11	FY12	FY13	FY14
Personnel					
GS/NSPS	\$ 501.45	\$ 668.60	\$ 668.60	\$ 668.60	\$ 668.60
Contract	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Expenses	\$ 188.07	\$ 238.84	\$ 238.84	\$ 238.84	\$ 238.84
Capital Assets	\$ 80.70	\$ 5.00	\$ 5.00	\$ 10.75	\$ 5.00
Total Costs	\$ 770.22	\$ 912.44	\$ 912.44	\$ 918.19	\$ 912.44
ANNUAL BENEFITS					
Savings/Revenue					
Personnel Reductions					
GS/NSPS	\$ -	\$ -	\$ -	\$ -	\$ -
Contract	\$ -	\$ -	\$ -	\$ -	\$ -
O&M	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Assets	\$ -	\$ -	\$ -	\$ -	\$ -
Revenue (Non-PBAM)	\$ 11.26	\$ 15.02	\$ 15.02	\$ 15.02	\$ 15.02
Purchased Care Savings	\$ 536.20	\$ 714.94	\$ 714.94	\$ 714.94	\$ 714.94
Sub-Total Savings/Revenue	\$ 536.20	\$ 729.96	\$ 729.96	\$ 729.96	\$ 729.96
Other					
Cost Avoidance	\$ -	\$ -	\$ -	\$ -	\$ -
Productivity Improvement	\$ -	\$ -	\$ -	\$ -	\$ -
Purchased Care Avoidance	\$ 56.58	\$ 75.44	\$ 75.44	\$ 75.44	\$ 75.44
Sub-Total Other	\$ 56.58	\$ 75.44	\$ 75.44	\$ 75.44	\$ 75.44
Total Benefits	\$ 604.04	\$ 805.39	\$ 805.39	\$ 805.39	\$ 805.39
Net Comparison (Benefits - Costs)					
Annual Net	\$ (166.18)	\$ (107.05)	\$ (107.05)	\$ (112.80)	\$ (107.05)
Cumulative Net	\$ (166.18)	\$ (273.23)	\$ (380.28)	\$ (493.08)	\$ (600.13)
Prospective Payment System					
Adjusted PPS - 68%	\$ 478.27	\$ 637.70	\$ 637.70	\$ 637.70	\$ 637.70
Summary Analysis for 5 Years					
Total Costs	\$ 4,425.75	Net Return		\$ (600.13)	Break Even
Total Benefits	\$ 3,825.62	Simple ROI		-13.6%	#N/A
Net Present Value (NPV) at 2.3%	\$ (576.22)	Projected Payback in Years		> 5	Years

C.2 Benefits

Purchased Care Savings

Purchased care savings projections provide the most significant value in this analysis. The analysis results for this category by scenario and FY are displayed in Table 3 and Table 4, page 34.

Table 3

Network / Purchased Care Savings Projections - IPC ML

Interdisciplinary Pain Center - Most Likely					
Projected Beneficiary	AD	ADFM	Retirees/Others	TFL	Total
Breakout (%)	8%	19%	73%	0%	100%
By Product Line	FY10	FY11	FY12	FY13	FY14
Outpatient Savings	\$ 783,901.66	\$ 1,045,201.74	\$ 1,045,201.74	\$ 1,045,201.74	\$ 1,045,201.74
Other	\$ 783,901.66	\$ 1,045,201.74	\$ 1,045,201.74	\$ 1,045,201.74	\$ 1,045,201.74
Total Purchased Care Savings	\$ 783,901.66	\$ 1,045,201.74	\$ 1,045,201.74	\$ 1,045,201.74	\$ 1,045,201.74

Table 4

Network / Purchased Care Savings Projections - IPC WC

Interdisciplinary Pain Center - Worst Case					
Projected Beneficiary	AD	ADFM	Retirees/Others	TFL	Total
Breakout (%)	8%	19%	73%	0%	100%
By Product Line	FY10	FY11	FY12	FY13	FY14
Outpatient Savings	\$ 536,202.11	\$ 714,936.61	\$ 714,936.61	\$ 714,936.61	\$ 714,936.61
Other	\$ 536,202.11	\$ 714,936.61	\$ 714,936.61	\$ 714,936.61	\$ 714,936.61
Total Purchased Care Savings	\$ 536,202.11	\$ 714,936.61	\$ 714,936.61	\$ 714,936.61	\$ 714,936.61

Purchased Care Avoidance

The purchased care avoidance for DDEAMC prescription costs is 77.9 percent lower than retail prescription costs. Data for determining the cost difference were provided by the DoD

Running Head: ESTABLISHMENT OF AN IPC

Pharmacoeconomics Center and is based solely on FY08 ingredient costs for the Augusta, Georgia area. The analysis results for this category by scenario and FY are displayed in Table 5 and Table 6, page 35.

Table 5

IPC ML Prescription Purchased Care Avoidance Projections

Interdisciplinary Pain Center - Most Likely					
Projected Beneficiary	AD	ADFM	Retirees/Others	TFL	Total
Breakout (%)	8%	19%	73%	0%	100%
By Product Line	FY10	FY11	FY12	FY13	FY14
Outpatient Savings	\$ -	\$ -	\$ -	\$ -	\$ -
Ancillary	\$ 141,280.98	\$ 188,374.64	\$ 188,374.64	\$ 188,374.64	\$ 188,374.64
Pharmacy Prescriptions	\$ 141,280.98	\$ 188,374.64	\$ 188,374.64	\$ 188,374.64	\$ 188,374.64
Total Purchased Care Avoidance	\$ 141,280.98	\$ 188,374.64	\$ 188,374.64	\$ 188,374.64	\$ 188,374.64

Table 6

IPC WC Prescription Purchased Care Avoidance Projections

Interdisciplinary Pain Center - Worst Case					
Projected Beneficiary	AD	ADFM	Retirees/Others	TFL	Total
Breakout (%)	8%	19%	73%	0%	100%
By Product Line	FY10	FY11	FY12	FY13	FY14
Outpatient Savings	\$ -	\$ -	\$ -	\$ -	\$ -
Ancillary	\$ 56,578.56	\$ 75,438.09	\$ 75,438.09	\$ 75,438.09	\$ 75,438.09
Pharmacy Prescriptions	\$ 56,578.56	\$ 75,438.09	\$ 75,438.09	\$ 75,438.09	\$ 75,438.09
Total Purchased Care Avoidance	\$ 56,578.56	\$ 75,438.09	\$ 75,438.09	\$ 75,438.09	\$ 75,438.09

Revenue Benefits

The revenue benefits associated with this analysis come from third party collections for beneficiaries that have Other Health Insurance (OHI). The analysis results for this category by scenario and FY are displayed in Table 7 and Table 8, page 36.

Table 7

IPC ML Revenue Benefits

Interdisciplinary Pain Center – Most Likely

<i>Revenue Benefits</i>						
Description	Expense Type	FY10	FY11	FY12	FY13	FY14
Third Party Collections	Revenue (Non-PBAM)	\$16,887.75	\$22,517.00	\$22,517.00	\$22,517.00	\$22,517.00
Total Capital Equipment Cost Increase		\$16,887.75	\$22,517.00	\$22,517.00	\$22,517.00	\$22,517.00

Table 8

IPC WC Revenue Benefits

Interdisciplinary Pain Center – Worst Case

<i>Revenue Benefits</i>						
Description	Expense Type	FY10	FY11	FY12	FY13	FY14
Third Party Collections	Revenue (Non-PBAM)	\$11,264.13	\$15,018.84	\$15,018.84	\$15,018.84	\$15,018.84
Total Capital Equipment Cost Increase		\$ 11,264.13	\$ 15,018.84	\$ 15,018.84	\$ 15,018.84	\$ 15,018.84

C.3 Costs

Capital Assets

Capital asset costs for both scenarios are the same. The projected costs associated with the scenarios are displayed by equipment type and FY in Table 9, page 37. The electromyography machine cost was determined through a vendor quote; the physical fitness equipment cost was obtained through a vendor quote for the initial year; costs for the following years are for replacing/upgrading equipment. Personal computer and network printer costs were based on recent purchases; one computer is on hand and only five more are required. Work station costs are

Running Head: ESTABLISHMENT OF AN IPC

based on recent purchases.

Table 9

IPC ML and IPC WC Capital Asset Expenses

Interdisciplinary Pain Center – Most Likely and Worst Case

<i>Equipment Lease/Purchase Cost (Capital Asset Expense)</i>							
Description of Equipment	Lease or Purchase	Classification	FY10	FY11	FY12	FY13	FY14
			Enter Full Cost under each year. Capital Asset cost are not prorated because of initial investment requirements				
Electromyography Machine	Purchase	Patient Care	\$14,950.00	\$0.00	\$0.00	\$0.00	\$0.00
Physical Fitness Machines	Purchase	Patient Care	\$50,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00
Personal Computers (5 ea)	Purchase	IM/IT Hardware	\$5,250.00	\$0.00	\$0.00	\$5,250.00	\$0.00
Network Printer	Purchase	IM/IT Hardware	\$500.00	\$0.00	\$0.00	\$500.00	\$0.00
Furniture (Work Stations)	Purchase	Non-Patient Care	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Capital Equipment Cost Increase			\$80,700.00	\$5,000.00	\$5,000.00	\$10,750.00	\$5,000.00

Operating Expenses

Operating expenses for both scenarios are the same. The projected costs associated with the scenarios are displayed by expense type and FY in Table 10, page 38. Semi-annual medical maintenance for the EMG machine was determined by the DDEAMC Medical Maintenance Non-Commissioned Officer in Charge. The requirement is four hours labor at \$94.00 per hour by DDEAMC staff. Staff training and associated travel expenses were calculated with FY08 costs for similar personnel. Recruitment advertising cost is based on recent advertising costs.

Table 10

IPC ML and IPC WC Operating Expenses

Interdisciplinary Pain Center – Most Likely and Worst Case

<i>Operating Expenses</i>						
Description	Expense Type	FY10	FY11	FY12	FY13	FY14
Medical Maintenance (EMG)	Maintenance Costs	\$752.00	\$752.00	\$752.00	\$752.00	\$752.00
Staff Training & Travel	Training Costs	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
Recruitment Advertisement	Other	\$5,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Operating Cost Increase		\$80,700.00	\$5,000.00	\$5,000.00	\$10,750.00	\$5,000.00

Personnel Costs

Personnel costs are based on the 2009 General Schedule (GS) employee compensation chart with an estimated benefit of 30 percent and assigned locality description as Rest of the United States (RUS), which is valued at 13.86 percent. The projected costs associated with the scenarios are displayed by personnel type and FY in Table 11 and Table 12, page 39.

Administrative support staff cost data were not available. However based on conversations with personnel from affected support areas (e.g. pharmacy, coding, billing, and logistics), the increased workload requirements from the IPC in comparison to the rest of the organization would be negligible and virtually undetectable.

Table 11

IPC ML and IPC WC Annual Personnel Costs by Position

Interdisciplinary Pain Center

GS Cost - Salary Table 2009-GS - 2009 General Schedule (BASE) plus Locality Increase							
Description	Grade Level	Step Level	Locality	Locality Rate	Salary +Benefits	Specialty Pay	Total Salary
Physiatrist, Clinical Director	15	10	RUS	13.86%	\$ 188,877	\$ 50,323	\$ 239,200
Pain Psychologist	14	5	RUS	13.86%	\$ 139,985	\$ -	\$ 139,985
Physical Therapy Asst	7	5	RUS	13.86%	\$ 56,160	\$ -	\$ 56,160
Licensed Practical Nurse	6	5	RUS	13.86%	\$ 50,535	\$ -	\$ 50,535
Social Worker	11	5	RUS	13.86%	\$ 83,109	\$ -	\$ 83,109
Physician Assistant	12	5	RUS	13.86%	\$ 99,615	\$ -	\$ 99,615

Table 12

IPC ML and IPC WC Annual Total Personnel Costs by FTE

Interdisciplinary Pain Center

Description	# of GS Personnel Full Time Equivalents for Each Year				
	FY10	FY11	FY12	FY13	FY14
Physiatrist, Clinical Director	0.75	1.00	1.00	1.00	1.00
Pain Psychologist	0.75	1.00	1.00	1.00	1.00
Physical Therapy Asst	0.75	1.00	1.00	1.00	1.00
Licensed Practical Nurse	0.75	1.00	1.00	1.00	1.00
Social Worker	0.75	1.00	1.00	1.00	1.00
Physician Assistant	0.75	1.00	1.00	1.00	1.00
Total GS Personnel Cost / Year	\$ 501,452	\$ 668,603	\$ 668,603	\$ 668,603	\$ 668,603

Marginal Supply Cost

A marginal supply cost of \$ 22.18 per RVU was derived using FY08 data from EAS IV for the DDEAMC Physical Medicine and Rehabilitation (PM&R) and Neurology Clinics. The projected costs associated with the scenarios are displayed by FY in Table 13, page 40 and Table 14, page 41.

The complexity of the data did not permit an accurate

identification of marginal supply cost; therefore some important factors must be mentioned:

1. The outpatient prescription cost could not be excluded from the data, which reasons this cost is higher than the actual cost and is an unfavorable factor when considering the IPC versus the status quo.

2. The neurology clinic marginal supply costs were included due to an estimated 33 percent of its workload being associated with the treatment of pain conditions; however the neurology clinic costs are approximately three times the costs of the PM&R clinic. Again, this reasons the cost is higher than the actual cost and is an unfavorable factor when considering the IPC versus the status quo.

3. Anesthesia pain management will not be performed in the IPC.

Table 13

IPC ML Marginal Supply Costs

Interdisciplinary Pain Center – IPC ML					
Marginal Supply Costs					
Outpatient by Product Line	FY10	FY11	FY12	FY13	FY14
Other RVUs	11,028.4	14,704.5	14,704.5	14,704.5	14,704.5
Cost per Unit	\$ 22.18	\$ 22.18	\$ 22.18	\$ 22.18	\$ 22.18
Total Outpatient Marginal Supply Costs:	\$ 244,609.47	\$ 326,145.81	\$ 326,145.81	\$ 326,145.81	\$ 326,145.81

Table 14

IPC WC Margin Supply Costs

Interdisciplinary Pain Center – IPC WC					
Marginal Supply Costs					
Outpatient by Product Line	FY10	FY11	FY12	FY13	FY14
Other RVUs	7,543.6	10,058.1	10,058.1	10,058.1	10,058.1
Cost per Unit	\$ 22.18	\$ 22.18	\$ 22.18	\$ 22.18	\$ 22.18
Total Outpatient Marginal Supply Costs:	\$ 167,317.05	\$ 223,089.55	\$ 223,089.55	\$ 223,089.55	\$ 223,089.55

Financial analysis, development of financial metrics

Purchased Care Savings

Purchased care savings projections are calculated by the purchased care system Relative Value Unit (RVU) cost multiplied by the projected total RVUs annually recaptured for each beneficiary category. PCS RVU cost is \$ 148.21 for AD, \$ 66.50 for ADFM, and \$ 63.82 for Retirees/Others.

Purchased Care Avoidance

The purchased care avoidance for prescriptions is calculated by subtracting the average DDEAMC pharmacy cost (\$11.37) from the average local retail pharmacy cost (\$51.31) which is multiplied by the projected percentage (IPC ML - 25% and IPC WC - 10%) of total annual prescriptions for non-active duty beneficiaries. Projected total annual prescriptions are calculated by multiplying the number of non-active duty beneficiaries by twelve (months in a year). FY10 calculations are pro-rated for a nine month time period.

Revenue Benefits

The basis for calculating third party collection rates is derived using DDEAMC's historical data, which determined that 13 percent of beneficiaries have OHI and that the facility receives 60 percent reimbursement for claims submitted. FY10 calculations are pro-rated for a nine month time period.

D. Sensitivities, Risks, and Contingencies

D.1 Sensitivities

Sensitivity refers to impact upon the project as assumptions vary or change. Two major assumptions were selected for analysis; recapture rate and prescription purchase care cost avoidance. The recapture rate directly impacts the prescription purchase care cost avoidance and led to the development of the IPC WC scenario which analyzes the sensitivity of both simultaneously from a least favorable perspective. In this analysis, both assumptions are given the most unfavorable value believed reasonably possible. The analysis produced a significant variance when compared to the positive IPC ML scenario projections over the five year time period, with the outcome projecting a 35 percent decline in ROI, a \$1.57M decline in NPV, and no projected payback.

D.2 Risks

The most significant risk associated with this project is a lack of performance monitoring/oversight from the command

level. The IPC ML scenario is the likely result if the clinic is monitored IAW applicable policies/standards. Two performance guides to facilitate success are the MHS Staff Production and Provider Availability, Production, and Empanelment Benchmarks published by the Office of the Surgeon General (OTSG), Appendix A, page 45.

Another significant risk is the hiring of permanent GS personnel. If permanent employees are hired and the project fails, then those employees cannot be released and must be absorbed into other hospital operations. The impact is an increased operational cost and decreased efficiency.

D.3 Contingencies

The best method to facilitate the likely success of the IPC is command participation and oversight through the planning, establishment and operation phases of the project. The combined clinical and hospital administrative knowledge of these senior leaders should result in an IPC of optimal configuration, appropriately staffed, effectively managed, and frequently monitored for attainment/sustainment of established performance measures.

E. Recommendations and conclusions

The analysis of two IPC establishment scenarios versus the status quo leads to the author's recommendation for establishment of an IPC as the most favorable method to provide the best available care for our patients while being fiscally

responsible.

The favorable financial expectations of the IPC ML scenario support the implementation of an IPC even if the financial projections are not fully realized. Utilization of interdisciplinary clinical practice procedures are expected to produce better patient outcomes, improved productivity, reduced treatment times, and reduced numbers of procedures /supplies.

These benefits have undetermined, but significant values that are likely to offset the realization of unfavorable changes in assumptions toward the IPC WC scenario. Additionally, if the major assumption of non-active duty beneficiary recapture is not realized, it is likely recurring regional referrals from other MTFs can be scheduled to offset some or all of the difference.

If strictly financial reasoning is used, many new technologies and improved clinical practices would not be implemented because there are less costly methods to treat patients with adequate outcomes versus optimal ones.

The access to care requirements and the related continuity of care issues for pain services continue to increase and significantly exceed the direct care system capabilities for our beneficiary population. Interdisciplinary pain services are suggested to be a more effective method of treating pain conditions with better patient outcomes and are being utilized at an increasing number of civilian and military facilities.

Appendix A

Staff availability, production, and empanelment benchmarks

Military providers in clinical roles: ensure all other military providers are available 218 workdays each year and six hours in clinic each workday. The standard is 18 patients seen each day (or 14.4 RVU each day). Military providers are to empanel at least 834 patients each.

Civilian (non-contractor) providers in clinical roles: ensure other civilian providers are available 223 workdays each year and 6.5 hours in clinic each workday. The standard is 19 patients seen each day (or 15.2 RVU each day). Civilian providers are to empanel 1,033 patients each.

Ensure PCM availability in clinic matches enrolled panel demands for patient care and enrolled panel does not exceed +/- 5% of PCM capacity.

Contractor providers in clinical roles: ensure all full-time (1920 hours) contract providers are available 240 workdays each year and seven hours in clinic each workday. The standard is 20 patients seen each day (or 16.0 RVU each day). Contract providers are to empanel 1,171 patients each (SERMC OPERATION ORDER 09-28 (Access to Care Campaign) 031600Q April 2009).

Staff Production Benchmark = 23.11 RVUs / Provider / Day. Based on 20 Days / Month = 462.2 (OTSG FY 09 RVU benchmark memo).

References

- AUSA online. (01 April, 2008). Combat Survival Rates Climb with Improved Medical Procedures. *AUSA News*, 31(4). Retrieved March 09, 2009 from <http://www.ausa.org>
- Augusta Tomorrow Online. (2009). 2009 Master Plan. Retrieved March 09, 2009 from <http://www.augustatomorrow.org/common/content.asp?>
- Chronic pain. (n.d.) In Department of Health and Senior Services Pain Management Glossary online. Retrieved from <http://www.dhss.mo.gov/PainManagement/Glossary.html> on May 06, 2009
- Clark, M.E., (2004). Post-deployment Pain: A Need for Rapid Detection and Intervention. *Pain Medicine*. Retrieved April 09, 2009 from www.mdconsult.com.
- Clark, M.E., Bair, M.J., Buckenmaier, C.C. Gironda, R.J., Walker, R.L., (2007). Pain and Combat Injuries in Soldiers Returning from Operations Enduring Freedom and Iraqi Freedom: Implications for Research and Practice. *Journal of Rehabilitation Research & Development*, 44, 179-194.
- Gironda, R.J., Clark, M.E., Massengale, J.P., & Walker, R.L. (2006). Pain among Veterans of Operations Enduring Freedom and Iraqi Freedom. *Pain Medicine*. Retrieved April 09, 2009 from www.mdconsult.com.
- Loisel, P., Abenhaim, L., Durand, P., Esdalle, J.M., Suissa, S.,

Running Head: ESTABLISHMENT OF AN IPC

- Gosselin, L., et al. (1997). A Population-based, Randomized Clinical Trial on Back Pain Management. *Spine*, 22(24): 2911-8.
- OTSG/MEDCOM Policy Memo 09-063, (August 04, 2009). Interim Policy Guidance for Consideration of Alternatives to Medication Approaches to Pain Management
- Philpott, T., (2008). *Military Update: Tricare Deputy Gives System 'C+ or B-'*. Retrieved March 09, 2009 from <http://www.stripes.com/articleprint.asp?section=103&article=59642>
- Pizzi, L.T., Carter, C.T., Howell, J.B., Vallow, S.M., Crawford, A.G., & Frank, E.D. (2005). Work Loss, Healthcare Utilization, and Costs among US Employees with Chronic Pain. Retrieved April 09, 2009 from www.mdconsult.com.
- Schmidt, M.J. (2002). *The Business Case Guide* (2nd ed.). Boston, MA: Solution Matrix Ltd.
- Thomsen, A.B., Soresen, J., Sjogren, P., & Eriksen, J., (2002). Chronic Non-malignant Pain Patients and Health Economic Consequences. *Eur J Pain*; 6: 341-52.
- Veterans Health Affairs Handbook 1172.1 Online. (2005). Retrieved March 14, 2009 from http://www1.va.gov/Vhapublications/ViewPublication.asp?pub_ID=1317