NAVAL POSTGRADUATE SCHOOL MONTEREY, CALIFORNIA





THESIS

MILITARY HEALTH CARE SYSTEM: COMPARING ORTHOPEDIC COSTS BETWEEN A MILITARY TREATMENT FACILITY AND CHAMPUS

by

Geralyn A. Haradon

December, 1994

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ABSTRACT

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I. INTRODUCTION

A. BACKGROUND

For more than three decades, two systems have provided health care for U. S. military beneficiaries: (1) the direct care system, whereby beneficiaries obtain health care services from military treatment facilities (MTFs), and (2) the Civilian Health and Medical Program of the Uniformed Service (CHAMPUS), a health program in which beneficiaries receive care from civilian facilities. [Ref. 17:p. v]

The Department of Defense (DoD) now spends \$15 to \$17 billion a year on medical services. About \$5 billion of this spending covers the military treatment facilities (MTFs). DoD's desire to minimize the cost of providing medical care while maintaining quality and timeliness of service, has prompted many suggestions for reforming the military health care system.

CHAMPUS is the Civilian Health and Medical Program of the Uniformed Services, a Department of Defense program for reimbursing individuals and health care providers for services provided by the civilian sector to eligible beneficiaries and retirees. It pays most of the costs for treatment in civilian medical treatment facilities when space and resource constraints at military hospitals and clinics make direct care inaccessible. The family members of active-duty personnel, retirees and their dependents under 65, some former spouses of service members, and certain survivors are eligible for CHAMPUS. Families of reserve and National Guard members called to active duty are also eligible.

B. OBJECTIVES OF THE RESEARCH

For the past decade, the CHAMPUS budget has grown substantially for several reasons. First, the Department of Defense has significantly expanded in size, increasing the number of military personnel whose medical care is the

military's responsibility. Additionally, there is a greater percentage of service personnel entering the military with family members, compared to previous years. These additional family members, especially children, have a tremendous need for medical services. Consequently, the need for health care far exceeds the capacity of overburdened military providers. Second, there is a rise in total national health care expenditures. [Ref. 13:p. I-3,5] These costs have grown excessively when compared to inflation.

In Fiscal Year (FY) 1993, approximately 8.7 million people were eligible for DoD health care benefits, including 1.9 million active duty personnel, 2.7 million family members, and 4.1 million retired military personnel and their dependents and survivors. From Operations & Maintenance (O&M) funds, CHAMPUS expenditures in FY-93 approached \$3.5 billion, nearly as much as was spent on nonactive duty beneficiaries in the "direct care" military treatment facility (MTF) system (\$3.9 billion). Over the last few years, a variety of modifications to the MTF and CHAMPUS systems have been implemented to reduce these costs. These include the CHAMPUS Reform Initiative (CRI) demonstrations, Base Realignment and Closure (BRAC) site managed care initiatives, Tidewater Virginia demonstration project (coordinated care), PRIMUS/NAVCARE Clinics, and most recently, the Managed Care Support Contract for California/Hawaii and Oregon/Washington.

The objective of this research is to compare direct care (MTF) and Standard CHAMPUS costs to determine whether a given MTF can provide inpatient care to its beneficiaries for a particular specialty service at a lower cost than through CHAMPUS. The analysis provides a method of calculating MTF specialty cost per admission that can be compared to the equivalent specialty cost reported by

CHAMPUS.

C. RESEARCH QUESTION

The primary question of the thesis is: Is it more cost effective to treat non active duty beneficiaries for inpatient orthopedic care in the direct care system (MTF) or be refer them to the indirect care system?

D. SCOPE

This thesis will concentrate on Naval Hospital, Oak
Harbor (an MTF) and its localized catchment area in the
vicinity of Oak Harbor, Washington. The analysis and cost
comparison will be limited to Orthopedics because this
specialty can be very resource intensive. The analysis will
focus on inpatient orthopedic costs covered by Standard
CHAMPUS funds in 1993. This is the most recent year for
which complete and relevant data exists. For consistency,
1993 orthopedic costs will also be used for the Naval
Hospital, Oak Harbor.

This study analyzes data generated prior to FY-95. As of 01 October 1994, there was a policy change regarding MTF financing. MTFs are now financed on a capitated rate, derived by the demographics of the catchment area. Each MTF is allocated a pre-determined capitated rate per beneficiary. This will change the MTF commanders' incentives for cost control in the MTF. In the past, MTF commanding officers had no incentive to reduce CHAMPUS costs because they were not responsible for CHAMPUS expenditures. Now each MTF commanding officer receives a CHAMPUS dollar target towards which to manage. If actual costs exceed this target, the MTF's O,M & N funds ultimately can be reduced by the amount the CHAMPUS target is exceeded. MTF commanding

¹This catchment area includes all beneficiaries residing near Naval Hospital, Oak Harbor (within a 40 mile radius) who use CHAMPUS as their primary insurer for inpatient care.

officers are responsible for providing all medical care for their beneficiary population within this capitated budget, irregardless of the actual level of service. Previously, MTFs were funded based on workload. The philosophy was, the more workload generated the more dollars received.

E. METHODOLOGY

Normally, participating health care providers are paid by CHAMPUS at a Champus Maximum Allowable Charge (CMAC). This is a Current Procedural Terminology (CPT) code specific reimbursement methodology developed by the Office of the Civilian Health and Medical Program of the Uniformed Services (OCHAMPUS). It is used to reimburse all fee-for-service professional services for the CHAMPUS beneficiary population. OCHAMPUS uses this pricing methodology to compensate providers for the technical component of outpatient services, such as laboratory and radiology.

This research uses data on cost per admission from the CHAMPUS Inpatient Care Summary report. The CHAMPUS Inpatient Care Summary report provides the combined cost of hospital and professional services for 27 hospital specialties. The analysis concentrates on the CHAMPUS cost for orthopedic cases.

The MTF average cost per admission for orthopedic patients is developed using data from the Medical Expense and Performance Reporting System (MEPRS). MEPRS tracks total costs (hospitalization and physician costs) and occupied bed days (OBDs) by functional work centers. MEPRS data on cost per OBD by work center can be used to calculate average cost per admission based on the number of days the typical patient remains in each MEPRS work center. The cost of each admission is calculated by summing the product of the number of days spent in each work center and the corresponding cost per OBD.

II. THE MILITARY HEALTH SERVICES SYSTEM

A. OVERVIEW OF THE MILITARY HEALTH SERVICES SYSTEM

Health care for military beneficiaries is provided through a dual system: The Navy, Army, and Air Force operate approximately 137 hospitals and numerous clinics in the U. S. and overseas. When military treatment facilities cannot provide care for all eligible beneficiaries, their health care needs may be augmented by CHAMPUS, a health insurance plan that reimburses for health care services provided by civilian practitioners to military dependents and beneficiaries under age 65. [Ref. 17:p. 1]

The Military Health Services System (MHSS) is undergoing major changes, driven by the momentum of national health care reform, affecting both the health care options available to our beneficiaries and some of the functions and organizational structures of the Military Services' medical departments. The Department of Defense (DoD) health care reform program, known as TRICARE, is designed to promote the effective execution of the military health care mission, ensure access to a quality health care benefit, control health care costs, and respond to changing military and national health care priorities.

As with the rest of the country, the Department of Defense is experiencing a significant evolution in its health services system. Driving much of the change for DoD is the rapid downsizing of the Army, Navy and Air Force's active duty and reserve forces. Ships, aircraft squadrons, divisions and bases are being mothballed and eliminated at a fast pace, while the military personnel strength shrinks in response to the smaller force. Active duty soldiers, sailors, and airmen numbered 2.2 million at the peak of Operation Desert Storm. They are now at 1.7 million, on their way to 1.4, or possibly 1.2 million by 1996. At the

same time, health care costs move upward.

A number of factors contribute to cost escalation. One is the nature of the military medical mission. The primary focus of the Defense Department is deterrence of aggression through combat readiness. This applies equally to the medical forces. They must be constantly prepared for casualties, perhaps massive in number and severity. That requires a significant investment in medical resources and personnel deployed with the active forces around the world, and at medical treatment facilities. Maintaining large medical forces is costly in both dollars and manpower.

There is another cost associated with medical readiness. Medical professionals must continue to hone their skills, just as pilots, soldiers and sailors. Skill readiness has been historically achieved through providing space available services to dependents of active duty military, and to retirees and their family members. The diversity of the medical care needs presented by these groups has offered sufficient volume and intensity to keep health professionals well practiced.

However, space available status has led non-active duty personnel and family members to expect entitlement for health care services at the MTF despite the lack of legal foundation. The CHAMPUS indemnity program was established in the 1960's to provide care for beneficiaries in civilian facilities when military hospitals are over-burdened or unable to meet the specific medical needs of beneficiaries. During conflicts, such as Operation Desert Storm, Congress has acted to ensure the continued availability of care for non-active duty beneficiaries. During Desert Storm, a number of Reserve physicians and other providers were recalled specifically to maintain the level of service for beneficiaries at military medical treatment facilities.

B. THE DIRECT HEALTH CARE SYSTEM OF MHSS

To understand military medicine, it is important to note that active-duty individuals have first priority in the MTFs. Preserving the fighting force is military medicine's fundamental mission. Members on active duty receive free medical care, including hospitalization, medicines, immunizations, regular physical examinations and dental care. Also, all military hospitals can treat any member of the seven uniformed services: Army, Navy, Marine Corps, Air Force, Coast Guard, Public Health Service, and National Oceanic and Atmospheric Administration. Any active-duty member that can not get to a military facility for emergency care may be treated at civilian hospitals; the military will pay the bill through the Office of Medical Affairs.

other beneficiaries are treated only if medical staff and resources are available after treating those in uniform. Family members of active-duty members, including family members of reservists on active duty, have second priority. Retirees and their family members have lowest priority. As with any hospital, however, the military's priority list is put aside during emergencies. No one in need of emergency care is turned away.

Access to the Department of Defense's medical resources for non active duty beneficiaries is controlled by Defense Eligibility and Enrollment Reporting System (DEERS). This is the military's computerized data base of individuals eligible for military medical benefits; active-duty personnel are automatically enrolled while qualifying family members must be enrolled.

Families of active-duty members and activated reserves are eligible for treatment at military treatment facilities as long as they are enrolled in DEERS. Those qualifying as family members include:

- The spouse and unmarried children (under 21 years of age) of active-duty members;
- 2. Unmarried children over 21 who receive more than 50 percent of their financial support from a military parent (limited to children with physical or mental handicap);
- 3. Unmarried children not yet 23 years of age who are full time students at accredited colleges and who must depend on a military parent;
- 4. Parents or parents-in-law who live in a residence provided or maintained by their active-duty son or daughter (in-law) and who receive more than half their financial support from the service member; and
- 5. Unremarried widows and widowers of active duty members or retirees. [Ref. 12:p. 15-20]

Family members can receive several kinds of medical services at military treatment facilities including: treatment of medical and surgical conditions, physical examinations, prescription and non-prescription drugs, emergency dental care, and ambulance service when medically necessary.

As with all health care programs, care is generally divided into outpatient and inpatient. Inpatient treatment occurs when an individual is admitted to a hospital with the reasonable expectation that such individual will stay at least 24 hours. Outpatient treatment occurs in a physician's office or clinic, or during a house call.

As with active-duty family members, retirees and their families are not charged for outpatient treatment at military treatment facilities. Retired members are not charged for inpatient care while retired officers and warrant officers pay a nominal fee of \$4.65 a day for meals (for FY-1994). Spouses and dependents of retirees' are billed \$9.30 a day (for FY-1994). See Figure 1.

	Out	1 11
Beneficiary	Patient	Patient

		T		
Active Duty	X \$0.00	X \$4.65/day		
Active Duty Beneficiary	SPACE A \$0.00	SPACE A \$9.30/day		
Retired (Enlisted)	SPACE A \$0.00	SPACE A \$0.00		
Retiree (Enlisted) Beneficiary	SPACE A \$0.00	SPACE A \$9.30/day		
Retired (Officer)	SPACE A \$0.00	SPACE A \$4.65/day		
Retired (Officer) Beneficiary	SPACE A \$0.00	SPACE A \$9.30/day		

Figure 1. Military Treatment Facility

Health Care Services Eligibility and Cost

Retirees are also eligible for medical care from the Department of Veterans Affairs (VA). Priority is determined as follows:

First priority (Category A) includes all veterans with service connected disabilities; veterans claiming exposure to Agent Orange while serving in Vietnam; and those veterans claiming exposure to ionizing radiation through occupation in Hiroshima or Nagasaki, Japan following detonation of the nuclear device or through testing of those or other such devices. Veterans, such as former prisoners of war are automatically included in Category A. Also included are veterans with an annual income of \$19,912 or less if they have no dependents, or \$23,896 with one dependent, plus \$1330 for each additional dependent. This group is considered mandatory.

Discretionary care is provided if space and resources are available, covers veterans with disabilities that are not service-connected and whose annual income is less than \$19,912 if they have no family members, or less than \$23,896 with one dependent, plus \$1,330 for each additional dependent. Veterans in this category must pay a deductible equal to what is paid under Medicare, \$696 in 1994.

They are also charged \$10 a day for inpatient care, \$5 a day for nursing home care, and \$36 for each outpatient visit. [Ref. 14: interview]

In an effort to alleviate overcrowding at hospitals, the services have opened a number of medical clinics. These clinics are manned by civilian health care providers and offer primary care to both active-duty personnel, retirees and family members. The Navy calls its clinics NavCare; the Army and Air Force call them PRIMUS. Eligible members and their families may enter any of these clinics, and receive service free of charge. Services include treatment for minor illnesses, routine physical exams, diagnostic services, X-rays, prescriptions and laboratory tests.

Members on active-duty are also entitled to receive dental care in military dental clinics. In order of priority, active-duty family members, including family members of recalled reservists, retirees, and retirees' family members may also receive emergency dental care at these facilities on a space available basis. Such care is free, except that family members must pay for prosthetic devices. These charges reflect the cost of the materials and not manpower costs.

The Department of Defense also offers active-duty family members in the U. S. and its territories dental treatment by participating civilian dentists through an insurance plan. The plan provides free diagnostic care, oral exams, and preventive care such as fluoride treatments. The plan pays 80 percent of other charges and the patient pays 20 percent. [Ref. 9:pp. 1-5]

C. THE INDIRECT MHSS HEALTH CARE SYSTEM

CHAMPUS was created by Congress when eligible beneficiaries were unable to access military treatment facilities. Its budget has been rising steadily for several years. In 1993, its total DoD budget was \$3,608,800 up from

\$3,372,600 in 1992. [Ref. 15:p. 1] In 1993, the total number of claims was 18,673,383 up from 17,910,083 in 1992. [Ref. 15:p. 1]

The Champus program offers a "triple option" system which provides standard, prime, and extra options. The standard option is basically an indemnity insurance that pays 80 percent of allowed charges while the beneficiary pays 20 percent after deductibles are met. The prime option is like a Health Maintenance Organization (HMO) where members enroll and pay minimal co-payments when treatment is sought from a specified list of providers. The extra option is like a Preferred Provider Organization (PPO) which is similar to the HMO but allows the beneficiary more choice in provider networks.

The following groups are eligible for CHAMPUS benefits: family members of active duty members; surviving spouses and unmarried children of service members and reservists who died while on active duty; spouses and unmarried children of reservists who are called to active duty for more than 30 days, and the survivors of reservists who died on active duty; members of the reserves between the age of 60 and 65 who are qualified to receive retired pay; surviving spouses and children of deceased retirees (spouses who remarry are ineligible unless married to eligible member); and children of active duty members or retirees up to age 21 if not married, and to 23 years of age if not married and enrolled full time in an accredited college or university.

As a rule, CHAMPUS coverage automatically ends when a participant turns 65. Most military retirees and their family members lose CHAMPUS eligibility when they become eligible for Social Security's Medicare program. However, retirees and their family members maintain their privilege for treatment in military treatment facilities on a space available basis.

D. THE EVOLUTION OF MANAGED CARE

As America entered the twentieth century, society transformed from a predominantly agricultural economy to a manufacturing economy. The manufacturing economy gave rise to big business over small, family-owned operations causing a shift in focus from individual operation to that of institutional domination. [Ref. 16:p. 5]

During the last fifty years, society in every developed country has become a society of institution. Every major task whether performance or health care, education or protection of the environment, the pursuit of new knowledge or defense, is today being entrusted to big organizations, designed for perpetuity and managed by their own management. [Ref. 3:p. 6]

Simultaneously, in the medical arena, a historical transition from generalist to specialist occurred. This transition set the seed for corporate management of medical care. Specialized medicine quickly began to unfold during World War II. With the surge of new technology, physicians started to specialize in certain areas of medicine. There was an increased emphasis on specialized medical training and facilities. Physicians released from military service were entering residency programs in various specialties. At the end of World War II, practicing specialists started to flood the market as 100,000 medical personnel were released from active duty during the post war downsizing. By 1966, almost 70% of all practicing physicians were specialists while 30% were generalists.

Specialists began to practice in groups instead of working on their own. The costs of providing medical care, advances in technology, scientific evolution, and other economic forces were the main catalyst for this shift. Physicians would purchase expensive equipment as a group rather than practice on their own and bear all the expense.

Managed care has evolved over the past 50 years with Kaiser Permanente being the pioneer in this method of delivery system. The Kaiser Permanente Medical Care Program originated in 1942. It is the largest most widely distributed and best known health maintenance organization (HMO) in this country. [Ref. 2:p. 4] An HMO is a delivery system established to provide high quality health care medical services at a competitive price. Competition is the key variable. In order to remain competitive and attract new members, HMO's must continue to reduce cost and encourage "wellness" for its members. Keeping patients healthy allows the HMO to contain cost and provide appropriate medical care. After Kaiser Permanente proved successful at providing care through this type of delivery system, other group practices evolved into popular marketable entities that mirror the Kaiser system.

Preferred Provider Organizations (PPO) evolved as another managed care option. PPOs are slightly different than an HMO. A PPO is "a contractual arrangement between professional and/or institutional health care providers and employers, insurance carriers or third party administrators to provide health care services to a defined population at established fees." [Ref. 2:p. 5] In other words, a PPO is a loosely integrated network of health care providers. All members have agreeded to provide services for a predetermined maximum price. Patients are free to choose between all member health care providers. Thus, PPO's allow the patient more choice than an HMOs: They represent a competitive form of bureaucratic organization in medical care. [Ref. 2:p. 27]

By mid 1979, there were 217 HMO's operating across the nation with a total enrollment of 7.9 million people. This figure had doubled in size since 1970. Clearly, a primary reason that HMO's have been successful is that physicians

have been able to accept some financial risk - the financial risk associated with providing medical care and services to a group of subscribers for a predetermined total cost. Both profits and losses are shared by all the physicians.

The Department of Defense has also begun to pursue innovative approaches to reinvent their health care delivery system. There were various projects tested throughout the United States such as CHAMPUS Reform Initiative (CRI) in California and Hawaii, CAMS in Charleston, South Carolina, and TRICARE Demonstration Project in Virginia. Reinventing the delivery of health care is a major undertaking for any organization, especially the military. The TRICARE project has been adopted by the three military services. It has involved developing 12 geographical regions, each with a designated Lead Agent to coordinate all medical care for that specific region.

E. TRICARE REGIONAL MANAGED CARE SYSTEM

In 1993, DOD has added several new components to the MHSS to begin its transition to a managed care concept of operation:

- 1. DoD is transitioning to a "capitation-based" method for allocating health care funds to the military departments.

 Capitation budgeting is a recognized strategy for health care cost containment. Under this concept, each MTF commander is responsible for providing health care services to a defined population for an average fixed amount per beneficiary.
- 2. DoD developed the "Triple Option" managed care program structure for CHAMPUS eligible beneficiaries.
- 3. DoD established 12 Health Service Regions (HSRs) within the U. S., each lead by a medical center commander designated as a Lead Agent. (see Figure 2).

DoD implemented a fixed-price-at-risk 4. TRICARE Support Contract. The support contractor established a network of civilian providers to augment MTF care within each area. The contractor provides fiscal and administrative support to Lead Agents for care purchased through these networks. fixed-price -at-risk contracts will be procured centrally by OCHAMPUS, with extensive participation by the Lead Agent and Services' staffs. The contractor is expected to assist Lead Agents and MTFs to improve access to quality health care while controlling health care cost.

Capitation Budgeting Concept

A capitation-based resource allocation system is increasingly advocated to consolidate resources, develop services, focus responsibility, and manage care appropriately. Basically, capitation budgeting can be defined as a prospective reimbursement process where the health care provider is paid a fixed price per person to provide a defined range of services over a specified time period. [Ref. 12:p. 6] Under this definition, capitation has three crucial elements: (1) care is prepaid with a predetermined, agreed-upon price, and price does not vary according to the value or intensity of services; (2) the payment is tied to a specific population of capitated patients, typically involving some type of an enrollment system; and (3) the provider bears full financial risk if expenditures exceed payments. The provider keeps part of the savings, if not all of the medical costs are within the capitated payment. Similarly, the provider is liable for any costs that exceed the capitated budget. Combined, these

²A fixed-price-at-risk contract protects the contractor from financial risk as its workload is increased or decreased by the MTF.

elements give the provider a strong incentive to manage care wisely. [Ref. 12:p. 7]

Capitation budgeting fundamentally governs the users' payment to the organization providing health care. [Ref. 12:p. 8] It is not required that doctors or other professional personnel be paid on a per capita basis under capitation budgeting. Providers could be paid by the program in a wide variety of ways, including salary and feefor-service. Those who finance care are more concerned with controlling aggregate costs than with the particular mode of remuneration among providers. [Ref. 12:p 8]

The "Triple Option" TRICARE Plan

The foundation of the TRICARE Program is a "triple option" of health care delivery for CHAMPUS eligible beneficiaries. Beneficiaries may choose from the following options:

TRICARE Standard: Individuals in this program enjoy unrestricted provider choice and pay no enrollment fees, but pay annual deductibles, co-payments and cost shares. This program is the basic CHAMPUS standard indemnity fee-for-service plan.

TRICARE Prime: Individuals in this program enroll in an HMO like plan and obtain their care from a network of civilian and military providers/hospitals. Enrolles pay an annual enrollment fee but face lower CHAMPUS cost shares and co-payments for point-of-service charges. Enrolles have access to enhanced preventive care services under this plan. They also have a Primary Care Manager (PMC). This doctor is responsible for coordinating required patient referrals for care within the MTF or civilian provider network. The point-of-service option under TRICARE Prime, allows enrolles to "go outside the provider network" for care. However, they are required to pay significant cost shares and deductibles which could exceed Standard CHAMPUS costs.

Finally, participants are relieved of claim filing responsibilities.

TRICARE Extra: Individuals don't have to enroll in this program, but agree to obtain care from their choice of providers within the PRIME network. Beneficiaries don't file claims and pay lower cost shares than required for non-network providers under the Standard CHAMPUS option.

The Lead Agent Concept

As previously stated, DoD established 12 Health Service Regions (HSR) within the United States, each with a designated Lead Agent MTF/Commander. Lead Agents work cooperatively with all the services' regional MTF commanders and their staffs to develop, implement, and manage the regional health plan for their MHSS beneficiaries. This includes developing an integrated health care network within their HSR. Lead Agents are responsible for:

- 1. developing an annual regional health service plan
- 2. developing clinical support contingency plans
- developing regional TRICARE Support Contract requirements
- developing procedures for coordinating health care delivery between military and civilian health care providers
- 5. monitoring CHAMPUS budget targets
- 6. coordinating utilization management and quality assurance activities
- establishing priorities for routing beneficiaries to the direct care system
- developing regional policy for coordinating patient referrals and issuing non-availability statements (NAS) in accordance with DOD policy
- coordinating the development of an annual regional capitalization, maintenance, repair and renovation plan for all MTFs within the HSR in concert with

regional MTFs

10. conducting ongoing evaluations and coordinating corrective actions relative to resource utilization, clinical services, and access as appropriate.

MTF Commanding Officers retain their Service designated Chain of command irrespective of their Lead Agent's Service affiliation. The Lead Agent has no command and control over the individual MTFs within their region. The Lead Agent's report to their service specific headquarters and the Assistant Secretary of Defense for Health Affairs. Each Service will retain existing authority to make decisions regarding direct care (MTF) operating funds, facility maintenance, and personnel actions. For the Lead Agent concept of managing CHAMPUS resources to be successful requires each service within the region to work together openly and cooperatively.

TRICARE Managed Care Support Contracts

The transition from an exclusive fee-for-service (Standard CHAMPUS) program to the TRICARE Triple Option as described is now underway and will be completed within the next three years. These fixed-price at-risk contracts will be procured centrally by OCHAMPUS, with extensive participation of the Lead Agent and the Services' staffs, and will assist Lead Agents and MTFs in improving access to quality health care and controlling health care costs.

III. METHODOLOGY

A. SOURCES OF DATA

The data used for this research comes from two organizations. Naval Hospital Oak Harbor, Oak Harbor, Washington furnished the Medical Expense and Performance Reporting System (MEPRS) and occupied bed day (OBD) data on inpatient orthopedic care for fiscal year 1993.

The Office of Civilian Health and Medical Program of the Uniformed Services (OCHAMPUS) in Aurora, Colorado provided the Health Care Summary Report. The Health Care Summary Report shows CHAMPUS utilization and cost data for the Oak Harbor catchment area.

B. OVERVIEW OF MEPRS

MEPRS contains cost and workload performance information for military treatment facilities. recognizes six general functional areas within an MTF: inpatient, outpatient, dental, ancillary services, support services, and special programs. Support services are laundry service, food service, housekeeping, and other non medical functions. Ancillary services include clinical laboratory, pathology, radiology, pharmacy, and other related activities that contribute to the proper diagnosis and treatment of admitted patients. Special programs consist of graduate medical education, public health services, and decedent affairs. Within the general functional areas, MEPRS further identifies separate work centers of the MTF in which different services are performed. It tracks workload and expenses by these work centers.

Average expenses from ancillary and support work centers are reallocated or reassigned to the work centers and other final operating accounts. This allocation is based on the percentage of the ancillary and support workload performed for the work centers. For example, the

performance factor for Blood Bank is a weighted procedure (see Appendix A for sample of performance factors). If 20% of Blood Bank laboratory procedures (i.e tests performed to prepare units of blood for patients) are requested by the Orthopedics physicians, then 20% of the cost of operating the Blood Bank are allocated to Orthopedics care (work center).

Expense information is entered in the MEPRS as a Direct Expense Schedule (DES). The DES identifies all expenses directly associated with a given work center including the ancillary and support work centers. Information is provided by the departments and is then rolled up by the MEPRS system. Workload information is gathered from numerous sources, including the Automated Quality of Care Evaluation Support System (AQCESS) and the Tri-service Medical Information System (TRIMIS). AQCESS provides OBDs by work center and TRIMIS provides ancillary workloads.

Workload statistics are calculated in MEPRS through stepdown assignment statistics (SAS) data sets. Each SAS data set includes a numerical identifier that is related with a specific workload measure and a list of the MEPRS work centers and corresponding workload for that work center.

The Expense Allocation System (EAS) is the automated system that processes the actual cost allocations from the intermediate operating accounts to the final accounts. EAS charges direct expenses of the ancillary and support work centers to the inpatient, outpatient, dental, or special programs work centers benefiting from the expenses.

During the final purification or post-stepdown, expenses from cost pools are allocated to final operating accounts in EAS. Cost pools are established when costs are shared by two or more final operating accounts.

The Final Purification Report identifies the expense

distribution from cost pools to final accounts. This report shows the dollar amounts calculated and allocated during purification.

The Computation Summary reveals the breakdown of total work center expense by direct expense, support costs, ancillary costs, expense from cost pools, and a final purified amount.

C. MEPRS DATA FOR INPATIENT ORTHOPEDIC CARE

Data provided by Naval Hospital, Oak Harbor, Washington covered only the inpatient services and work centers involving Orthopedic costs. Five reports were used for analyzing Orthopedic cases. These reports are included as Appendices B, C, D, E, and F. Appendix B (Occupied Bed Day Data) accounts for all the occupied bed days for the inpatient work centers. Appendix C (Direct Expense Summary) shows the total salary of clinicians working in those particular work centers. Appendix D (Stepdown Schedule) enumerates all the ancillary and support costs allocated to the affected work centers. Appendix E (Final Purification Report) shows the costs allocated to different work centers from the ward cost pools. Appendix F (Computation Summary Report) integrates all the different costs allocated to the work centers.

Naval Hospital Oak Harbor provided their complete MEPRS data for FY-93 (01 October 1992 to 30 September 1993). However, the data needs to be analyzed carefully because of MEPRS's inherent limitations. For example, data is collected by functional work center instead of by individual patient. When admitted patients in a given specialty are treated in two or more work centers, cost per admission must be calculated from data on cost per OBD by work center and

³To date, there are 6 identified inpatient specialties within the Naval Hospital Oak Harbor (see Appendix J-Inpatient Specialties).

treatment provided by the specialty. Second, since MEPRS is an allocative system, a work center's share of support and ancillary costs is determined by its relative share of weighted workload. If weights do not capture all differences in resource consumption for ancillary and support costs, then the allocated cost could be different from the true cost. As a result of these limitations, estimating the cost per admission in a given specialty using patient treatment protocols cannot truly reflect actual cost.

D. OVERVIEW OF THE HEALTH CARE SUMMARY REPORT

The Health Care Summary Report (HCSR) is produced by OCHAMPUS on a quarterly basis to show CHAMPUS utilization and health care expenditures at the individual MTF catchment area and regional level. The Health Care Summary Report provides CHAMPUS data broken out by hospital specialty.

The Health Care Summary Report provides data on various CHAMPUS statistics. The major breakouts of information on this report are:

Hospital Specialty - (Adverse Reactions, Allergy, Cardiology etc.)

Category of Beneficiary - (Family Members of Active Duty, Retirees, and Family Members of Retired/Deceased.)

Type of Care - (Hospital, Inpatient Professional, Outpatient Professional, and Outpatient Cost Shared as Inpatient)

E. CALCULATING COSTS FOR INPATIENT ORTHOPEDIC TREATMENT

For Orthopedic cases, the total expense is \$650,000 for Naval Hospital, Oak Harbor in fiscal year 19934. This

⁴For the fiscal year 1993, 99.50% of patients admitted at Naval Hospital Oak Harbor for Orthopedics care were seen and treated at that work center. The remaining .50% were treated by two or more work centers. They were not included in the analysis because the effect is considered negligible in the final cost per admission.

includes all clinician and military salaries. Furthermore, 199 orthopedic patients were admitted in fiscal year 1993. Dividing \$650,000 by 199 yields a \$3266 average cost per orthopedic patients. The OBDs totaled 475. Dividing 475 OBDs by 199 patients yields a 2.387 average length of stay (ALOS) or occupied bed days (OBD). Furthermore, dividing the total expense of \$650,000 by occupied bed days yields \$1,368. These costs are summarized in Table 1. These costs can be compared to the CHAMPUS costs.

CHAMPUS Orthopedics cases for the fiscal year 1993 cost the government \$168,704 for 31 inpatient admissions (see Appendix G, Total All Categories of Beneficiaries section, NAS required). Dividing the total government cost by 31 total admissions yields a \$5,442.00 average government cost per admission. The total occupied bed days is 109. Dividing this by total admissions yields a 3.52 average length of stay or average OBD. Furthermore, dividing \$5,442.00 by the average OBD or length of stay yields a \$1546.00 average government cost per occupied bed day. These costs are also summarized in Table 1.

⁵May [Ref. 8] developed a methodology to estimate cost per admission where admissions involved several work centers. The cost per admission is determined from the treatment protocols and the cost per OBD for each work center. The cost is estimated as a weighted sum of the cost per OBD in each work center where the weights equal the number of days spent in each work center.

Cost for each admission = wi * Ci+...wn*Cn i=1 to n

This methodology is not necessary in this case because orthopedic patients are only treated by one work center.

Naval Hospital
Oak Harbor CHAMPUS % Savings

Average Cost per Admission	\$3,266	\$5,442	40%
Average cost per Occupied Bed Day	\$1,368	\$1546	12%
Average Occupied Bed Day per Admission	2.39	3.52	32%

le 1. Orthopedic Cost Comparison
between Direct Care and CHAMPUS for Naval Hospital, Table 1. Oak Harbor Catchment Area

IV. DISCUSSION AND RECOMMENDATIONS

SUMMARY

The data derived from the Cost Comparison Summary can be used to calculate the final costs and work-load for Orthopedic care incurred at Naval Hospital Oak Harbor and CHAMPUS for FY 1993. Referring to Appendix I, the average cost per admission at the MTF level is about \$3,266. represents the average cost for inpatient care for one Orthopedic specialty patient. It is derived by multiplying the average cost per occupied bed day, \$1,369, by the average length of stay, 2.39 days. The CHAMPUS cost for Orthopedic care per admission within the Oak Harbor catchment area is \$5,442. This number is derived from the CHAMPUS Health Care Summary Report.

This indicates there is a significant cost difference between the two programs. Assuming the cost per patient is unaffected by shifting the workload from CHAMPUS to the MTF, \$2,172 per patient represents a substantial savings.

Based on the data analyzed in this research, shifting CHAMPUS Orthopedics cases back to the Naval Hospital Oak Harbor could have significantly reduced the overall Orthopedic cost for the Oak Harbor catchment area for FY The potential savings represents almost a 40 percent reduction in the total CHAMPUS cost in all Orthopedic categories in the Oak Harbor area. The average MTF cost per OBD was 12 percent lower than the average CHAMPUS cost per The total savings exceeds the savings per OBD because MTF patients have a 32 percent lower average OBD per admission than CHAMPUS patients

It should be noted that the remaining five medical specialties within the Naval Hospital Oak Harbor were not compared and analyzed. Thus, the potential savings from these specialties and their impact on the overall CHAMPUS costs for the catchment area cannot be ascertained.

other five medical specialties must be considered before drawing any conclusions about bringing orthopedic patients back into the MTF. If the MTF's total resources are limited, it should focus on those specialties providing the greatest cost savings. It would be inefficient for the MTF to use its limited resources to bring orthopedics back into the MTF if it could realize greater cost savings in other specialties.

Actual versus Estimated Cost Savings

There are extra costs associated with shifting any form of medical specialty. These costs may be significant. Examples of these costs are salaries of new doctors, additional ancillary costs, and other support costs. One way to forecast future cost when shifting patients is to use the established average cost per patient per occupied bed day. This represents the average cost incurred by the military hospital for doctors' salaries, ancillary services, and other support services for that work center.

When deciding to bring workload into the MTF one must consider the average cost versus the marginal cost. average costs to forecast the impact of shifting workloads implies that the rates of doctors, staff, support services, equipment, facilities, etc. per patient remain constant as the number of patients changes. If increasing the workload allows the MTF to use existing assets more efficiently, average cost will overstate the actual incremental cost of adding patients. If increasing the workload requires acquiring new assets (doctors, staff, equipment, etc.) average cost may understate the actual incremental cost of adding patients. Ideally, this analysis would compare the incremental cost of shifting workloads from CHAMPUS to the Unfortunately, incremental cost data is unavailable so It is unclear whether average cost data is used as a proxy. average cost is a good or bad proxy in this case.

Furthermore, there may be reasons for referring some CHAMPUS Orthopedic patients to civilian facilities that may help explain the cost differences between CHAMPUS and the MTF within the Oak Harbor catchment area. Some patients may require specialized equipment or medical staff unavailable at the MTF. Similarly, some severe cases may exceed the MTF's capabilities. To the extent that CHAMPUS patients reflect these factors, the cost savings would be overestimated here. Unfortunately, existing data does not reflect these factors. They must be determined on a case by case basis.

There are several other factors that make it difficult to estimate potential savings from shifting workload from CHAMPUS to the MTF. First, the potential savings that could be derived from shifting CHAMPUS workload depends upon the patients' private insurance coverage. For eligible family members who have private insurance, CHAMPUS is considered a secondary insurer. Therefore, it only pays charges not covered by the family members' insurance. This must be weighed against the insurance implications of recapturing the patient in the MTF. [Ref. 17:pp. 4-8]

Second, it is important to consider the potential effect on the quality of medical care and the population's overall satisfaction. Increasing the number of patients seen within a particular specialty may reduce access to that health care service. This may be observed in terms of both longer lines (waiting to make an appointment or follow-up) and the amount of time physicians spend with their patients. In addition, patients no longer have the option to see any specialist or doctor they choose (exceptions are emergency conditions). This may increase patient dissatisfaction and reduce actual or perceived quality.

Another issue to consider is the effect on the regional health care system outside the MTF. Effective, 01 March

1995, the Managed Care Support (MCS) contract will be implemented in the Washington/Oregon catchment areas. In this contract, the government has attempted to "fix" the contract cost. The objective is to reduce the contractor's risk due to changes in the actual workload. For cost elements where cost is fixed, the MCS contract includes a Bid Price and Bid Price Adjustment Formula. The Bid Price represents a fee-for-service rate. It is based on the projected CHAMPUS population and case mix. The Bid Price Adjustment formula adjusts the fee-for-service rate based on the actual CHAMPUS population case mix, CHAMPUS reimbursement policy and MTF utilization rate.

Normally, the contractor's revenue and profit would depend on its caseload and case mix. The contractor's profits could be at risk as its case load increased or decreased. To limit this risk, health care service prices will be adjusted to account for differences between the actual and projected levels of MTF utilization. Further, the contractor's expected level of inpatient costs may be influenced by shifts in inpatient casemix between CHAMPUS and the MTFs. Therefore, the bid prices for inpatient care will also be adjusted for changes in the CHAMPUS inpatient casemix, provided the smaller of the two changes in casemix reflects at least a two percent change relative to the data collection period.

As DoD "downsizes", the supply of military physicians within Naval Hospital Oak Harbor is limited, not only in Orthopedics, but in most clinical areas. This situation is not unique to Oak Harbor. It is common at other military treatment facilities as well. Some MTF services may have to be cut back, and some closed, due to the lack of resources.

B. CONCLUSIONS

The methodology described in this research provides a best estimate for centrally comparing Orthopedic costs

between a military treatment facility and CHAMPUS. The CHAMPUS cost per patient admission can be derived from the CHAMPUS Health Care Summary Report. The military treatment facility cost can be constructed using the cost per occupied bed day estimates from MEPRS. Since the data used in this analysis is based on average cost, Orthopedics appears to be lower at the MTF than through CHAMPUS.

The MEPRS data measures average cost. Average cost is the only data that is available. However, decisions to shift patients between the MTF and CHAMPUS should be based on incremental cost. Accuracy is also a question. function of the individuals providing the data. reliability of the data has been questioned. Another cost implication that must be examined is the acuity of the patients being referred. If more critical patients are being referred to civilian providers, it could explain the higher CHAMPUS cost. Finally, to maximize limited resources, the remaining five specialty areas must be examined. It could be more cost effective to bring other specialty care back into the MTF. Because of these considerations, it is difficult to recommend bringing Orthopedic patients back into the MTF based on the cost data available.

Centralized data, as currently collected, can not be used to make or monitor cost effective decisions. Each command has local knowledge about individual facility capabilities that are not captured in statistical information and data. This data is critical for making appropriate decisions.

Ensuring correct decisions requires making these decisions at the local level. BUMED has started encouraging this by allowing commanding officers to make decisions if they can justify savings and manage the funding provided. If commanding officers are going to make prudent and

appropriate decisions, better information must be provided. In addition, MTF CO's must have appropriate incentives to manage direct dollars and CHAMPUS targets. The "triple option" and capitated budgets are a move in the right direction. When specific incentive systems are established, the system should be designed to encourage commanding officers to even go below target if quality is not compromised.

C. RECOMMENDATIONS

This research has analyzed and compared the costs of one medical specialty, Orthopedics, between a military treatment facility and its catchment area. Based on the average cost data analyzed, it appears that a significant savings could be realized by shifting patients back to the MTF. However, before attempting to shift major CHAMPUS workloads, a further study should be conducted on the other five specialties. This study would ascertain the full impact of possible changes in all specialty areas. It would help ensure appropriate changes are made.

When shifting CHAMPUS costs back to the MTF, commanding officers need to have the latitude to identify appropriate shifts, in concert with the Lead Agent. In order for the commanding officers to make the appropriate decision, an incentive system needs to be established that will encourage efficiency without future penalties (e.g. lowering the capitated rate or CHAMPUS target). To support the commanding officers in the decision making, appropriate data systems must be developed and accurate information has to flow freely. Data that is currently being used in the decision process is sometimes less than accurate and may measure the wrong inputs.

It should be noted that data utilized in this research was only based on beneficiaries using Standard CHAMPUS. This catchment area signed a TRICARE contract in October

1994 which will go into effect in March 1995. The contract will offer beneficiaries the "triple option". This is expected to provide a CHAMPUS cost savings in the future and could even further reduce specialty care cost. The "triple option's" cost impact should be monitored closely.

D. AREAS FOR FUTURE RESEARCH

- 1. Analyze the cost of the remaining five medical specialties at Naval Hospital Oak Harbor. Such a study should cover a two to three year span in order to determine if there is a continuous trend in MTF versus CHAMPUS costs.
- 2. Evaluate the Managed Care "Triple Option" program after the program has been implemented for at least one year. The study should ascertain if it is prudent to recapture patients or refer them to the contractor. The study should also evaluate DoD's financial impact of recapturing patients under the BID Price Adjustment Methodology.
- 3. Analyze the cost implications of recapturing patients that are not reflected in the current cost data. Some of these cost factors include:
 - patient severity
 - MTF resource availability
 - MTF capabilities
- 4. Examine Incentives at all levels (e.g, physicians, COs, Lead Agents, BUMED, patients, etc) to ensure that all stakeholders are encouraged to minimize health care cost while maintaining quality. Cost minimization requires each stakeholder to make the appropriate decision.
- 5. Examine procedures for setting capitated rates and CHAMPUS targets. Do these procedures encourage local decision makers to minimize the overall cost of medical care in their catchment area?

- If not, how can they be modified.
- 6. Identify the data required to make appropriate decisions at each level. How should DoD's health care information system be modified to facilitate the decision making process.

APPENDIX A

EXAMPLE OF PERFORMANCE DESCRIPTIONS NAVAL HOSPITAL OAK HARBOR, FY 93

ACCT	DESCRIPTION	PERFORMANCE DESCRIPTION
DAA	PHARMACY	WEIGHTED PROCEDURE
DBA	CLINICAL PATHOLOGY	WEIGHTED PROCEDURE
DBC	BLOOD BANK	WEIGHTED PROCEDURE
DCA	RADIOLOGY	WEIGHTED PROCEDURE
DDA	ELECTROCARDIOLOGY	PROCEDURE
DDD	PULMONARY FUNCTION	WEIGHTED PROCEDURE
DEA	CENTRAL STERILE	HOURS OF SERVICE
	SUPPLY	
DFA	ANESTHESIOLOGY	MINUTES OF SERVICE
DFB	SURGICAL SUITE	MINUTES OF SERVICE
DHD	PHYSICAL THERAPY	VISIT
DGA	SAME DAY SURGERY	MINUTES OF SERVICE

APPENDIX B

STATISTICAL DATA SET (OCCUPIED BED DAY DATA)

NAVAL HOSPITAL, OAK HARBOR, FY 1993

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		FAA HOUSEKEEPING AND JANITOKIAL SEKVICE GAA BIOMEDICAL EQUIPMENT REPAIR HBA LINEN AND LAUNDRY SERVICE IAA DIETETICS LJAA INPATIENT CARE ADMINISTRATION KAA AMBULATORY CARE ADMINISTRATION GEAA CENTRAL STERILE SUPPLY GEAA CENTRAL STERILE SUPPLY GEAA CENTRAL PATHOLOGY GEAA CENTRAL PATHOLOGY GEAA CENTRAL PATHOLOGY GEAA CENTRAL STERILE SUPPLY GEAA PHARMACY GEAA CENTRAL PATHOLOGY GEAA CENTRAL SURGERPHY GDAA PHARMACY GEAA DIAGNOSTIC RADIOLOGY GEAA ANESTHESIOLOGY GEAA ANESTHESIOLOGY FFAA ANESTHESIOLOGY FFAA ANESTHESIOLOGY GEAA INTERNAL MEDICINE AXS WARD G COST POOL BAA GENERAL SURGERY BEA OPIHALMOLOGY CAA GYNECOLOGY CAA GENERAL SURGERY GEA OBSTETRICS CXO WARD H COST POOL

PREPARED: 94 OCT 04 1542 HRS STEPDOWN SCHEDULE FACILITY NAME: NAVAL HOSPITAL OAK HARBOR FACILITY CODE: 066097 DOD REGION: 11

YEAR TO DATE QUARTER 4 : 01 JUL - 30 SEP FY 93 PAGE 1-2

ACCT DESCRIPTION	DIRECT EXPENSE	EDBA	EDCA	EDDA	EDEA	EDGA	EDJA	E.B.A.
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BCCA OBSTETRICS CLINIC BCXO OB GYN COST POOL	2124843	† O '					** ^	380
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BFAA PSYCHIATRY CLINIC	296728	102	σ⊂	00	7	00	\sim	
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BGAA FAMILY PRACTICE CARE	740842 285007	ກທ	7 7	•	**	0	9	6-1
BHGE PRIMARY CARE CLINIC CONTRACT	3046	2	00	00	12	00	~ 5	36 19
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BIAA EMERGENCY MEDICAL CARE BJAA FLIGHT MEDICINE CARE	1958090 553354	134	17	-0	n 5- 0		2402	. 62 62
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	347924			00	00	o o	9	· · · · · · · · · · · · · · · · · · ·
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FCCA CHAMPUS BENEFICIARY SUPPORT FCDA SUPPORT TO OTHER MILITARY ACTIVITIE		\$	-00		-00	9 0 878	1614 3620	
FIAA READINESS TRAINING LOCAL	71	, 0 0	•••	, o c			10	-
FJAG MILITARY TRAVEL SUMULIA	23	, 0	• •	, 0	0	0		

PREPARED: 94 OCT 04 1542 HRS STEPDOWN SCHEDULE FACILITY NAME: NAVAL HOSPITAL OAK HARBOR FACILITY CODE: 066097 DOD REGION: 11

YEAR TO DATE QUARTER 4 : 01 JUL - 30 SEP FY 93 PAGE 2- 1

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EBBA	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	101 58 57 840
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PREPARED: 94 OCT 04 1542 HRS STEPDOWN SCHEDULE FACILITY NAME: NAVAL HOSPITAL OAK HARBOR FACILITY CODE: 066097 DOD REGION: 11

QUARTER 4: 01 JUL - 30 SEP FY 93 YEAR TO DATE PAGE 2-2

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PREPARED: 94 OCT 04 1542 HRS STEPDOWN SCHEDULE FACILITY NAME: NAVAL HOSPITAL OAK HARBOR FACILITY CODE: 066097 DOD REGION: 11

QUARTER 4 : 01 JUL - 30 SEP FY 93 YEAR TO DATE PAGE 3- 1

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DBAA	1065968 4862 4862 4862 658 658 3668
DAAA	2618792 2618792 2618792 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
DEBA	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
DEAA	114286 114286 114286 119 59351 939 939
EKAA	464290
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PREPARED: 94 OCT 04 1542 HRS STEPDOWN SCHEDULE FACILITY NAME: NAVAL HOSPITAL OAK HARBOR FACILITY CODE: 066097 DOD REGION: 11

QUARTER 4: 01 JUL - 30 SEP FY 93 YEAR TO DATE PAGE 3-2

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REPARED: 94 OCT 04 1542 HRS STEPDOWN SCHEDULE ACILITY NAME: NAVAL HOSPITAL DAK HARBOR CILITY CODE: 066097

YEAR TO DATE
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PREPARED: 94 OCT 04 1542 HRS STEPDOWN SCHEDULE FACILITY NAME: NAVAL HOSPITAL OAK HARBOR FACILITY CODE: 066097 DOD REGION: 11

YEAR TO DATE QUARTER 4: 01 JUL - 30 SEP FY 93 PAGE 4- 2

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YEAR TO DATE QUARTER 4: 01 JUL - 30 SEP FY 93 PAGE 1-1

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AAXS WAKD G CUST FOUL	82714	50268	0	0	0268	152982
ABFA OPTHALMOLOGY	1	7	7	-	2753	45777
ACAA GYNECOLOGY	770	166771	764	· c	47811	197320
ACBA OBSTETRICS	9500	5) M	0	0633	
ACXO WARD H COST POOL	7902	96342		0	9639	1670
ADAA PEDIAIRICS	2227) }	0	0	- 1	4222
ADBA NUKSEKY	:9	237249	0	0	237249	70580
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BBAA GENERAL SURGERY CLINIC	71	- C	· c	3237	3237	15533
BCBA GYNECOLOGY CLINIC	0 0	•		0857	1085737	14652
BCCA OBSTETRICS CLINIC	000	• =	Ö	960	4094	
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BDAA PEDIATRIC CLINIC		· C	0	0	0	2511
BEAA ORTHOPEDIC CLINIC	777	-	0	0	0	3852
BFAA PSYCHIATRY CLINIC	7.5	.	0	0	0	4116
BFAX CHAMPUS RECOUP	705	· c	0	0	0	2406
BFEA SOCIAL WORK SERVICES	3 2	0	0	0	0	17331
BGAA FAMILY FRACTICE CARE	6584	0	0	0	~	6584
BHAA PRIMARY CARE CLINICS	208	0	0	0	0	908/
PRIMARY CARE CLINIC	712	0	0	0	0	3715
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BHGA UCCULALIONAL DEALLE CLINIC	3044	0	0	> (> C	35044
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PHYSIOLOGICAL TRAINING/SUPPORT	619	0	-	-		3968
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	326	, O	0	0	0	2326
	058	0	0	0	9	202

PREPARED: 94 OCT 04 1542 HRS FINAL PURIFICATION FACILITY NAME: NAVAL HOSPITAL OAK HARBOR FACILITY CODE: 066097 DOD REGION: 11

YEAR TO DATE QUARTER 4: 01 JUL - 30 SEP FY 93 PAGE 1- 2

AMOUNT PURIFIED REASSGND EXPENSE	0 94158 0 690665 0 349149 0 535755 0 28450 0 23306240	1 1 1 1 1 1 1 1
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EXP. AFT. STEPDOWN	94158 690665 349149 535755 28450	2730003
ACCT DESCRIPTION	CARE PURCHAS ICIARY SUPPO HER MILITARY PORTATION INING LOCAL EL SOMOLIA	

PREPARED: 94 OCT 04 1542 HRS FACILITY NAME: NAVAL HOSPITAL OAK HARBOR FACILITY CODE: 066097 DOD REGION: 11

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COMPUTATION SUMMARY	
10 00 00 00 00 00 00 00 00 00 00 00 00 0	DOD REGION: 11
1542 HRS	HUSFITAL DOD
PREPARED: 94 OCT 04 1542 HRS	CODE: 066097
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QUARTER 4 : 01 JUL - 30 SEP FY 93 PAGE 02

YEAR TO DATE

PURIFIED EXPENSE	0128	40128	01861	5555	22222	46526			5849	5849	3849	251104	7110	3752	79684	8520	1163	4068	4068	73318	3318	73318	25691	43903	5840	8062	$\frac{7129}{2}$	7129	4658	44658	ソカカロの	24400	74400	7266	12221	00271	ナウナ	777	1 7 1	> C	.	. 0
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NCIL	00	9069	9655	8017	3639	3439	3038	3038	0394	394	1000	8 6 8 8 6 8 8 6 8	868	767	67	67		0		4320	4320	4320	3338	6032	249793	1055	<u> </u>	515	06/	6/90	1211	1211	7611	7 2	0576					86	9	9
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PURIFIED EXPENSE

PREPARED: 94 OCT 04 1542 HRS FACILITY NAME: NAVAL HOSPITAL DAK HARBOR FACILITY CODE: 066097 DOD REGION: 11

PURIFIED EXPENSE

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O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	01 JUL - 30 SEP	DIRECT	7746	236 7197	7197	18867	98850 98850	433513	433513	446543 446543	446543	120136	120136	48990	48990	32	32	20075	661001	100199	390415 390415	390415	2299375	525136	525136	347924	603387	224486	213555	213555	165346	400465
PREPARED: 94 C FACILITY NAME: FACILITY CODE:	QUARTER 4 : PAGE 04	ACCT CODE	*EDCA EDD	*EDDA EDE	*EDEA	*EDGA	EDJ *EDJA	П П	*EEAA	H H H T H	*EF AA	EG AG	*EGAA	EH	*EHBA	EI EIA	*EIAA	EIB XEIBA	Д	*EJAA	EK A	*EKAA	<u> </u>	FAI	*FAIA	FAL *FAI A	FB	FBB	FBC	*FBCA ERT	*FBIA	FC

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: 94 OC! 04 INNAME: NAVAL HO: CODE: 066097	1 01 JUL - 30	DIRECT EXPENSE	94158	94158	94017	94017	212290	212290	397109	397109	397109	716	716	716	24638	24638	24638	23306240
FACILITY N FACILITY C	QUARTER 4 PAGE 05	ACCT CODE	Ε. Δ.	*FCAA	FCC	*FCCA	FCD	*FCDA	ш	FEA	*FEAA	I	FIA	XFIAA		F.IA	*F.JAG	*TOTAL

PAGE: 02 03: 15: FONTHS UNDUELLEATED ************************************	126.30 126.30 126.30 125.509 135.518 21.154.16	7 10 10 8,485 10,687 10	25,224 135,294 143,128 143,128 22,554,72	1900 1900 1900 1900 1900 1900 1900 1900	000000	103 166 152 125 201,125 233,626
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APPENDIX H
SUMMARY OF COSTS/WORKLOAD

	otal xp	OBD's	Cost Per OBD	Total Admiss.	Cost Per Admiss.	ALOS
MEPRS	650000	475	1368	199	3270	2.38
CHAMPU	S 168704	109	1546	31	5442	3.52

APPENDIX I

INPATIENT SPECIALTY
NAVAL HOSPITAL OAK HARBOR, FY 1993

UCA CODE	DESCRIPTION
AAAA ABAA ACAA ACBA ADAA ADBA AEAA AGAA	INTERNAL MEDICINE GENERAL SURGERY GYNECOLOGY OBSTETRICS PEDIATRICS NURSERY ORTHOPEDICS FAMILY PRACTICE INTERNAL MEDICINE
AGCA AGDA AGEA AGHA	FAMILY PRACTICE OBSTERTICS FAMILY PRACTICE PEDIATRICS FAMILY PRACTICE GYNECOLOGY FAMILY PRACTICE NURSERY

APPENDIX J (GLOSSARY)

- MTF Military Treatment Facility (same as Military Hospital)
- 2. DOD Department of Defense
- 3. ALOS average Length of Stay
- 4. FY Fiscal Year
- 5. OBD Occupied Bed Day
- 6. NAS Non Availability Statement
- 7. CHAMPUS Civilian Health and Medical Program of the Uniformed Services
- 8. DEERS Defense Eligibility and Enrollment Reporting System
- 9. MEPRS Medical Expense and Performance Reporting System

APPENDIX K (MAY'S METHODOLOGY)

Cost per admission = wi*Ci+...wn*Cn i=1 to n,
 where

wi = number of OBD spent in work center i

Ci = cost per OBD in work center i

n = number of work centers.

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