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Abstract

The purpose of this study was to determine the most appropriate organizational structure and alignment for a managed care office at Keller Army Community Hospital (KACH), West Point, N.Y. The study methodology relied on an extensive literature search, interviews with key personnel and direct observations. I used the Structural Design Model designed by Jan Galbraith (1971) and Richard Daft (1989) to determine the most appropriate organizational structure for the managed care office. Using the results of the Structural Design Model, I developed several organizational alignment alternatives. I then used the problem solving process to determine my data analysis, I concluded that the managed care office should be organized as a matrix structure and aligned as a separate entity under the Deputy Commander for Administration (DCA). This recommended organizational structure and alignment will enhance operations for the managed care office and optimize coordination among the applicable hospital departments. This study validated Health Services Command's (HSC) decision regarding the structure for a similar office; however, I proposed an alternative alignment model that is more appropriate for this office. Because of the close similarity of organizational structures among Medical Department Activities (MEDDACs), the results of this management project can be used by other MEDDACs with a managed care office and tailored to their own organizations. Other MEDDACs will find that aligning their managed care office under the DCA rather than as a branch in the Patient Administration Division (PAD) will improve the effectiveness and coordination of the managed care programs.



DEPARTMENT OF THE ARMY
U. S. ARMY MEDICAL DEPARTMENT ACTIVITY
West Point, New York 10996-1197

REPLY TO
ATTENTION OF:

HSUD (310-1)

23 May 1990

MEMORANDUM THRU COL William Inazu, Deputy Commander for
Administration

FOR Residency Committee, U.S. Army-Baylor University
Graduate Program in Health Care Administration
(HSHA-IHC), Academy of Health Sciences, Fort Sam
Houston, TX 78234-6100

SUBJECT: Graduate Management Project

I am re-submitting one copy of my Graduate Management
Project for approval as well as the DD Form 1473 and DTIC
Form 59 in accordance with the instructions contained in
the Administrative Residency Manual.

Encl

BRIAN E. ANSELMAN
CPT, MS
Administrative Resident

HSUD 1st End

COL Inazu/ba/3305

DA, HQ, USA MEDDAC, West Point, NY 10996-1197 23 May 90

FOR Residency Committee, US Army-Baylor University
Graduate Program in Health Care Administration (HSHA-IHC),
AHS, Fort Sam Houston, TX 78234-6100

I have reviewed and approved CPT Anselman's Graduate
Management Project. I am satisfied that he has made the
modifications suggested by MAJ Varney and recommend
approval of his GMP.

WILLIAM M. INAZU
COL, MS
Deputy Commander for Administration

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I would also like to express my gratitude to my three faculty readers: LTC George Gisin, LTC F. William Brown and MAJ Richard Varney. Each of them have responded with timely guidance and feedback regarding the development of my project. I especially appreciate the time and guidance that LTC Brown provided in assisting me to develop my methodology. His suggestions considerably strengthened my methodology for this project.

Finally, I wish to thank Richard Daft, author of the book, Organization Theory and Design (1989). His book synthesized all of the structural design models and paradigms I needed to conduct an organizational structure study at Keller Army Community Hospital. This reference provided me with an excellent knowledge base in organization design that greatly facilitated my conduct of this management project.

Abstract

The purpose of this study was to determine the most appropriate organizational structure and alignment for a managed care office at Keller Army Community Hospital (KACH), West Point, N.Y. The study methodology relied on an extensive literature search, interviews with key personnel and direct observations. I used the Structural Design Model designed by Jay Galbraith (1971) and Richard Daft (1989) to determine the most appropriate organizational structure for the managed care office. Using the results of the Structural Design Model, I developed several organizational alignment alternatives. I then used the problem solving process to determine the most appropriate organizational alignment alternative. Based on my data analysis, I concluded that the managed care office should be organized as a matrix structure and aligned as a separate entity under the Deputy Commander for Administration (DCA). This recommended organizational structure and alignment will enhance operations for the managed care office and optimize coordination among the applicable hospital departments. This study validated Health Services Command's (HSC) decision regarding the structure for a similar office; however, I proposed an alternative alignment model that is more appropriate for this office. Because of the close similarity of organizational structures among Medical Department Activities (MEDDACs), the results of this management project can be

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- C. SURVEY QUESTIONNAIRE FOR ENVIRONMENTAL
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- G. ORGANIZATION CHART FOR ALTERNATIVE 1
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- K. PROPOSED MATRIX STRUCTURE FOR THE MCHSB

**DETERMINING THE MOST APPROPRIATE ORGANIZATIONAL STRUCTURE
AND ALIGNMENT FOR A MANAGED CARE OFFICE AT KELLER
ARMY COMMUNITY HOSPITAL, WEST POINT, N.Y.**

Conditions Which Prompted the Study

Over the past few years, the delivery of health care in the Army Medical Department (AMEDD) has experienced dramatic changes. Constraints on Federal and Department of Defense (DoD) budgets created an environment of limited resources within the DoD health system. At the same time, the demand for services continued to grow and the cost of providing care, particularly through the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), skyrocketed. Cost containment and the efficient use of resources are now the governing philosophy of the AMEDD.

Prospective payment in the form of Diagnosis Related Groups (DRGs) is being introduced into the DoD health system as a means of cost containment. In addition, the DoD Health Affairs Office has turned to managed care as a potential means of cost containment. The DoD Health Affairs Office developed numerous managed care demonstration projects in attempts to determine which models would be most effective in containing the costs of military medicine.

Yet, while the economics of delivering health care is changing, the organizational structure of the MEDDAC has not changed. Is the structure of MEDDACs appropriate to enhance the function of providing the highest quality care at the best price?

The function of military hospitals is to manage the changing environment to its advantage in terms of quality of care and resource utilization. Army MEDDACs must then develop organizational structures that can react quickly to the changing environment, enhance opportunistic thinking and decision making, and foster cost conscious responses to the growing service base.

Prior to September 1989, the management and coordination of the managed care activities at KACH were fragmented along functional lines. No one person had responsibility for all managed care activities. The PAD controlled the Health Benefits Advisor (HBA) duties and Supplemental Care program. The Resource Management Division (RMD) coordinated the DoD Sharing Agreement Program and the Clinical Support Division (CSD) coordinated the CHAMPUS Partnership and Direct Health Care Provider Programs (DHCPP). This was further complicated by the KACH organizational structure in which the PAD and CSD reported to the DCCS while the RMD reported to the DCA. This fragmented approach prevented the development of a comprehensive managed health care delivery strategy.

In September, 1989 HSC established the Military-Civilian Health Systems Branch (MCHSB). As one of its primary goals, the MCHSB is responsible for developing, coordinating and monitoring a managed health care system for the MEDDAC. HSC provided three additional manpower requirements and funding to staff this branch,

in addition to shifting the HBA authorization to this branch. The directive also mandated that the MCHSB was to be aligned as a branch under the PAD.

The HSC Regulation 10-1 stipulates that the PAD is to be aligned under the DCA. However, at KACH, the Commander decided to configure PAD under the DCCS. The CSD is also under the DCCS. Therefore, the DCA is effectively removed from the direct policy and decision making process regarding managed care initiatives.

Statement of the Management Problem

The problem statement for this study was to determine the most appropriate organizational structure and alignment for a managed care office at Keller ACH, West Point, N.Y.

Review of the Literature

In my literature review, I have first presented the theoretical constructs of my management project which are organizational structure and managed care. Then I have reviewed the managed care applications that the DoD is currently employing.

Organizational Structure

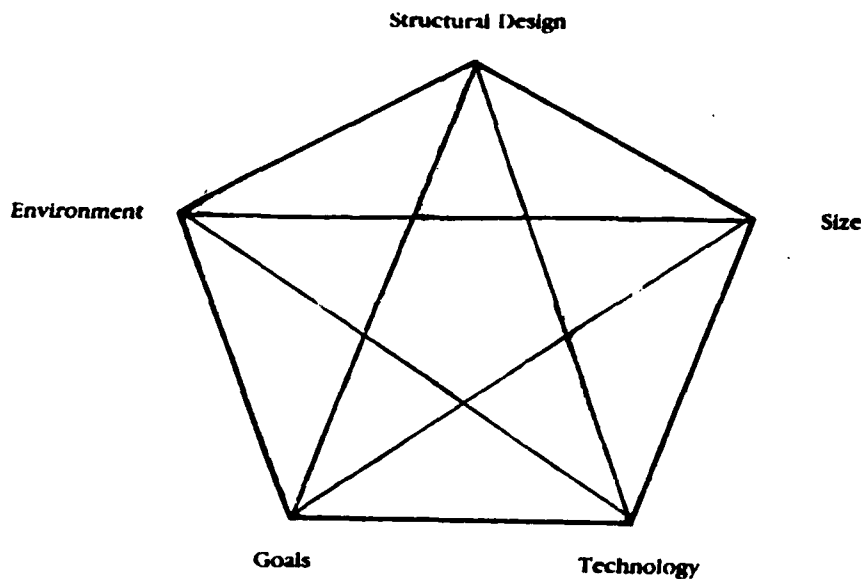
There is no single best way for an institution to organize in all situations. Contingency theory states that there is no best way, that it depends on the situation (Daft, 1989). The fundamental tenet of contingency theory, as applied to organizational theory, asserts that there is no universal type organizational structure, but a multitude of possible alternative

methods of organization. The appropriate structure is contingent on such organizational factors as tasks, size and external environment. These factors serve as both opportunities and constraints that influence the internal organization (Daft, 1989; Leatt & Schenck, 1982; Neuhauser, 1972). Theorists argue that "effective and successful organizations structure or organize themselves in a manner compatible with these contextual demands or respective contingencies" (Leatt & Schenk, 1982, p.221).

The Structural Design Model (Figure 1) by Jay Galbraith (Daft, 1989) posits that organizational structure is determined by four contextual variables: environment, goals, technology and size. Each of these factors is associated with a correct structural design, and each of these may influence each other as well.

Structural Design Model

Figure 1. Structural Design is contingent on Environment, Size, Goals and Technology contextual variables.



Note. From "Matrix Organization Designs" by J.R. Galbraith, 1971, Business Horizons, 29-40.

There are three basic organizational structures: Functional, product and matrix. In a functional structure, activities are grouped together by common function from the bottom to the top of the organization such as Nursing, Surgery, Medicine, and Radiology. The functional organization is most effective when the environment is stable, the technology is relatively routine with low interdependence across functional lines, the goals pertain to internal efficiency and technical specialization, and the size is small to medium (Daft, 1989; Hellriegel, Slocum & Woodman, 1986; Litterer, 1980; Neckel, 1988; Shortell & Kaluzny, 1988).

In a product structure, the organization is based on organizational outputs. For each product output, all necessary resources are grouped within the departmental structure. The product structure is most effective when the environment is uncertain, technology is non-routine and reflects interdependence across departments, goals emphasize external effectiveness and adaptation, and the size is large (Daft, 1989; Hellriegel, Slocum & Woodman, 1986; Litterer, 1980; Neckel, 1988; Shortell & Kaluzny, 1988).

A matrix organization exists when both product and functional structures are implemented simultaneously in each department. It is similar to the use of full-time integrators or product managers except that in a pure matrix organization, the product managers are given formal authority equal to that of the functional managers. The matrix structure is best used when environmental uncertainty is high and when goals reflect a dual requirement, such as for both product and function. This structure is good for non-routine technologies that have interdependencies both within and across functions. It tends to work best in organizations of moderate size with a few product lines (Daft, 1989; Hellriegel, Slocum & Woodman, 1986; Litterer, 1980; Neckel, 1988; Shortell & Kaluzny, 1988). According to Davis and Lawrence (1977, as cited in Daft, 1989), the matrix structure is appropriate for the following special conditions:

- 1). Environmental pressure is for two or more critical outputs such as technical quality and frequent new products.
- 2). The environmental domain of the organization is both complex and uncertain.
- 3). Economies of scale in the use of internal resources is needed such as not having sufficient engineers to assign them full time to separate product lines, such that engineers are temporarily allocated to several product lines.

Different forms of a matrix organization can be identified on a continuum which ranges from the pure functional organization to the pure product organization (Galbraith, 1971 as cited in Larson & Gobeli, 1987). At the functional end of the spectrum, hierarchical or vertical coordination exists. At the other end of the spectrum, product organization exists in which lateral or horizontal coordination operates (Litterer, 1980). "Matrix organizations lie between the two extremes by integrating the functional structures with a horizontal project structure" (Larson & Gobeli, 1987, p.127).

Organizations apply the matrix structure in varying degrees and in different ways. The level of horizontal linkage used determines where the organization falls on the spectrum. Horizontal linkages or lateral relations refer to the degree of

coordination and communication that exist across organizational departments (Duncan, 1979; Daft, 1989; Neuhauser, 1972; Shortell & Kaluzny, 1988).

The following horizontal linkages are alternatives listed in ascending order of complexity. Paperwork and memos are simple devices that provide a low level of horizontal linkage. Direct contact between managers of different groups permits a slightly higher degree of lateral coordination. Creating a liaison role is the next alternative and is a formal communications link between two units. Task forces are more complex mechanisms of creating horizontal linkage and are temporary committees composed of representatives from each department to deal with a specific project or problem (Duncan, 1979; Daft, 1989; Hellriegel, Slocum & Woodman, 1986; Litterer, 1980).

The need for stronger, more complex horizontal coordination may necessitate the establishment of an integrator role. The integrator is located outside the departments and is responsible for coordinating the actions of several departments. The integrator frequently has titles such as program manager, brand manager, project manager, or product manager. Integrators have a great deal of responsibility, but have little authority as formal authority remains with the functional department managers (Daft, 1989; Duncan, 1979; Lawrence & Lorsch, 1967; Hellriegel, Slocum & Woodman, 1986).

Establishing project teams tends to be the strongest - horizontal linkage device. Project teams are permanent task forces and are often used in conjunction with an integrator (Daft, 1989; Duncan, 1979; Litterer, 1980).

Larson and Gobeli (1987) cite three different forms of matrix structures. The pure matrix structure or balanced matrix is one in which the functional manager and product manager equally share direct authority over work operations. The project manager is primarily concerned with what needs to be accomplished while the functional manager is concerned with how it will be accomplished. The functional matrix occurs when the project manager's role is restricted to coordinating the efforts of the functional groups with only indirect authority to expedite and monitor the work plan. The functional managers are responsible for the design and completion of their respective technical requirements. The last matrix structure is the project matrix. This form occurs when the project manager has direct authority to make decisions regarding personnel and work flow activities. The functional manager is limited to providing services and technical advisory support.

Managed Care

The term "managed care" refers to any system in which the management of health care delivery uses cost control mechanisms (Kongstevdt 1989). Aaron and Breindel (1988) similarly define managed care, but add that the cost control mechanisms are normally established by third parties (non-patient and non-provider). The more common forms of managed care plans are Health Maintenance Organizations (HMOs) and Preferred Provider Organizations (PPOs). HMOs are pre-paid capitated plans that provide comprehensive health care for a specified period. PPOs are contractual arrangements with providers or institutions in which they provide health care services at pre-established discounted fee-for-service prices. However, the distinction between HMOs, PPOs, and other forms of managed care plans has narrowed, and many hybrid managed care plans have sprouted (Kongstevdt, 1989).

Traditionally, health care has been financed by a fee-for-service system in this country. This financing mechanism reimbursed health care providers, including both physicians and hospitals, their total costs or charges incurred in the treatment process. The more physicians and hospitals charged and the higher their costs, the greater their revenues. There was no incentive to control access or contain costs, but rather, physicians and hospitals were economically motivated to induce demand (Aaron &

Breindel, 1988; Kongstevdt, 1989). This system promoted — inefficiency and resulted in skyrocketing inflation in health care.

As the cost of providing health care benefits to employees soared, corporations soon felt the adverse impact on profits and competitiveness with foreign goods. Corporations turned to managed health care delivery systems that could control costs. Managed medical care has existed since 1929 when the first HMO was established. Managed medical plans did not proliferate until after the passage of the HMO Act of 1973. This law opened the door for managed care plans to increase in numbers and to expand their enrollment to beneficiaries of government financed health care programs including Medicare and Medicaid (Kongstevdt, 1989). Following the passage of the HMO Act, managed care plans grew in popularity in the 1980s as an alternative to the inflationary fee-for-service system (Aaron & Breindel, 1988).

By definition, managed care plans rely on cost containment mechanisms to control costs. There is a wide variety of cost control measures available with varying degrees of effectiveness. Different types of managed care plans employ their own mix of cost control mechanisms. Some of these cost control measures include financing mechanisms such as capitation and discounted fee-for-service plans; utilization management mechanisms such as preadmission certification, second surgical opinions and case

management; and risk sharing mechanisms among providers such as capitation and withholds (Kongstevdt, 1989; Aaron & Breindel, 1988).

The military health care system continues to encounter inflationary pressures and greater demand for service. The DoD is experimenting with numerous managed care initiatives to rein in health care costs. Many of these managed care programs focus on CHAMPUS costs.

CHAMPUS

Since the direct care system could not meet total demand for care, Congress legislated CHAMPUS as a cost sharing health insurance plan. Nearly 9.2 million people including all active duty servicemen, their dependents, and military retirees and their dependents are eligible to use the DoD direct health care system. This demand far exceeds the capabilities of the system. Since the active duty population has priority in the system, the excess demand generated by dependents and retired beneficiaries is referred to the more expensive CHAMPUS program. On average, for every dollar that is spent for medical treatment in a military treatment facility, it costs CHAMPUS \$1.57 to provide the same treatment (Gisin & Sewell, 1989; Congressional Budget Office (CBO), 1988; telephonic interview with CPT Gidwani, 21 November 1989). CHAMPUS pays a large part (normally 75-80%) of civilian hospital and physician costs. Beneficiaries can use CHAMPUS at

any time for outpatient care, but must obtain permission - (non-availability statements) from the local military medical commander for inpatient care if they live within a 40 mile radius catchment area (Gisin & Sewell, 1989).

While funding for the direct health care system has always been provided through service channels, CHAMPUS funding until recently was provided directly to the Office of CHAMPUS, Denver, CO by the DoD. This allowed the opportunity for considerable cost shifting from the three services to the DoD (CBO, 1988). Traditionally, local military hospital commanders encouraged patients to use CHAMPUS to reduce the overcrowding at their facilities. This helped the local hospitals and services while creating a burgeoning CHAMPUS budget for the DoD. As Gisin and Sewell (1989, p.88) noted, the "DoD found itself to be primarily a bill payer, with little control over either the number of beneficiaries or the scope of services provided through CHAMPUS."

Over time, this led to friction between the services and the DoD regarding the perceived willingness of the services to provide the maximum amount of care in military hospitals and clinics. CHAMPUS sustained budget deficits in the 1980s that required supplemental appropriations in excess of \$300 million each year. To put a rein on rampant CHAMPUS expenditures, the DoD Health Affairs Office decided to allocate CHAMPUS funds directly to the three services beginning in FY88, thereby placing the burden of

controlling CHAMPUS costs on them (Gisin & Sewell, 1989). Over the last ten years, Congress and the DoD sponsored a variety of programs designed to recapture CHAMPUS workload into the military direct health care system. Beginning in FY88, Congress gave the services authority to pursue demonstration projects aimed at improved management of CHAMPUS funds (HSC, 1988).

Catchment Area Management. One such demonstration project authorized by Congress is the Catchment Area Management (CAM) project. This program gives local hospital commanders the opportunity to demonstrate that when given adequate funding, resources and authority, they can enhance health care delivery within their respective catchment areas while containing costs. Under the provisions of this program, the local hospital commander receives both the appropriated Operations and Maintenance Army (OMA) funding and CHAMPUS funding budgeted for the hospital's catchment area. The commander is responsible for providing care to all beneficiaries within budgetary constraints. The local commander also has the authority to determine the level and mix of in-house services to be provided and which services are to be contracted out (Gisin & Sewell, 1989; HSC, 1988).

Necessary to the success of the CAM project is the channeling of CHAMPUS workload into the military treatment facility to maximize treatment provided at lower costs. Hospital commanders have the latitude to hire or contract the necessary mix and number

of direct health care providers and ancillary support personnel to maximize the direct health care system workload. During FY89 and FY90, the CAM was to be tested at five DoD hospitals, and upon evaluation of the results, a decision would be made regarding expansion of this concept to other DoD facilities (Gisin & Sewell, 1989; HSC, 1988) .

CHAMPUS Reform Initiative. The CHAMPUS Reform Initiative (CRI) is a DoD demonstration project for beneficiaries in California and Hawaii that began in August of 1988. The Foundation Health Corporation was awarded a contract to provide CHAMPUS services to more than 800,000 beneficiaries in the two states. Using health care finders (HCFs) located at each medical treatment facility (MTF), Foundation would first try to maximize the CHAMPUS workload for each military MTF in the two state area. The HCFs would then refer beneficiaries to a network of PPOs if an appointment at nearby MTFs are unavailable. Beneficiaries also have the option of enrolling in HMOs (Office of The Surgeon General (OTSG), 1989).

Preferred Provider Arrangements. The DoD initiated a CHAMPUS demonstration project in Georgia and Florida on 1 July 1988 in which several PPOs agreed to provide health care to CHAMPUS beneficiaries at discounted prevailing CHAMPUS rates with lower

beneficiary cost shares. This is a two year test of the demonstration project and savings are projected at \$4.5 million over the duration of the experiment (Price, 1989).

Partnership Program. Under the provisions of DoD Instruction (DoDI) 6010.12 (1987), the "Military Civilian Health Services Partnership Program" was established in October 1987. The Partnership Program was designed to assist hospital commanders in augmenting their medical staff to capture CHAMPUS workload when the hospitals are unable to provide sufficient health care services to CHAMPUS beneficiaries through the treatment facility's own resources. The purpose of the program is to allow CHAMPUS beneficiaries to receive inpatient and outpatient care, through the CHAMPUS program, from civilian health care providers in the MTF (internal partnership) and from military health care providers in civilian facilities (external partnership).

The premise of the Partnership Program is that the DoD health care delivery system can operate more efficiently by using the CHAMPUS program to supplement the MTF rather than disengaging the patient to CHAMPUS, which is a considerably more costly health care component, according to Albert Shultz, Partnership Program Coordinator at HSC. Since the civilian health care provider working in the military hospital incurs lower overhead, the hospital commander negotiates for a discounted fee-for-service. Normally, the hospital commander is expected to obtain at least a

30% discount from the CHAMPUS prevailing rates (personal interview with Albert Schultz, 6 July 1989).

Alternate Use of CHAMPUS Funds Program. The Alternate Use of CHAMPUS Funds Program is a Congressionally approved project allowing up to \$50 million in FY89 CHAMPUS Funds to be used for other than CHAMPUS claims when such use would improve the productivity of military hospitals and produce net verifiable savings. The Assistant Secretary of Defense (Health Affairs) has been designated as the proponent for the program and is the approving authority for all program proposals.

Personal Services Contracts

Congress authorized the AMEDD to negotiate personal services contracts for direct health care providers such as physicians, dentists, nurses, radiologists, and laboratory technicians. Among the purposes of personal services contracts are to facilitate mission accomplishment, maximize beneficiary access to military treatment facilities, and reduce the use of CHAMPUS. For FY88, the program paid for 385 work years world wide for all types of contracts in 51 military medical facilities. This program helped reduce the Army CHAMPUS bill by bringing more health care providers into MTFs (OTSG, 1989; DoD, 1985).

Supplemental Care

MTFs are tasked to provide eligible beneficiaries with medical care to the extent that such care is required, authorized, and available. If the patient is an eligible beneficiary and the care required exceeds the ability of the MTF to provide this necessary care, supplemental care funds can be used to obtain these services from local civilian resources.

Supplemental care funds may be used to obtain such non-elective services as special treatment procedures, consultations, tests, and supplies. They can also be used to cover all obstetric expenses for active duty females, if OB services are not available in the MTF.

Normally, supplemental care services are provided on an outpatient basis. However, inpatient referrals can be made, usually for emergency situations. With the exception of OB services, the patient can remain hospitalized in a civilian facility, using supplemental care funds, for up to 48 hours. For periods exceeding 48 hours, approval must be obtained from the regional medical center to which the MEDDAC reports.

After audit reports revealed that many facilities were paying excessive charges for medical services purchased from civilian sources, the Office of the Secretary of Defense (OSD) for Health Affairs instructed the tri-services to institute tighter controls on supplemental care expenditures. Hospital commanders are now

expected to pursue alternative methods of obtaining supplemental care such as VA-DoD Sharing Agreements, the Partnership Program, Direct Health Care Providers Contracting and inter- and intra-service evacuation if it is feasible and less costly (OTSG, 1988).

As a provision of the Partnership Program, MTF commanders may use available supplemental care funds to purchase care for non-CHAMPUS beneficiaries from Partnership providers at a negotiated discounted fee-for-service price (DoD, 1988). Once their other alternatives are explored, hospital commanders may obtain Supplemental Care provided that they ensure that fees paid do not exceed prevailing CHAMPUS rates. MTF Commanders must ensure that resource-sharing agreements are considered where multiple federal facilities coexist; and where possible, they must pursue Partnership Agreements or professional services contracts for services frequently purchased from civilian sources. -

VA-DoD Sharing

In 1982, Congress authorized VA hospital directors and military hospital commanders to engage in sharing agreements that resulted in increased quality of care, improved service to the patient and enhanced cost effectiveness of treatment. This program allows DoD hospitals to take advantage of the excess capacity of medical services existing at nearby VA facilities at substantially reduced cost and vice versa. These sharing

agreements can afford considerable savings to a hospital -
commander's Supplemental Care budget.

Military-Civilian Health Systems Branch

Health Services Command established a new Military-Civilian Health Systems Branch (MCHSB) under the MEDDAC's Patient Administration Division in September 1989. This branch will support the mission of coordinating direct care and CHAMPUS services including the management of all managed care activities. Currently, the Clinical Support, Patient Administration and, to a lesser extent, Resource Management Divisions perform many of the functions that the new branch will conduct. HSC also created two positions for the new branch; the supervisory Health Services Manager and the Civilian Resource Coordinator. HSC distributed three additional manpower requirements to KACH for their Military-Civilian Health Systems Branch. Keller ACH received manpower requirements for each of the new positions created and for a Budget Assistant. The Health Benefits Advisor authorization was shifted from the Patient Affairs Branch in the PAD to the MSHSB for a total of four personnel. HSC indicated that the additional requirements would be funded in FY90.

Purpose of the Study

I based my graduate management project on the following hypotheses:

H_0 = The organizational structure and alignment, as specified in the HSC Regulation 10-1 and the TDA for Keller ACH, is the most appropriate to complete the stated mission and requirements of the Managed Care Office.

H_a = The organizational structure and alignment, as specified in the HSC Regulation 10-1 and the TDA for Keller ACH, is not the most appropriate to complete the stated mission and requirements of the Managed Care Office.

To determine the most appropriate organizational structure and alignment to administer the managed care office, an organizational and an environmental assessment were made with the following objectives:

1. Identify the goals and functions of the managed care office.
2. Determine the most appropriate organizational structure for the managed care office with the Structure Design Model by:
 - a. Assessing the goals of the managed care office to determine if the focus of the goals are internal, external or dual.

b. Assessing the departmental technology of the managed care office along two dimensions: Job task complexity and interdependence.

c. Assessing the level of uncertainty in the KACH environment by employing a framework that measures two dimensions of environmental uncertainty: Environmental complexity and environmental stability.

d. Determining the size of KACH in terms of the number of people employed in the organization.

3. Determine the most appropriate organizational alignment of the managed care office by:

a. Developing alignment alternatives based on the organizational structure recommended by the Structural Design Model.

b. Evaluating alignment alternatives.

c. Choosing the best alignment alternative.

Methods and Procedures

I divided my project into two phases: organizational structure and organizational alignment. The purpose of the organizational structure phase was to determine the most appropriate structure for the managed care office. The choice of organizational structure was one of three possibilities: functional, product or matrix. Only after I had determined the structure could I then proceed to identify the most appropriate organizational alignment. The organizational alignment chosen would then determine the most appropriate reporting relationship for the managed care office. I have discussed the methodology and procedures for each phase separately. My discussion of each phase includes the model designs and frameworks I used and the criteria developed for each model and framework.

I conducted an extensive literature search prior to my phased approach and reviewed a wide variety of reference material governing the following topics:

- a. Managed Care
- b. CHAMPUS Program
- c. CHAMPUS Managed Care Demonstration Projects
- d. Supplemental Care
- e. Personal Contracting
- f. Organizational Structure
- g. Organizational Design Criteria

In addition to numerous books and journal articles, I reviewed various military correspondence including information papers, memorandums, letters, and DoD Instructions.

My methodology also included direct observation of specific managed care functions, interviews with command and staff members at KACH and telephone interviews with staff members from the OTSG and HSC. The ethical rights of those people interviewed were preserved by informing them of the purpose of my interview and stating their right to refuse or stop the interview at any time prior to the interview.

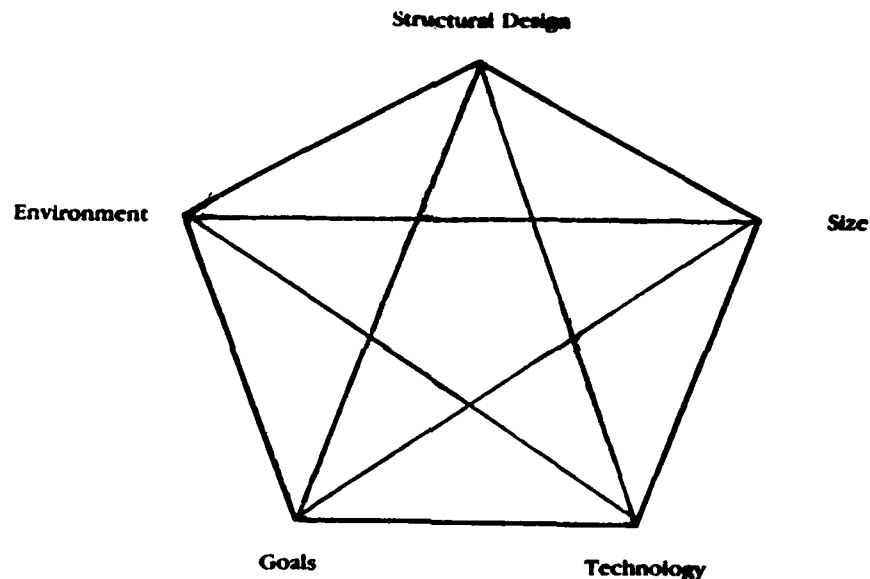
Organizational Structure Phase

The model I used to determine the appropriate structure for the managed care office at Keller ACH was patterned from the Structural Design Model (Figure 2) developed by the organizational theorist, Jay Galbraith and modified by Richard Daft (Galbraith, 1977 as cited by Daft, 1989). The model postulates that organizational structure is determined by four contextual variables: Organizational environment, technology, goals, and size. By assessing the environmental factors and organizational characteristics of the programs to be incorporated in a functional entity in terms of these four variables, Galbraith and Daft posit that the most appropriate structure for an organization can be

determined. The structural design model by Galbraith and Daft established construct validity and reliability for the study.

Structural Design Model

Figure 2. Structural Design is contingent on Environment, Size, Goals and Technology contextual variables.



Note. From "Matrix Organization Designs" by J.R. Galbraith, 1971, Business Horizons, 29-40.

Goals. An organizational goal is a desired state of affairs that the organization attempts to realize (Etzioni, 1964 as cited in Daft, 1989). Goals can reflect either management's internal focus or external focus. Strategy is the plan of action that describes resource allocation for dealing with the environment and for achieving organizational goals. The goals and strategy define the scope of the operations and relationship with the organization's various constituencies (Daft, 1989).

I relied on interviews and literature reviews to determine the goals and functions of the managed care office and the subsequent analysis of the goals' focus. I interviewed the DCA, various HSC and OTSG staff members and the CAM project officer at Ft. Carson regarding current and future trends in managed care in the Army. I also conducted literature searches. Specifically, I reviewed DoD and HSC correspondence related to managed care initiatives in the military. I had the DCA review and approve the goals and functions that I developed for the managed care office.

I evaluated the goals of the managed care office to determine if the focus of each goal was internal or external. Goals that reflect an internal focus concern efficiency and technical quality and specialization. Organizational goals that stress an external focus concern growth, innovation, product development, adaptation to the environment and client satisfaction.

Once I had categorized each of the managed care office goals as having either an internal or external focus, I had the DCA review and verify my assessment. Then, I characterized the overall focus of the managed care office. My criteria for categorizing the managed care office focus was to categorize it as internal if all of the goals had an internal focus. Or I would categorize the managed care office focus as external if all of the goals had an external focus. However, if there was any

combination of goals that reflected both an internal focus and external focus, I would have the DCA determine whether the emphasis of the goals was internal, external or dual and would classify the goals as such.

Organizations whose goal orientation is technical efficiency, technical specialization and quality are likely to be organized in a functional structure. Organizations in which goals focus on external effectiveness, adaptation to the environment and client satisfaction will likely be configured in a product structure. There are some organizations that have equally weighted, dual goals of technical specialization and adaptation to the environment. These situations would dictate a matrix structure as most appropriate (Daft, 1989).

Organizational Environment. Environment is that which management considers to be relevant or potentially relevant for organizational decision making (Duncan, 1979). Daft (1989) defines environment as all elements existing outside the boundaries of the organization that can affect all or part of the organization.

The essential aspect of environment which affects organizational structure is the degree of uncertainty the environment presents for the organization. Uncertainty is defined

as a situation in which decision makers have insufficient information regarding environmental factors and have difficulty predicting external changes (Daft, 1989).

My framework for assessing environmental uncertainty at KACH combined two dimensions: environmental complexity and environmental change. This paradigm, the Framework for Assessing Environmental Uncertainty (Figure 3), was developed by Duncan (1972, as cited by Daft, 1989). His environmental uncertainty framework combines both complexity and change dimensions to determine the level of uncertainty in the environment. According to this paradigm, a simple, stable environment represents a low level of uncertainty. The framework equates low-moderate uncertainty with a complex, stable environment. Uncertainty escalates to moderate-high for a simple, unstable environment. The highest level of uncertainty occurs in a complex, unstable environment.

Framework for Assessing Environmental Uncertainty

Figure 3. The framework determines environmental uncertainty by combining environmental complexity and environmental change.

		Environmental Complexity	
		Simple	Complex
Environmental Change	Stable	Low Uncertainty	Low-moderate Uncertainty
	Unstable	High-moderate Uncertainty	High Uncertainty

Note. From "Characteristics of Perceived Environments and Perceived Environmental Uncertainty" R.B. Duncan, 1972, Administrative Science Quarterly, 313-327.

I began my assessment of environmental uncertainty by analyzing the complexity dimension. The complexity dimension refers to the number and dissimilarity of external elements relevant to an organizations operations. Daft (1989) suggests that there are ten external sectors that can potentially influence the organization's operations:

1. Economic conditions sector
2. Government sector
3. Industry sector
4. Market sector
5. Human resources sector
6. Financial resources sector

7. Technology sector
8. Socio-cultural sector
9. International sector
10. Raw materials sector

In a simple environment, only a few similar external elements influence the organization. In the complex environment, many diverse external elements interact with the organization.

I evaluated the level of complexity at KACH in terms of the ten external sectors listed by Daft (1989) that potentially influence the organization. I surveyed the senior Medical Corps Officer, COL Wolcott, the senior Medical Service Corps Officer, COL Inazu, and the senior Nurse Corps Officer, LTC Bell, to determine their perceptions of which sectors influence the KACH environment (Appendix C). They indicated next to each sector whether they believed the sector was relevant to the KACH environment or not. A simple two out of three majority constituted a consensus for each sector. Based on the number of sectors that were relevant to KACH, I categorized the KACH environment as simple or complex. I operationally defined a simple environment as 4 or less sectors that influence the organizational environment. My operational definition for a complex environment was one in which 5 or more sectors influence the organizational environment.

The next phase of my assessment of environmental uncertainty involved an analysis of the change dimension. The change dimension concerns the level of change associated with the environmental factors. A stable environment remains relatively unchanged over a period of time, while an unstable environment has environmental elements that are subject to abrupt changes (Daft, 1989; Duncan, 1979).

To categorize the change dimension, I again used the ten external sectors for my analysis. I used the same survey instrument and sample population to determine if the external sectors were changing or remaining stable. I requested the survey population to indicate next to the sectors, which they said were relevant to the KACH population, whether this sector was changing or stable. If half or more of the respondents indicated that the sector was changing, I classified the sector as changing.

Based on the number of external elements experiencing change, I characterized the KACH environment as stable or unstable. My operational definition of a stable environment was one in which less than half of the relevant elements were experiencing change. Conversely, I defined an unstable environment as half or more of the relevant elements that were experiencing changes.

Once I had labeled these two dimensions of uncertainty, I used the Framework for Assessing Environmental Uncertainty to determine the level of uncertainty at KACH. I compared my

characterizations of the complexity dimension and change dimension at KACH to the model. The matrix paradigm identified the level of uncertainty at KACH based on my analysis of the complexity and change dimensions.

Environmental uncertainty is an important variable in designing an organizational structure. Daft (1989) developed appropriate organizational structure responses to the level of uncertainty in the organization's environment (Appendix D). In a stable, simple environment, an organization can rely on rules, regulations, procedures and vertical communication to operate effectively. This is consistent with a functional structure. The stable, complex environment can also rely on rules, but also requires many departments for boundary spanning. This environment lends itself towards a functional structure. The unstable, simple environment should be a more informal, decentralized structure with a few integrating roles. A product structure would be appropriate in this situation. However, when the environment is unstable and complex, frequent changes require more information processing to achieve coordination. The coordination required by an uncertain environment requires extensive horizontal linkage and integration which is a characteristic of a product or matrix structure (Daft, 1989; Duncan, 1979).

Technology. Technology is the transformation process in which the knowledge, tools, techniques, and actions are used to

transform inputs into outputs (Rosseau, 1979 as cited in Daft, 1989). Two independent aspects of technology that are important in determining appropriate organization structure are complexity of the job tasks and the interdependence required among departments. I assessed each of the functions of the managed care office that I identified in my analysis of Goals in terms of these two separate departmental technology dimensions: Job task complexity and interdependence. (Daft, 1989; Walker & Lorsch, 1968).

I used several methodologies to conduct my analysis of each of the functions. My primary method was interviews. For tasks currently being performed in the hospital, I spoke with appropriate division chiefs and employees who perform these tasks. I supplemented the data I gather from observations of these tasks. My rotations as the administrative resident provided me an excellent opportunity to observe various managed care functions. For future tasks, I spoke to HSC and OTSG staff members and the CAM site project officer at Ft. Carson. To a lesser extent, I relied on literature reviews to gather data on future managed care tasks.

Job task complexity is defined in terms of routine versus non-routine and is a function of task variety and analyzability. Charles Perrow developed a model titled, Framework for Department Technologies, that reflects this relationship (Daft & Macintosh,

1978 as cited in Daft, 1989). Variety refers to the number of unexpected and new events that occur in the task process.

Analyzability refers to the degree that a function or task can be reduced to objective, established, computational procedures to solve problems.

The routine versus non-routine dimension of Perrow's Framework for Department Technologies (Figure 4) is an excellent measure for analyzing departmental technology. The routine versus non-routine dimension combines task variety and analyzability into a single dimension of technology. The analyzability and variety dimensions are often inversely related in departments as illustrated in the framework. This framework suggests that technologies high in variety tend to be low in analyzability and vice versa.

Framework for Department Technologies

Figure 4. This framework combines task variety and task analyzability into a single dimension called Routine versus Non-routine technology.

		Variety	
		Low	High
Analyzability	Low	Craft	Non-routine
	High	Routine	Engineering

Note. From "A New Approach to Design and Use of Management Information" by R. Daft and N. Macintosh, 1978, California Management Review, 82-92.

Routine job tasks are defined as having low task variety and high task analyzability. Routine tasks are characterized by few unexpected and novel events, formalized and standardized procedures and the use of objective and computational problem solving techniques. Non-routine tasks have high task variety and rely on accumulated experience, knowledge and judgement rather than established procedures to resolve problems (Daft, 1989; Walker & Lorsch, 1968).

To evaluate task complexity, I used the routine versus non-routine dimension of Perrow's Framework for Department Technologies and assessed each managed care function in terms of

the level of variety and analyzability involved. Using this dimension, I labeled the managed care tasks as either high variety/low analyzability or low variety/high analyzability. I defined low variety as tasks that were performed in the same manner day to day with few unexpected or new events. High variety tasks, however, frequently encountered unexpected or new events. I operationally defined low task analyzability as tasks that cannot rely on formally established procedures to perform the work. Tasks defined as high analyzability were those that can or do rely on standard, formal procedures to resolve problems.

Once I assessed and labeled each function in terms of variety and analyzability, I had my assessments verified by a second party to establish reliability. For those tasks associated with the PAD, I had the Chief of the PAD verify my results. For the remainder of the tasks, I had the DCA review and verify my assessments.

Once the functions were labeled and verified, I then classified the managed care office department technology as routine or non-routine. I based my determination of task complexity for the managed care office by the number of functions that were labeled as high variety/low analyzability or non-routine. I decided to categorize the managed care office as

routine if less than half of the functions were labeled as high variety/low analyzability, and non-routine if half or more of the functions were labeled as high variety/low analyzability.

The functional organization seems to lead to better results in situations where stable performance of a routine task is desired, while product organizations lead to better results in situations where the task is less predictable and requires innovative problem solving. This can be complicated by the possibility that there is a mixture of these dimensions in each organization. There may be a mixture of routine tasks and non-routine tasks, jobs requiring little interdependence among specialists, and jobs that require a great deal (Daft, 1989; Nackel, 1988). Mixed dimension organizations may have to adopt a compromise between product and functional structures (Walker & Lorsch, 1968).

The other technology dimension that I analyzed was interdependence. Interdependence is the extent to which employees or departments depend on each other for resources or materials to accomplish their task. Thompson (1967, as cited in Daft, 1989) defined three types of interdependence that influence organizational structure. Pooled interdependence is the lowest form of interdependence and occurs when departments work independently of each other and work does not flow between departments. Sequential interdependence is a serial form in which

parts produced in one department become inputs to another department and is a higher level of interdependence than pooled. The highest level of interdependence is reciprocal. This level exists when the input flows back and forth between departments before an output is produced. Reciprocal interdependence requires the coordination of a variety of services to be provided to produce the final product such as the care provided in a hospital to patients (Duncan, 1979; Litterer, 1980).

To characterize the level of interdependence in the managed care office, I assessed each function for its level of interdependence. I defined a pooled interdependent function as one in which the unit was independent and did not rely on work flow from another unit to produce its output. My definition of a sequential interdependent function was one in which there were successive stages of production and in which the unit's output did not eventually return back to the unit as an input. I defined reciprocal interdependent functions as those in which the work flow moved back and forth between units before the final product was achieved.

Once I assessed and labeled each function in terms of interdependence, I had my assessments verified by a second party to establish reliability. For those tasks associated with the

PAD, I had the Chief of the PAD verify my results. For the remainder of the tasks, I had the DCA review and verify my assessments.

Once my results were verified, I characterized the level of interdependence for the entire managed care office based on my assessment of its functions. Daft (1989) argues that structural priority should be given to the greatest interdependence that exists in the organization. Since decision-making, communication and coordination problems are greatest for reciprocal interdependence, he states that reciprocal interdependence should receive priority in the organizational structure. Therefore, for the purposes of my project, I characterized the level of interdependence for the managed care office based on the highest level of interdependence that existed for any of its functions.

Management requirements vary for each level of interdependence. Pooled interdependence requires very little horizontal linkage or integration and operates quite well in a functional structure. Sequential interdependence requires more lateral coordination and some form of integration. Reciprocal interdependence requires extensive horizontal linkage and necessitates either a product or matrix organization to operate effectively (Daft, 1989; Duncan, 1979; Litterer, 1980).

Size. Size is the organizational magnitude as reflected in the number of people in the organization. Size is typically

measured as small, medium or large, and it is an important contextual variable that can influence structure. Large organizations are normally more formalized by relying on written rules, procedures and policies to achieve standardization and control. As a result of their size, large organizations permit greater decentralization and require a greater degree of horizontal and vertical integration than do smaller organizations (Daft, 1989; Litterer, 1980).

I measured the size of KACH in terms of the number of full time equivalents (FTEs) employed at KACH as of 31 December 1989. I gathered this data from the Personnel Division at the hospital. Based on the number of FTEs at KACH as of 31 December 1989, I categorized the size of the hospital as small, medium or large. To make this determination, I used the criteria established by the Office of Management and Budget (OMB) on 18 May 1982. According to the OMB, a "Very Small" organization is less than 20 employees, a "Small" organization is 20 - 99 employees, a "Medium" organization is 100 - 499 employees and a "Large" organization is 500 or more employees. The OMB states that the standards are consistent with standard business employment classes and are to be used by all federal agencies when publishing business data.

Size impacts organizational structure through economies of scale and resource limitations. Economies of scale are usually associated with functional structures. It is normally more

expensive to buy a number of small facilities for product - divisions than a few large ones for functional departments. Product structures may require more staff than functional structures. A large organization can more readily afford to give up some economies of scale than can a small organization. For these reasons, a small organization is consistent with a functional structure and a large organization is associated with a product structure. A moderately sized organization with a few product lines could be structured as a matrix organization (Daft, 1989; Nackel, 1988; Litterer, 1980).

Structural Design Model. Once I had characterized each of the contextual variables, I compared my results with the Structural Design Model. I developed a table and listed each of the four variables. Then, I annotated my assessment next to each variable for the managed care office.

Table 1

Managed Care Office Method of Assessment

Managed Care Office Organization

Environment:	Level of uncertainty
Technology :	Level of task complexity; degree of interdependence
Size :	Size of organization
Goals :	Focus of goals: External, internal or dual

Note. Adapted from "What is the Right Organization: Decision Tree Analysis Provides the Answer" by R. Duncan, 1979, Organizational Dynamics, 431.

I then compared my assessment of KACH and the managed care office in terms of the four contextual variables against the three structural model profiles provided by Daft (1989). I have summarized the appropriate situation with respect to environment, technology, goals and size for each form of structure below (Galbraith, 1971; Daft, 1989; Neckel, 1988).

Table 2

Functional, Product and Matrix Structure Profiles

<u>Functional Organization</u>	
Environment:	Stable, low uncertainty
Technology :	Routine, low interdependence
Size :	Small to Medium
Goals :	Internal efficiency, technical specialization and quality
<u>Product Organization</u>	
Environment:	Moderate to high uncertainty, dynamic
Technology :	Non-routine, high interdependence
Size :	Large
Goals :	External effectiveness, adaptation
<u>Matrix Organization</u>	
Environment:	High uncertainty
Technology :	Non-routine, many interdependencies
Size :	Moderate
Goals :	Dual- external adaptation and technical specialization

Note. Adapted from "What is the Right Organization: Decision Tree Analysis Provides the Answer" by R. Duncan, 1979, Organizational Dynamics, 431.

If the managed care office organization profile did not exactly match one of the three structural profiles, I decided to pick the organizational structure that matched the most variables

with the managed care office profile. Should the managed care office match the same number of variables for more than one structural profile, I decided to choose the organizational structure based on prioritizing the four variables. Since adequate horizontal linkage is instrumental to the effectiveness of an organization, I have the variable, technology, as the most important. Next in order of priority was size, followed by goals and then environment. Thus, if there was a tie, the structure profile that matched the managed care office in terms of technology would be selected as the most appropriate organizational structure for the managed care office. If the tie was still unbroken, then I planned to make similar comparisons with size, goals and environment in that order until the tie was broken and I had chosen the most appropriate organizational structure.

Organizational Alignment Phase

Upon determining the most appropriate organizational structure for the managed care office, my next objective was to determine the most appropriate organizational alignment for the managed care office at KACH. I used the problem solving process to make this determination. The problem solving process involved the following steps:

1. Discuss the situation.
2. Define the problem.

3. Develop alternative courses of action.
4. Analyze each alternative.
5. Select the best alternative.
6. Discuss implementation of the alternative

I used a variety of references to make my analysis and decision. I relied on HSC Regulation 10-1, The Organization and Functions Manual, the HSC Memorandum dated 12 September 1989 regarding the Military-Civilian Health Systems Branch, the KACH TDA and the goals of the managed care office to conduct my analysis and select an alternative.

Results and Discussion

The results of my data analysis show that a matrix structure is the most appropriate organizational structure for the managed care office and that the managed care office should be aligned as a separate office under the direct supervision of the DCA. I have presented my data analysis and discussion for the Organizational Structure Phase and Organizational Alignment Phase below.

Organizational Structure Phase

The data analysis for organizational structure reveals the following results. The goals of the managed care office have a dual external and internal focus. The environmental uncertainty level at Keller ACH is high. The size of KACH is medium, and the

technology of the managed care office reflects non-routine tasks and reciprocal interdependence with other hospital departments. Using the Organizational Design Model demonstrates that a matrix organization is the most appropriate organizational structure for the managed care office.

Goals. My goal analysis consisted first of identifying the goals and functions of the managed care office and then assessing the goals to determine the focus of these goals. By identifying the goals and functions of the managed care office, I ascertained the purpose of this organization and its intended strategies to accomplish its goals. With this information, I determined the focus of the goals of the managed care office.

Goal Identification. To identify the goals and functions of the managed care office, I began by interviewing the KACH Deputy Commander for Administration, COL William Inazu. He stated that the primary goal for this office is to increase our capacity to provide health care without a corresponding increase in costs or decrease in quality. This organizational goal has three operative goals: improve access to beneficiaries, contain the rate of growth of government health care expenditures, and maintain the quality of care. Each of these operative goals must be achieved if the managed care office goal is to be accomplished.

COL Inazu further explained that his concept of the managed care office has similar functions to those of the

Military-Civilian Health Systems Branch (MCHSB). However, he qualified this by stating that the managed care office is not necessarily constrained to the functions of the MCHSB.

COL Inazu anticipates that managed care will play a larger role in military medicine in the coming years. Therefore, there may be additional functions to be performed by the managed care office than only those listed for the MCHSB. However, he asked that I limit the functions of the managed care office to those that can be performed now or in the immediate future. He certainly expects that all negotiations for agreements to support the managed care concept will go through this office.

Many of the functions that COL Inazu expects to be performed by the managed care office are specified in an HSC Memorandum dated 12 September 1989 which establishes the MCHSB. The memorandum states that the branch was established to support the mission of coordinating direct care and CHAMPUS services. The memorandum describes the following functions of the MCHSB:

- a. Develop and maintain data and information regarding the clinical capabilities within the MTF and the civilian community.
- b. Identify clinical areas within the MTF which would benefit from the implementation of a Partnership agreement, VA-DoD sharing agreement, DHCPP, or other initiatives which maximize the use of the MTF resources.

c. Responsible for development of statements of work for contract purposes and agreements which support the DHCPP and Partnership program.

d. Responsible for monitoring supplemental care expenditures and identifying cost effective civilian alternatives for supplemental care program use.

e. Responsible for negotiating agreements and contracts to support the DHCPP, Partnership Program, Supplemental Care Program, and VA-DoD Sharing Program. Shall not perform contracting officer representative duties in support of any contracting efforts.

f. Coordinate with the CHAMPUS Fiscal Intermediary, OCHAMPUS, and the CHAMPUS Division, DCSCS, at HSC for CHAMPUS policy guidance, reimbursement policies and practices, special program status, and benefits changes.

g. Disseminate information to beneficiaries and providers regarding the CHAMPUS and MTF capabilities and policies.

h. Operate the Health Care Finder (HCF) program which provides information and referral services to beneficiaries and providers concerning the availability and location of medical services within the MTF catchment area.

i. Provide information to beneficiaries and providers concerning health benefits programs available. These include but

are not limited to CHAMPUS, Medicare, Medicaid, VA benefits, civilian community health resources, and services provided by charity and state agencies within the catchment area.

j. Conduct continuous monitoring of the health care resources within the catchment area, including the military community, in order to provide current information regarding the availability and 1 of services to beneficiaries and the MTF.

k. Issue Non-availability statements (NAS) and maintain the automated NAS issuance system in DEERS for the MTF.

l. Provide information to the commander concerning the numbers and reasons for issuance of NAS within the MTF. Provide information to beneficiaries and providers regarding the requirements for NAS.

m. Develop and maintain a utilization management system to monitor the progress of services provided under Partnership agreements and other CHAMPUS initiatives.

n. Implement and monitor alternate use projects.

I telephonically interviewed LTC Gwaltney, Chief of the CHAMPUS Division at HSC and the proponent for the new MCHSB, to obtain more information regarding this office. LTC Gwaltney emphasized that the purpose of the MCHSB is merely to provide support personnel to handle the current requirements of CHAMPUS

managed care programs. Although she suspects that some form of CAM is the wave of the future, LTC Gwaltney said the MCHSB was not designed to perform an eventual CAM mission or function.

LTC Gwaltney explained that the MCHSB integrates functions normally associated with the PAD, the Resource Management Division (RMD) and the CSD. The MCHSB is organized under the PAD Division. She said the MCHSB will assist and facilitate decision making concerning managed care programs.

Having established the current scope of the managed care office, my next objective was to ascertain the immediate future direction of managed care in the Army. The CRI and CAM projects are the most comprehensive managed care programs in the military. Since LTC Gwaltney said she felt that some form of CAM would more likely be the trend in managed care that the Army pursues, I contacted the CAM project officer at the OTSG.

I spoke to CPT Gidwani, CAM Project Analyst, at the OTSG to determine the status and future of the CAM project. According to CPT Gidwani and the HSC CAM Proposal, the goals of CAM are to:

- a. Contain the rate of growth of government health care expenditures.
- b. Improve accessibility to health care services.
- c. Improve beneficiary and provider satisfaction with the availability and accessibility of health care services.

d. Maintain quality of care provided to the CHAMPUS - beneficiary population.

CPT Gidwani said that although the CAM project was in its incipient stage, it has been very successful. He said that CAM shows signs of containing CHAMPUS costs and redirecting patient flow to the direct health care system. CPT Gidwani went on to say that although CAM has a three year trial period, Congress is anxious to expand CAM to other military hospitals and may do so before the end of the trial period.

Since the CRI is still a viable alternative to CAM, I telephonically interviewed Ann Price, CRI Project Analyst at the OTSG, to learn the status of CRI and its future. Ms. Price stated that the CRI is in the third year of its three year trial period. She said that although the CRI was confronted by several serious problems initially, the contractor, Foundation Health Corporation, has made the necessary corrections to ensure that the CRI is operating as planned.

The Rand Corporation conducted the evaluation of CRI and made its report to Congress in January. Ms. Price feels confident that the CRI will be continued in California and Hawaii and that the government will renew its contract with Foundation. She said the CRI may eventually be expanded to New Mexico, Arizona, and Nevada.

Since both project officers see the potential expansion of both of these projects, I contacted LTC Clement, Chief of the Program, Analysis, and Evaluation Division at the OTSG, to hear his opinion on the future of these projects. It is LTC Clement's opinion that cost savings are more apparent for CAM than for the CRI. He said CAM offers more flexibility and is better structured to contain costs than the CRI. As a result, he said CAM shows the potential for greater savings than the CRI. However, there is no formal time table for the expansion of CAM.

Since there is a growing consensus that CAM of some form is the likely direction of managed care in the military, my next objective was to learn how the demonstration sites structured their CAM organizations and which functions they performed that would be appropriate now for a managed care office at KACH. CPT Gidwani suggested that I speak with LTC Badgett, the CAM project officer at Ft. Carson.

I contacted LTC Badgett and questioned him regarding his organization structure and functions for CAM. He said that a Patient Services Division (PSD) (Appendix E) was designed to administer and manage the CAM project at FT. Carson. This includes the management of CHAMPUS related programs, health care access systems and a patient grievance system.

Elements from the CSD and the PAD were incorporated into the PSD to ensure an integrated approach to the CAM project. The

patient appointment system and the patient representative officer from the CSD and the Health Benefits Advisor (HBA) from the PAD are now elements of the PSD. He said the RMD will continue to be responsible for the total MTF budget to include the CHAMPUS account, but there is a budget liaison element in the PSD.

The PSD falls under the domain of the DCA. In addition to the Office of the Chief, the PSD consists of the Program and Patient Services Branches. The Program Branch consists of a Marketing Section, Partnership Section, Enrollment Section and the Project Coordinate Appropriate Resources Effectively (CARE) Program Section (The Project CARE Program is a case management demonstration program). The Chief of the Program Branch also serves as the budget liaison. The Patient Services Branch consists of the CHAMPUS Section, Patient Representative Section and the Patient Appointment Section.

The Ft. Carson PSD incorporates nearly all of the functions identified for the MCHSB and includes additional functions necessary for the planning, implementation and monitoring of CAM. The only functions that the PSD does not perform, that are associated with the MCHSB, concern the VA-DoD Sharing Agreements, Supplemental Care Programs and Alternate Use of CHAMPUS Funds Program. According to LTC Badgett, there are no VA medical facilities in the Ft. Carson catchment area. As for the Supplemental Care Program, he said although it was not included as

a function for the PSD originally, it is now under consideration for being shifted to the PSD. The Alternate Use Program is not a function either since the comprehensive nature of CAM replaces the limited scope of the Alternate Use Program.

According to the HSC CAM Proposal and LTC Badgett, the following CAM unique functions are incorporated into the PSD:

- a. Identify methods of optimally delivering health care in a managed care system to all enrolled beneficiaries.
- b. Responsible for developing statements of work for agreements with outside providers and provider organizations.
- c. Responsible for negotiating agreements and contracts with civilian providers and alternative health care delivery institutions.
- d. Enrollment of beneficiaries in a managed care system.
- e. Responsible for marketing of the benefit packages available to beneficiaries.
- f. Responsible for the operation of the patient grievance system to resolve patient concerns.
- g. Operation of the patient appointment system.
- h. Operation of Project CARE.
- i. Develop a utilization management system to monitor provider practice patterns and patient utilization.

Although Ft. Carson's PSD is still in its incipient stage, LTC Badgett describes it as successful. By integrating the

necessary functions together, the PSD quickly adapted to the new environment of managed care. The extensive coordination necessary to plan, implement and monitor CAM is facilitated by this organization while simultaneously expediting and enhancing the decision making process.

LTC Badgett expressed his satisfaction with the structure of the PSD. He believes the functions of the PSD are appropriate. With the exception of adding the management of the Supplemental Care Program to the mission of the PSD, LTC Badgett said that he would not alter this organization.

Retrospective Case Mix Analysis System (RCMAS). LTC Clement suggested that a managed care office will rely on RCMAS data for analysis and decision making. Analyzing RCMAS data will become another function of the managed care office once RCMAS is fielded. I discussed the applications of RCMAS with CPT Aguirre, Chief of the PAD at KACH.

According to CPT Aguirre and the RCMAS User's Manual, RCMAS is a DRG management tool. It is an information retrieval system that facilitates inpatient health care utilization analysis to support management decision making. RCMAS is menu driven and offers a variety of DRG analysis including utilization analysis, targeted analysis, DRG comparative data and eventually, charge analysis, ambulatory analysis and cost management strategies.

Utilization analysis provides information regarding length of stay, discharge rates and days of care. The data can be analyzed by beneficiary category, diagnoses group or MTF. Targeted analysis provides analytical assistance by identifying predefined subsets of admissions for cost containment purposes. The predefined subsets are: resource intensive procedures, second opinion surgeries, diagnoses not normally hospitalized, potential ambulatory surgery, outliers and Friday/Saturday admissions. The DRG Comparative Analysis System offers comparative data from civilian hospitals on length of stay norms, discharge rate norms, charge norms, per diem norms and ancillary and total charges per discharge for each of the 473 DRGs. This comparative data will be useful as a benchmark for specific DRGs in a particular area.

An important function for the managed care office will be to interpret and analyze RCMAS data. RCMAS data will provide invaluable information and analysis. Utilization review is an integral component of managed care. RCMAS provides utilization analysis and DRG comparative analysis which the managed care office will rely on to contain costs, to identify areas for potential cost savings or improved efficiency and to effectively negotiate with outside providers. PAD will continue to be responsible for the maintenance of the RCMAS system.

Summation of goals and functions. I submitted a list of my proposed managed care office goals and functions to the DCA for

review and final approval. COL Inazu approved the goals and functions listed below. The goals and functions of the managed care office are slightly broader than the those proposed for the MCHSB. The future of managed care in the military portends to be CAM. However, the absence of a time table and a well defined concept of CAM prohibits the inclusion of many potential CAM fuctions in the managed care office at this time. Thus, the goals and function of the managed care office incorporate the immediate applicable goals and functions associated with CAM and RCMAS utilization analysis in addition to those prescribed for the MCHSB. The following goals and functions delineate the mission and scope of the managed care office at KACH:

Goals

- a. Develop and operate a managed health care system for the catchment area beneficiaries.
- b. Contain the rate of growth of government health care expenditures.
- c. Improve accessibility to health care services.
- d. Improve beneficiary and provider satisfaction with the availability and accessibility of health care services.
- e. Maintain quality of care provided to the CHAMPUS beneficiary population.

Functions

a. Conduct workload, utilization and cost analysis to include (Military Expense, Performance and Reporting System) MEPRS and RCMAS data for the planning, implementation and monitoring of a managed care system.

b. Identify optimal methods of delivering health care to all beneficiaries in a managed care system. The managed care system will include, Partnership agreements, VA-DoD sharing agreements, DHCPP, Alternate Use of CHAMPUS Funds and other initiatives which maximize the use of the MTF resources.

c. Responsible for development of statements of work for contract purposes and agreements which support the, VA-DoD sharing agreements, DHCPP, Alternate Use of CHAMPUS Funds and the Partnership program.

d. Responsible for monitoring supplemental care expenditures and identifying cost effective civilian alternatives for supplemental care program use.

e. Responsible for negotiating agreements and contracts to support the, Partnership Program, Supplemental Care Program, Alternate Use of CHAMPUS Funds and the VA-DoD Sharing Program. Shall not perform contracting officer representative duties in support of any contracting efforts.

f. Coordinate with the CHAMPUS Fiscal Intermediary, OCHAMPUS, and the CHAMPUS Division at HSC for CHAMPUS policy

guidance, reimbursement policies and practices, special program status and benefits changes.

g. Disseminate information to beneficiaries and providers regarding the CHAMPUS and MTF capabilities and policies. Provide information to beneficiaries and providers concerning health benefits programs available. These include but are not limited to CHAMPUS, Medicare, Medicaid, VA benefits, civilian community health resources, and services provided by charity and state agencies within the catchment area.

h. Conduct continuous monitoring of the health care resources within the catchment area, including the military community, in order to provide current information regarding the availability of services to beneficiaries and the MTF.

i. Issue Non-availability Statements (NAS) and maintain the automated NAS issuance system in DEERS for the MTF. Provide information to the commander concerning the numbers and reasons for issuance of NAS within the MTF. Provide information to beneficiaries and providers regarding the requirements for NAS.

j. Develop and maintain a utilization management system to monitor the progress of services provided under Partnership agreements and other CHAMPUS initiatives.

k. Implement and monitor Alternate Use projects.

l. Responsible for marketing the health benefit packages available to beneficiaries.

The goals and functions of the managed care office reflect the combination of MCHSB and CAM goals and functions. I made minor changes to the functions of the MCHSB prior to their inclusion to the managed care office. The development and maintenance of data and information regarding clinical capabilities remains with the current functional proponents. The MEPRS data system will remain a function of the RMD and the RCMAS system will belong to the PAD. The interpretation and analysis of this data, however, will be primarily the responsibility of the managed care office. Also, the managed care office will not directly negotiate with providers for the DHCPP. This function is the responsibility of the West Point Purchasing and Contracting Branch by law and will remain so. Lastly, I deleted the HCF function since it cannot be performed until CAM is established. Currently, military hospitals are prohibited by law from performing this function.

Goal Assessment. Once I had ascertained the goals and functions of the managed care office, I assessed each of the managed care office goals to determine if the focus of the goal was internal, external or dual. The following summarizes my analysis for each goal:

Goal: Develop and operate a managed health care system for the catchment area beneficiaries.

Focus: External. This goal requires the hospital to adapt to the changing industry conditions and the concept of managed care. The hospital must be prepared to develop and implement new programs and be innovative in its approach to designing and implementing new managed care initiatives.

Goal: Contain the rate of growth of government health care expenditures.

Focus: Internal. This goal concerns an emphasis towards improved efficiencies in the delivery of health care. This goal is manifested by the emphasis of the managed care initiatives toward maximizing workload in the MTF.

Goal: Improve accessibility to health care services.

Focus: Dual. This goal not only requires innovation and managed care program development to meet increasing demands of care, but it also requires the hospital to improve efficiency of patient flow to increase access to care.

Goal: Improve beneficiary and provider satisfaction with the availability and accessibility of health care services.

Focus: External. This goal stresses customer satisfaction, which is an external focus.

Goal: Maintain quality of care provided to the CHAMPUS beneficiary population.

Focus: Internal. The goal of quality care requires the hospital to focus on technical quality and specialization, which is an internal focus.

My assessment of the focus of the managed care office goals concluded that this office has a combination of goals that reflects both an internal and external focus. Since there is a combined internal and external focus, my methodology dictated that the DCA would make the final determination of the primary focus of the managed care office. He could have decided that the primary emphasis of the managed care office is internal, external or an equally balanced dual focus. Upon review of my assessment, COL Inazu validated my analysis and stated that the primary focus of the managed care office is an equally balanced dual focus.

Environment. My analysis of environment employed the Framework of Environmental Uncertainty. The two dimensions that comprise this paradigm are environmental complexity and change. I began by assessing environmental complexity followed by environmental change. Finally, I used the assessments of these two dimensions to determine the level of environmental uncertainty at KACH.

Environmental Complexity. Based on my survey of the Commander, the DCA and the Chief, Department of Nursing to measure environmental complexity, I classified the KACH environment as complex. A majority of the respondents indicated that eight of

ten potentially relevant environmental sectors influenced the KACH environment. Table 3 summarizes the results of the survey. The only environmental sectors that failed to receive a majority consensus as influential to KACH were Raw Materials and International. According to my criteria, I would classify the KACH environment as complex if five or more of the external sectors were relevant to it. Since my survey shows that eight sectors are relevant and influence KACH, I classified the KACH environment as complex.

Table 3

Summary of Environmental Complexity Survey

Environmental Sector	Relevant to KACH	Not Relevant to KACH
Economic conditions	2	1
Government	3	0
Industry	2	1
Market	3	0
Human resources	3	0
Financial resources	2	1
Technology	2	1
Socio-cultural	2	1
International	1	2
Raw materials	1	2

Environmental Change. My survey of environmental change revealed that the respondents believe the environmental sectors that influence KACH are dynamic. The survey of environmental change indicated that a majority of the senior management sample at KACH believes that the eight environmental sectors that they perceived to influence KACH were all changing (Table 4). Since I defined an unstable environment as half or more of external

sectors selected as influential to KACH that are experiencing change, I labeled the change dimension as unstable.

Table 4

Summary of Environmental Change Survey

Environmental Sector	Stable	Dynamic
Economic conditions	1	2
Government	0	3
Industry	1	2
Market	0	3
Human resources	0	3
Financial resources	1	2
Technology	1	2
Socio-cultural	1	2

Environmental Uncertainty. My analysis of the level of environmental uncertainty at KACH determined that there is high uncertainty. Based on my survey of the senior KACH management using the environmental uncertainty framework, I determined that the KACH complexity dimension is complex and the KACH change dimension is unstable. Using the Framework for Assessing Environmental Uncertainty (Figure 5), I found that the complex and unstable environment at KACH equates to high uncertainty.

Framework for Assessing Environmental Uncertainty-

Figure 5. The framework determines environmental uncertainty by combining environmental complexity and environmental change.

		Environmental Complexity	
		Simple	Complex
Environmental Change	Stable	Low Uncertainty	Low-moderate Uncertainty
	Unstable	High-moderate Uncertainty	High Uncertainty

Note. From "Characteristics of Perceived Environments and Perceived Environmental Uncertainty" R.B. Duncan, 1972, Administrative Science Quarterly, 313-327.

Size. My analysis of the size of KACH involved measuring the number of FTEs at KACH as of 31 December 1989 and comparing this data with the organization size standards set by the OMB. According to the Personnel Division, KACH had the following number of FTEs on 31 December 1989:

Table 5

Total FTEs at KACH as of 31 December 1989

Officers	73
Warrant Officers	2
Enlisted	168
Civilian	172
<u>TOTAL FTEs</u>	<u>415</u>

According to the standards established by the OMB, I classified KACH as a medium sized hospital. The OMB standards define a medium

sized organization as one with an employment level of 100 - 499 people. KACH had 415 FTEs as of 31 December 1989; therefore, it is a medium sized organization.

Technology. My analysis of the contextual variable technology consisted of a two dimensional assessment of the functions of the managed care office. I described each of the functions first in terms of task complexity and then task interdependence. I then characterized the managed care office entity in these same terms based on my analysis of individual functions.

Task Complexity. I began the technology assessment by evaluating the complexity dimension. This dimension categorizes tasks as either routine or non-routine and is based upon task variety and analyzability. I described each managed care office function in terms of task variety and analyzability. Then I had the DCA and the Chief of PAD verify my assessments to establish reliability (Appendix F). Using the routine versus non-routine dimension from the framework below (Figure 6), I labeled the function as routine or non-routine. The following is a summary of my analysis of the managed care functions and verification by the DCA and Chief of PAD for the complexity dimension.

Framework for Department Technologies

Figure 6. This framework combines task variety and task analyzability into a single dimension called Routine versus Non-routine technology.

		Variety	
		Low	High
Analyzability	Low	Craft	Non-routine
	High	Routine	Engineering

Note. From "A New Approach to Design and Use of Management Information" by R. Daft and N. Macintosh, 1978, California Management Review, 52-92.

FUNCTION: a. Conduct workload, utilization and cost analysis to include MEPRS and RCMAS data for the planning, implementation and monitoring of a managed care system.

VARIETY: HIGH

ANALYZABILITY: LOW

TASK COMPLEXITY: NON-ROUTINE

The myriad combinations of analyses that can be performed using workload, cost and utilization data will prevent the function from becoming rote. Moreover, the analysis involved with such data does not lend itself toward standard procedures to follow. The analyst must rely on experience and knowledge to perform such analysis.

FUNCTION: b. Identify optimal methods of delivering health care to all beneficiaries in a managed care system. The managed care system will include Partnership agreements, VA-DoD sharing agreements, DHCPP, Alternate Use of CHAMPUS Funds and other initiatives which maximize the use of the MTF resources.

VARIETY: HIGH

ANALYZABILITY: LOW

TASK COMPLEXITY: NON-ROUTINE

Numerous internal and external factors exist that will affect the application and extent of the various managed care initiatives at KACH. This will create a great deal of variety in the performance of the task. Since the optimal delivery of health care depends on each hospital's individual situation, there are no formal standards or guides to assist in the process. The managed care office personnel must rely on their own knowledge and understanding of the various managed care programs.

FUNCTION: c. Responsible for development of statements of work for contract purposes and agreements which support the, VA-DoD sharing agreements, DHCPP, Alternate Use of CHAMPUS Funds and the Partnership program.

VARIETY: HIGH

ANALYZABILITY: LOW

TASK COMPLEXITY: NON-ROUTINE

While the statements of work for the Partnership Program are specified by HSC, there is considerable latitude for developing statements of work for the other managed care initiatives. Each of the initiatives will have different statements of work. Since the development of the statements depends on the requirements of the hospital, the collective wisdom, knowledge and experience of the people will be used to perform this function.

FUNCTION: d. Responsible for monitoring supplemental care expenditures and identifying cost effective civilian alternatives for supplemental care program use.

VARIETY: LOW

ANALYZABILITY: HIGH

TASK COMPLEXITY: ROUTINE

The monitoring of supplemental care expenditures is a routine process and follows a prescribed process.

FUNCTION: e. Responsible for negotiating agreements and contracts to support the, Partnership Program, Supplemental Care Program, Alternate Use of CHAMPUS Funds and the VA-DoD Sharing Program. Shall not perform contracting officer representative duties in support of any contracting efforts.

VARIETY: HIGH

ANALYZABILITY: LOW

TASK COMPLEXITY: NON-ROUTINE

The negotiation process for any of the managed care facilities cannot rely on standard procedures and is subject to a great many unexpected events.

FUNCTION: f. Coordinate with the CHAMPUS Fiscal Intermediary, OCHAMPUS, and the CHAMPUS Division at HSC for CHAMPUS policy guidance, reimbursement policies and practices, special program status and benefits changes.

VARIETY: LOW

ANALYZABILITY: HIGH

TASK COMPLEXITY: ROUTINE

The Health Benefits Advisor has standard procedures and several readily accessible references to consult regarding policies, reimbursement and eligibility.

FUNCTION: g. Disseminate information to beneficiaries and providers regarding the CHAMPUS and MTF capabilities and policies. Provide information to beneficiaries and providers concerning health benefits programs available. These include but are not limited to CHAMPUS, Medicare, Medicaid, VA benefits, civilian community health resources, and services provided by charity and state agencies within the catchment area.

VARIETY: LOW

ANALYZABILITY: HIGH

TASK COMPLEXITY: ROUTINE

The day to day requirements for this task are repetitious, and references are available.

FUNCTION: h. Conduct continuous monitoring of the health care resources within the catchment area, including the military community, in order to provide current information regarding the availability of services to beneficiaries and the MTF.

VARIETY: LOW

ANALYZABILITY: HIGH

TASK COMPLEXITY: ROUTINE

The procedures to survey and monitor the catchment area are routine and rely on established procedures.

FUNCTION: i. Issue Non-availability statements (NAS) and maintain the automated NAS issuance system in DEERS for the MTF. Provide information to the commander concerning the numbers and reasons for issuance of NAS within the MTF. Provide information to beneficiaries and providers regarding the requirements for NAS.

VARIETY: LOW

ANALYZABILITY: HIGH

TASK COMPLEXITY: ROUTINE

The procedures to issue, monitor and report NASs are formally established and repetitious in nature.

FUNCTION: j. Develop and maintain a utilization management system to monitor the progress of services provided under Partnership agreements and other CHAMPUS initiatives.

VARIETY: HIGH

ANALYZABILITY: LOW

TASK COMPLEXITY: NON-ROUTINE

Each managed care initiative will have a separate utilization management program tailored specifically to the managed care initiative. This will require understanding and experience and will have few standard procedures to rely on.

FUNCTION: k. Implement and monitor Alternate Use projects.

VARIETY: HIGH

ANALYZABILITY: LOW

TASK COMPLEXITY: NON-ROUTINE

Endless possibilities exist for Alternative Use projects. Few guidelines exist for the program beyond demonstrated cost savings. Analysis for Alternate Use projects will not be routine nor will it be able to rely on formal procedures.

FUNCTION: l. Responsible for marketing the health benefit packages available to beneficiaries.

VARIETY: HIGH

ANALYZABILITY: LOW

TASK COMPLEXITY: NON-ROUTINE

Market analysis and promotional campaigns can be quite complicated and is not conducive to rely on established procedures or repetition.

Based on my criteria, I classified the complexity dimension of the managed care office as non-routine. My criteria for classifying the managed care office as non-routine was if six or more of the 12 tasks were labeled as non-routine. Since seven of the tasks were labeled as non-routine, I classified the technological complexity dimension of the managed care office as non-routine.

Interdependence. Having evaluated the complexity dimensions of the managed care office, my next step in characterizing the departmental technology variable was to assess the interdependence between the managed care office and other hospital departments. As I discussed in the literature review, there are three levels of interdependence. The lowest level of interdependence is pooled, followed by sequential interdependence and then by reciprocal interdependence, which is the highest level of interdependence.

I assessed each function of the managed care office for its degree of interdependence among other departments. Then I had the DCA and the Chief of PAD verify my assessments to establish reliability (Appendix F). Once each function was characterized by its degree of interdependence, I made an aggregate assessment of the technological interdependence for the managed care office. The following summarizes my data analysis for the interdependence dimension:

FUNCTION: a. Conduct workload, utilization and cost analysis to include MEPRS and RCMAS data for the planning, implementation and monitoring of a managed care system.

INTERDEPENDENCE: Reciprocal

This function will require extensive coordination among clinical departments and administrative divisions. There will be frequent exchange of information between the managed care office and RMD and PAD to conduct the required analysis. Other departments and divisions may have to be consulted to assist in interpreting workload and utilizing data.

FUNCTION: b. Identify optimal methods of delivering health care to all beneficiaries in a managed care system. The managed care system will include, Partnership agreements, VA-DoD sharing agreements, DHCPP, Alternate Use of CHAMPUS Funds and other initiatives which maximize the use of the MTF resources.

INTERDEPENDENCE: Reciprocal

The identification of optimal methods for delivering health care will require the managed care office to coordinate among the Commander, DCA, DCCS, PAD and RMD. Other administrative divisions must also be consulted. This process cannot be reduced to a successive, one-way flow of communication and coordination, but must rely on a multi-directional flow of information.

FUNCTION: c. Is responsible for development of statements of work for contract purposes and agreements which support the, VA-DoD sharing agreements, DHCPP, Alternate Use of CHAMPUS Funds and the Partnership program.

INTERDEPENDENCE: Reciprocal

Developing statements of work for the various DoD managed care initiatives dictates the managed care office to coordinate among the DCA, DCCS, CSD, PAD, RMD, QA and appropriate department and service chiefs. The process for developing statements of work necessitates a multi-directional flow of communication.

FUNCTION: d. Responsible for monitoring supplemental care expenditures and identifying cost effective civilian alternatives for supplemental care program use.

INTERDEPENDENCE: Sequential

The process of monitoring supplemental care funds is predominantly a successive, one-way flow of information. The process originates with the request for Supplemental Care by the recommending physician, approval by the DCCS or PAD Chief, the appointment for the patient and commitment of funds by the Supplemental Care Clerk and the expense for funds by RMD.

FUNCTION: e. Responsible for negotiating agreements and contracts to support the, Partnership Program, Supplemental Care Program, Alternate Use of CHAMPUS Funds and the VA-DoD Sharing Program. Shall not perform contracting officer representative duties in support of any contracting efforts.

INTERDEPENDENCE: Reciprocal

The negotiation process requires a two-way flow of information at a minimum. In addition, the managed care office must make extensive coordination among the departments prior to the negotiation process.

FUNCTION: f. Coordinate with the CHAMPUS Fiscal Intermediary, OCHAMPUS, and the CHAMPUS Division at HSC for CHAMPUS policy guidance, reimbursement policies and practices, special program status and benefits changes.

INTERDEPENDENCE: Pooled

The Health Benefits Advisor normally acts independently to perform this function and does not need to coordinate among other departments in the hospital.

FUNCTION: g. Disseminate information to beneficiaries and providers regarding the CHAMPUS and MTF capabilities and policies. Provide information to beneficiaries and providers concerning health benefits programs available. These include but are not limited to CHAMPUS, Medicare, Medicaid, VA benefits, civilian community health resources, and services provided by charity and state agencies within the catchment area.

INTERDEPENDENCE: Pooled

The Health Benefits Advisor also acts independently to perform this function. No coordination among hospital departments is required.

FUNCTION: h. Conduct continuous monitoring of the health care resources within the catchment area, including the military community, in order to provide current information regarding the availability of services to beneficiaries and the MTF.

INTERDEPENDENCE: Pooled

This function can be conducted independently without the coordination among other hospital departments or divisions.

FUNCTION: i. Issue Non-availability statements (NAS) and maintain the automated NAS issuance system in DEERS for the MTF. Provide information to the commander concerning the numbers and reasons for issuance of NAS within the MTF. Provide information to beneficiaries and providers regarding the requirements for NAS.

INTERDEPENDENCE: Sequential

At times, there is a successive, one-way flow of information among hospital departments before the Health Benefits Advisor may issue a NAS.

FUNCTION: j. Develop and maintain a utilization management system to monitor the progress of services provided under Partnership agreements and other CHAMPUS initiatives.

INTERDEPENDENCE: Reciprocal

Once the managed care office receives the utilization data, it will likely consult various clinics and administrative divisions prior to the managed care office final analysis. The development of a utilization management system will require a multi-directional flow of information for the managed care office as well.

FUNCTION: k. To implement and monitor Alternate Use projects.

INTERDEPENDENCE: Reciprocal

The implementation and monitoring of Alternative Use Projects will require the managed care office to coordinate among a variety of departments and divisions.

FUNCTION: 1. Responsible for marketing the health benefit packages available to beneficiaries.

INTERDEPENDENCE: Pooled

The marketing function could potentially involve considerable coordination among the managed care office and the other hospital departments. However, the marketing program initially will be relatively independent and would require minimal coordination among hospital departments.

Based on my criteria, I classified the interdependence level for the managed care office as reciprocal. My criteria dictated that I classify the managed care office by the highest level of interdependence that exists for any one function. The highest level of interdependence is reciprocal, and six of the functions exhibited this level of interdependence. Therefore, I classified the level of interdependence at the managed care office as reciprocal.

Structural Design Model. Once I had defined the organizational characteristics of the managed care office for each of the four contextual variables, I listed them in Table 6 below:

Table 6

Managed Care Office Profile

	<u>Managed Care Office</u>
Environment:	High uncertainty
Technology :	Non-routine technology, reciprocal (high) interdependence
Size :	Medium
Goals :	Dual focus - internal and external

Note. Adapted from "What is the Right Organization: Decision Tree Analysis Provides the Answer" by R. Duncan, 1979, Organizational Dynamics, 431.

I then compared this table with the tables that delineate the organizational characteristics profile for the functional, product and matrix structures. The managed care office organizational characteristics matched all four contextual variables for the matrix structure profile in the Table 7 below:

Table 7

Managed Care Office versus Matrix Structure Profile

<u>Managed Care Office</u>	<u>Contextual Variables</u>	<u>Matrix Structures</u>
high uncertainty	Environment	high uncertainty
non-routine, high	Technology	non-routine, high
interdependence		interdependence
medium	Size	medium
dual focus	Goals	dual focus

Note. Adapted from "What is the Right Organization: Decision Tree Analysis Provides the Answer" by R. Duncan, 1979, Organizational Dynamics, 431.

The organizational characteristics of the managed care office matched only two contextual variables, environment and technology, for the product structure profile (Table 8).

Table 8

Managed Care Office versus Product Structure Profile

<u>Managed Care Office</u>	<u>Contextual Variable</u>	<u>Product Structure</u>
high uncertainty	Environment	moderate to high uncertainty
non-routine, high interdependence	Technology	non-routine, high interdependence
medium	Size	large
dual focus	Goals	external focus

Note. Adapted from "What is the Right Organization: Decision Tree Analysis Provides the Answer" by R. Duncan, 1979, Organizational Dynamics, 431.

The organizational characteristics of the managed care office matched only one contextual variable, size, for the functional structure profile (Table 9).

Table 9

Managed Care Office versus Functional Structure Profile

<u>Managed Care Office</u>	<u>Contextual Variable</u>	<u>Functional Structure</u>
high uncertainty	Environment	low uncertainty
non-routine, high interdependence	Technology	routine, low interdependence
medium	Size	small to medium
dual focus	Goals	internal focus

Note. Adapted from "What is the Right Organization: Decision Tree Analysis Provides the Answer" by R. Duncan, 1979, Organizational Dynamics, 431.

The organizational characteristics of the managed care office matched all contextual variables of the matrix structure profile.

Therefore, the Structural Design Model indicates that the most appropriate organizational structure for the managed care office at KACH is a matrix structure.

Discussion. The application of the Structural Design Model to the managed care office and Keller ACH clearly illustrated that a matrix structure would be the most appropriate organizational structure. The results of my data analysis were further substantiated by the three conditions for a matrix structure set forth by David and Lawrence (1977, as cited by Daft, 1989). They developed three conditions to indicate when a matrix structure is appropriate. I have listed each condition and explained how the managed care office and Keller ACH have met the conditions.

CONDITION I: Pressure exists to share resources across product lines. The organization is typically medium sized and has a moderate number of product lines. It feels pressure for the shared and flexible use of people and equipment across those products. For example, the organization is not large enough to have sufficient engineers to assign them full-time to each product line, so engineers are assigned part-time to several products or projects.

Keller ACH meets this condition. Based on the criteria established by OMB, I defined Keller ACH as a medium sized hospital. Keller ACH does not have sufficient staff to assign full-time employees from each functional area to each product or project. Nor do the products or projects warrant a full-time staff member from each functional area. Therefore, the hospital must share its personnel resources among various managed care programs.

Organizational size is an important factor in determining organizational structure. Conspicuous differences exist between large and small organizations besides the obvious number of people employed. Large organizations are characterized by greater decentralization of decision making and greater formalization of policies and procedures. Also, large organizations demand greater horizontal linkage than do small organizations. Large organizations are most appropriate for product structures.

Small and medium sized organizations such as Keller ACH typically do not have sufficient functional staff personnel to assign full time to each product line as required by a product line structure. Small to medium sized organizations normally identify with functional structures. Medium sized organizations are also appropriate for matrix structures. This is consistent with the findings of my data analysis for Keller ACH.

CONDITION II: Environmental pressure exists for two or more critical outputs, such as for technical quality (functional organization) and frequent new products (product organization). This dual pressure means that a balance of power is required between the functional and product sides of the organization, and a dual authority structure is needed to maintain the balance.

Keller ACH meets this condition. The dual focus of the managed care office suggests that a matrix structure would be the most appropriate structure to maintain a balance between the dual internal and external focus of the organization. Rather than choosing to place

emphasis on either the internal or external focus, the DCA decided that the managed care office should have an equally weighted dual focus.

CONDITION III: The environmental domain of the organization is both complex and uncertain. Frequent external changes and high interdependence between departments require a large amount of coordination and information processing in both vertical and horizontal directions.

Keller Hospital meets this condition. The first part of the condition refers to environmental uncertainty. The senior management of KACH indicated overwhelmingly their perceptions of a complex and changing environment. In addition, the literature reviews also attest to the complexity and dynamics in the health care industry and the military health care system (Getz, 1987; Gisin & Sewell, 1989). These two measures of environmental uncertainty indicate a high level of uncertainty exists at Keller ACH.

Environmental uncertainty is a strong determinant of organizational structure. According to Daft's Contingency Framework for Environmental Uncertainty and Organizational Responses (Appendix D), an organization encountering high uncertainty should have an organic structure. An organic structure entails that decision-making ability is decentralized and procedures are informal. This paradigm dictates that organizations encountering high uncertainty have many departments to serve as boundary spanners and buffers against uncertainty. The model also suggests the organizations have many integration roles. Product and matrix structures consist of these

features and are normally associated with organizations facing high environmental uncertainty. Again, this is consistent the results of my data analysis for KACH.

The second part of the condition refers to task complexity and interdependence. The nature of the functions of the managed care office are complex and require extensive coordination. The substantial analysis and coordinating function are non-routine. The high interdependence among the managed care office and the other hospital departments require considerable horizontal linkage. Matrix and product organizations are best suited for non-routine tasks. Also, both of these organizations provide the requisite horizontal linkage necessary for reciprocally interdependent organizations such as the KACH managed care office.

The managed care office and Keller ACH meet all three conditions. This reaffirms my data analysis that a matrix structure is the most appropriate organizational structure for the managed care office.

Organizational Alignment Phase

The organizational alignment phase of my data analysis concluded that organizing the managed care office directly under the DCA as a separate entity would be the most appropriate organizational alignment. The following is a summary of my analysis of the organizational alignment.

Prior to HSC establishing the Military-Civilian Health Systems Branch, the management and coordination of the managed care activities

at KACH were fragmented along functional lines. No one person had responsibility for all managed care activities. The PAD controlled the Health Benefits Advisor duties and Supplemental Care program. The RMD coordinated the DoD Sharing Agreement Program and the CSD coordinated the CHAMPUS Partnership and DHCPP programs. This was further complicated by the KACH organizational structure in which the PAD and the CSD reported to the DCCS while the RMD reported to the DCA. This fragmented approach prevented the development of a comprehensive managed health care delivery strategy.

In September, 1989 HSC established the MCHSB. As one of its primary goals, the MCHSB is responsible for developing, coordinating and monitoring a managed health care system for the MEDDAC. In accordance with the directive from HSC and HSC Regulation 10-1, the MCHSB is the title of the managed care office that Keller ACH will implement as a matrix structure. HSC provided three additional manpower requirements and funding to staff this branch, in addition to shifting the HBA authorization to this branch. However, the DoD hiring freeze has prevented the actual staffing of this office.

The HSC Regulation 10-1 stipulates that the PAD is to be aligned under the DCA. However, at KACH, the Commander decided to configure the PAD under the DCCS. The CSD is also under the DCCS. Therefore, the DCA is effectively removed from the direct policy and decision making process regarding managed care initiatives.

Problem: The MCHSB is not organizationally aligned under the DCA, either as a branch of a division or directly under the DCA, as HSC implicitly directed. Due to the complexity of some of the MCHSB tasks and the nature of the work to be performed, the effectiveness of the MCHSB may be decremented as aligned under the PAD. Also, as managed care becomes the dominant mode of delivery of health care, the senior management of KACH will be responsible for developing a comprehensive managed care strategy for the community. The PAD division chief will not likely be able to provide adequate guidance to the MCHSB regarding managed care analysis, strategy and planning. Nor will the division chief have a sufficient power base to sustain the requisite coordination among the senior management, clinical departments and administrative divisions.

Alternative 1: Do nothing (Appendix G). Let the MCHSB remain aligned under the PAD and the DCCS. This alternative does not bring the DCA directly into the policy making or decision making process for the managed care delivery system. Not only is the DCA effectively left out, but the Chief of the PAD does not have the background, experience or understanding of the total managed care system to provide sufficient guidance to the MCHSB. The analysis required is considerably difficult and not straight-forward. The Chief of the PAD is not likely to be able to assist the MCHSB with this analysis. Furthermore, managed care policy and strategy should be made by the senior management of KACH. Decisions regarding the delivery system of

health care should not be made by division chiefs. Aligning the MCHSB under the PAD unnecessarily adds a layer of bureaucracy for the MCHSB to operate.

The nature of the work to be performed by the MCHSB in developing and coordinating a managed health care system will require extensive coordination. As I established previously, the MCHSB is characterized by high interdependence. The MCHSB must coordinate among the senior management, clinical departments and administrative divisions. The coordination by the MCHSB requires a strong power base to facilitate the horizontal linkage across the multi-disciplinary health care system. Aligning the MCHSB under the Chief of the PAD will not effect the requisite coordination. The Chief of the PAD will not be able to resolve major problems and will have to involve senior management to allay turf battles.

Alternative 2: Align the PAD under the DCA (Appendix H). This alternative would bring the DCA into the policy and decision making process for the managed care delivery system. However, as in Alternative 1, the Chief of PAD is not qualified to direct the MCHSB operations. Most functional area chiefs lacks experience and understanding of a comprehensive managed care system, cannot provide adequate guidance and are not in a position to decide policy. As I said in my analysis of Alternative 1, a functional area chief has an insufficient power base to facilitate the extensive coordination required of the MCHSB. Also, since managed care policy and

development decisions belong in the realm of the senior management, aligning the MCHSB under a functional division creates an unnecessary layer of management.

In addition to many of the same problems as in Alternative 1, Alternative 2 is not likely to be acceptable under the current Commander. COL Wolcott, the MEDDAC Commander, realigned PAD under the DCCS. This alignment will not change during his tenure as commander. Although he is scheduled to leave in August, it is uncertain whether the new commander will change the alignment.

Alternative 3: Place the MCHSB under the RMD and leave the PAD under the DCCS (Appendix I). This alternative would be more acceptable than Alternative 2. Since the PAD would remain under the DCCS and only the MCHSB would realign under the RMD, the Commander would likely accept this alternative. Also, the alternative brings the DCA into the policy and decision making process of the managed care delivery system.

However, this alternative has the same weaknesses as Alternative 1 and 2 regarding the alignment of the MCHSB under a functional area division chief.

Alternative 4: Place the MCHSB under the DCA as a separate entity (Appendix J). This alternative also leaves the Commander's organizational alignment intact and would likely be acceptable to the Commander. It brings the DCA formally into the policy formulation and decision making process for the managed care delivery system.

Aligning the MCHSB under the DCA resolves the problems associated with placing the MCHSB under a functional area chief. First of all, the DCA has a generalist background and a greater understanding of the managed care delivery system than a junior functional chief. The DCA can provide sufficient guidance to the MCHSB regarding complex analysis of workload and cost data. As part of senior management, the DCA can make decisions and policies in concert with the Commander and the DCCS regarding the managed care delivery system. Also, the DCA's power base is strong enough to facilitate the extensive and difficult coordination that the MCHSB must make.

Recommendation: Based on my analysis of the four alternative organizational alignments for the MCHSB, I recommend Alternative 4 as the best alternative (Appendix J). The complexity of the tasks and nature of the work require experience, understanding and a generalist background and approach to supervise the MCHSB. The DCA's position in the organization will facilitate the MCHSB coordination endeavors and expedite decision making regarding the managed care delivery system.

Conclusions and Recommendations

Conclusions

The purpose of this study was to determine the most appropriate organizational structure and alignment for a managed care office at Keller Army Community Hospital, West Point, New York. I have concluded from my data analysis that the managed care office should be

structured as a matrix organization and aligned as a separate entity under the DCA.

Based on my conclusions, I rejected the null hypothesis of my GMP:

H_0 = The organizational structure and alignment, as specified in the HSC Regulation 10-1 and the TDA for Keller ACH, is the most appropriate to complete the stated mission and requirements of the Managed Care Office.

Consequently, I accepted the alternate hypothesis of my GMP:

H_a = The organizational structure and alignment, as specified in the HSC Regulation 10-1 and the TDA for Keller ACH, is not the most appropriate to complete the stated mission and requirements of the Managed Care Office.

I validated the organizational structure of the Military-Civilian Health Systems Branch set forth by HSC; however, I concluded that the alignment of the MCHSB should change from a branch in the PAD to a separate entity under the DCA.

Recommendations

I recommend that the MCHSB be structured as a matrix organization that will direct all managed care activities, CHAMPUS services and Health Benefits Advisor duties. Furthermore, I recommend that the MCHSB be a separate entity reporting directly to the DCA (Appendix J).

The Chief of the managed care office, titled the Military-Civilian Health System Branch by HSC, will direct, supervise and coordinate all managed care programs for Keller ACH. In essence, the Chief of the MCHSB will be the program manager for all managed care programs including Partnership Programs, Supplemental Care,

VA-DoD Sharing Programs, the DHCPP and the Alternate Use of CHAMPUS Funds Program. Meanwhile, the functional area managers will retain responsibility for the supervision and evaluation of their personnel.

Since the functional area managers will retain supervision and rating authority, I recommend that the MCHSB be organized as a variation of the balanced matrix model called a functional matrix. In the functional matrix model, the functional supervisors retain primary authority, and project or product managers coordinate product activities with dashed line authority (Appendix K).

The conclusions of this study are applicable to HSC and the MEDDACs that have the MCHSB. My study validates the matrix organization that HSC prescribed for the MCHSB in HSC Regulation 10-1. Other MEDDACs will find that a matrix organization is the most appropriate structure since MEDDACs are likely to have similar organizational traits as Keller ACH. That is, the goals and functions of their Military-Civilian Health Systems Branch will parallel those of the MCHSB at KACH. Therefore, the functions will be non-routine, and there will be high interdependence among other hospital departments. The other MEDDACs will also find their environment high in uncertainty. The size may vary among MEDDACs, but few MEDDACs will have sufficient personnel resources to staff their MCHSB with full time staff from the other functional areas. These traits indicate that a matrix organization would be most appropriate for other MEDDACs for their MCHSB.

Also, other MEDDACs will find that aligning their MCHSB under the DCA will improve the effectiveness and coordination of their managed care programs. By aligning the MCHSB under the DCA, the MEDDAC resolves the problems associated with placing the MCHSB under a functional area chief. The DCA has a generalist background and a greater understanding of the managed care delivery system than a junior functional chief. The DCA can provide greater guidance to the MCHSB regarding complex workload and cost data analysis. As part of senior management, the DCA can make decisions and policies in concert with the Commander and the DCCS regarding the managed care delivery system which the functional chief could not. Also, the DCA's power base is strong enough to facilitate the extensive and difficult coordination that the MCHSB must make. The MEDDACs will find that the DCA's position in the organization facilitates the MCHSB coordination function and expedites decision making regarding the managed care delivery system.

The exact placement of the MCHSB has been a point of contention for many DCAs. There are divergent opinions for where and to whom the MCHSB should report. The unconventional organizational structure at KACH served as a catalyst to force the analysis of alignment of the MCHSB at Keller ACH. While I believe my arguments for placing the MCHSB under the DCA apply to other MEDDACs as well, this subject should be further researched. A Delphi study involving the DCAs should be conducted. The expert opinions and judgements of the DCAs

could be refined over this iterative process to reach a final conclusion over the alignment of the MCHSB in the Army MEDDAC organization.

Implementation

My recommendation for the alignment of the MCHSB deviates from HSC's prescribed organizational alignment as set forth in HSC Regulation 10-1. Therefore, a request for approval of deviation must be submitted to HSC's Management Division, Deputy Chief of Staff for Resource Management in accordance with HSC Regulation 10-1. The CHAMPUS Division at HSC is the proponent for the MCHSB and has approval authority for this request. In the interim, once the MCHSB becomes operational, the Chief of the MCHSB should report directly to the DCA. The DCA will have rating authority over the Chief of the MCHSB.

The Chief of the PAD will retain functional responsibility for the HBA and Supplemental Care Clerk. The Chief of the PAD will provide advice and guidance regarding beneficiary eligibility and CHAMPUS related matters to the HBA and Supplemental Care clerk.

Currently, a Management Analyst in the RMD coordinates the KACH VA-DoD Sharing Program. The Chief of the MCHSB can either take control of the program or continue to let the Management Analyst coordinate the program while receiving guidance and direction from the MCHSB.

Office space for the MCHSB should be identified and provided. Also, office automation, such as personal computers, appropriate software packages and telecommunications equipment should be identified for the branch and ordered now.

Using the suggested job descriptions provided by HSC as a guide, job descriptions for the unfilled MCHSB positions should be developed and recruiting actions submitted to hire people for these positions.

My only other suggestion for the managed care office at KACH concerns a strategic plan for the eventual evolvement toward a CAM environment. Throughout my development of the goals and functions for the managed care office, it was apparent that Catchment Area Management is the wave of the future for DoD health care. I believe KACH should be proactive in this development of CAM by establishing a steering committee. The steering committee would be responsible for conducting broad base planning and an environmental analysis. This will facilitate the hospital and its transition to CAM when it is eventually expanded to other DoD hospitals.

Closing Remarks

Louis Henri Sullivan, a 19th century architect, said, "Form follows function." The nature of the goals and functions of the Military-Civilian Health Systems Branch dictate that a matrix structure aligned under the DCA is the most appropriate structure and alignment for it.

The matrix structure is a useful design that provides the necessary vertical and horizontal linkages to the managed care office. This will facilitate the efforts of the managed care office to deal with the multi-disciplinary hospital complex. A matrix structure is not a panacea for all ills, nor is it suited for all clinical settings. However, accompanied by the alignment of the MCHSB under the DCA, the matrix structure will enhance communication, coordination and management for the Military-Civilian Health Systems Branch and its managed care domain.

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APPENDIX A

DEFINITIONS

DEFINITIONS

CHAMPUS - cost sharing health insurance plan for military dependents and retirees.

Environment - that which management considers to be relevant or potentially relevant for organizational decision making

Environmental complexity dimension - refers to the number and dissimilarity of external elements relevant to an organization's operations

Complex environment - many diverse external elements interact with the organization

Simple environment - only a few similar external elements influence the organization

Environmental change dimension - the change dimension concerns the level of change associated with the environmental factors

Stable environment - remains relatively unchanged over a period of time

Unstable environment - has environmental elements that are subject to abrupt changes

Fee-for-service - this financing mechanism reimbursed health care providers, including both physicians and hospitals, their costs or charges incurred in the treatment process

Functional structure - activities are grouped together by common function from the bottom to the top of the organization such as Nursing, Surgery, Medicine, and Radiology

Goals - an organizational goal is a desired state of affairs that the organization attempts to realize

Goals: external focus - concern growth, innovation, product development, adaptation to the environment and client satisfaction

Goals: internal focus - concern efficiency and technical quality and specialization

HMO - pre-paid capitated plans that provide comprehensive health care for a specified period

Horizontal linkage - refers to the degree of coordination and communication that exists across organizational departments

Integrator - a person located outside the functional departments who is responsible for coordinating the actions of several departments

Managed care - refers to any system in which the management of health care delivery uses cost control mechanisms

Matrix organization - exists when both product and functional structures are implemented simultaneously in each department. It is similar to the use of full-time integrators or product managers except that in a pure matrix organization, the product managers are given formal authority equal to that of the functional managers.

Balanced Matrix - one in which the functional manager and product manager equally share direct authority over work operations

Functional matrix - occurs when the project manager's role is restricted to coordinating the efforts of the functional groups with only indirect authority to expedite and monitor the work plan. The functional managers are responsible for the design and completion of their respective technical requirements.

Project matrix - occurs when the project manager has direct authority to make decisions regarding personnel and work flow activities. The functional manager is limited to providing services and technical advisory support.

PPO - contractual arrangements with providers or institutions in which they provide health care services at pre-established discounted fee-for-service prices

Product structure - the organization is based on organizational outputs. For each product output, all necessary resources are grouped within the departmental structure

Project teams - permanent task forces often used in conjunction with an integrator

Size - the organizational magnitude as reflected in the number of people in the organization

Small organization - 20 - 99 employees

Medium organization - 100 - 499 employees

Large organization - 500 or more employees

Structural Design Model - organizational structure is determined by four contextual variables: environment, goals, technology and size

Task forces - temporary committees composed of representatives from each department to deal with a specific project or problem

Technology - the transformation process in which the knowledge, tools, techniques, and actions are used to transform inputs into outputs

Technological Interdependence - the extent to which employees or departments depend on each other for resources or materials to accomplish their task

Pooled interdependence - the lowest form of interdependence and occurs when departments work independently of each other and work does not flow between departments

Sequential interdependence - a serial form in which parts produced in one department become inputs to another department and is a higher level of interdependence than pooled

Reciprocal interdependence - this level exists when the input flows back and forth between departments before an output is produced.

Technological job task complexity - defined in terms of routine versus non-routine and is a function of task variety and analyzability

Routine job tasks - defined as having low task variety and high task analyzability

Non-routine job tasks - defined as having high task variety and low task analyzability

Variety - refers to the number of unexpected and new events that occur in the task process

Analyzability - refers to the degree that a function or task can be reduced to objective, established, computational procedures to solve problems

Uncertainty - a situation in which decision makers have insufficient information regarding environmental factors and have difficulty predicting external changes. It is a product of environmental change and complexity.

APPENDIX B

ACRONYMS

ACRONYMS

AMEDD	Army Medical Department
CHAMPUS	Civilian Health and Medical Program of the Uniformed Services
CAM	Catchment Area Management
CBO	Congressional Budget Office
CRI	CHAMPUS Reform Initiative
CSD	Clinical Support Division
DCA	Deputy Commander for Administration
DCCS	Deputy Commander for Clinical Services
DHCPP	Direct Health Care Provider Program
DoD	Department of Defense
DRG	Diagnosis Related Groups
FTE	Full Time Equivalent
HBA	Health Benefits Advisor
HCF	Health Care Finder
HMO	Health Maintenance Organization
HSC	Health Services Command
KACH	Keller Army Community Hospital
MEDDAC	Medical Department Activity
MEPRS	Military Expense and Performance Reporting System
MCHSB	Military-Civilian Health Systems Branch
MTF	Medical Treatment Facility
NAS	Non-availability Statement

OCHAMPUS	Office of CHAMPUS
OMB	Office of Management and Budget
OSD	Office of the Secretary of Defense
OTSG	Office of the Surgeon General
PAD	Patient Administration Division
PPO	Preferred Provider Organization
PSD	Patient Services Division
RCMAS	Retrospective Case Mix Analysis System
RMD	Resource Management Division

APPENDIX C

^N
SURVEY QUESTIONNAIRE FOR ENVIRONMENTAL
COMPLEXITY AND CHANGE

Environmental Assessment

Environmental Sectors	Does it influence KACH?	Is sector dynamic?
1. Industry		
2. Raw Materials		
3. Human Resources		
4. Financial Resources		
5. Market		
6. Technology		
7. Economic Conditions		
8. Government		
9. Socio-cultural		
10. International		

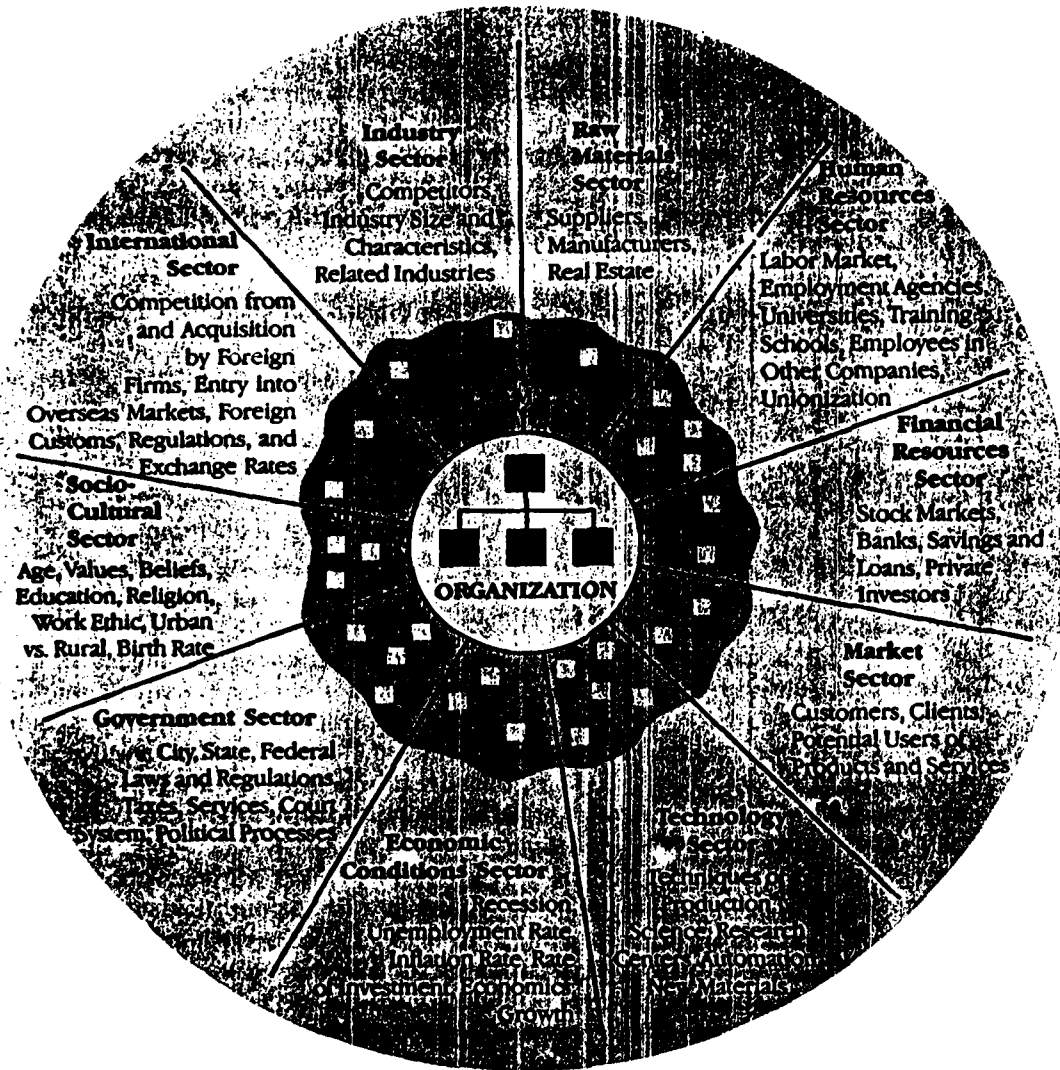


EXHIBIT 2.1
An Organization's Environment.

The sectors and a hypothetical organizational domain are illustrated in exhibit 2.1.

Industry. Industry includes competitors in the same type of business. The recording industry is different from the steel industry or the broadcasting industry. Industry influences an organization's size, amount of advertising, type of customers, and typical profit margins.

Industry concentration may influence the amount of competitive uncertainty for each organization.³ An industry with a few large companies can be uncertain because the action of a large competitor has great significance. Examples of industries with intense competitive battles are the soft drink

industry where the war between Coke and Pepsi has battered the small brands, and the beer industry where the increasing dominance of Anheuser-Busch and Miller have forced consolidation among other companies. Other industry battlegrounds are luxury hotels and disposable diapers. Luxury hotels in Los Angeles are fighting each other for business with free deodorants, perfumes, and guest slippers to entice customers who will pay over \$300 a night for a single room.⁴ The war between Kimberly-Clark's Huggies and Procter & Gamble's Pampers has gotten so hot with improved products, advertising, and reduced pricing that Johnson & Johnson and Scott Paper Company have been driven out of the disposable diaper business.⁵

Raw Materials. Organizations must acquire raw materials from the external environment. These materials include everything from paper, pencils, and typewriters to patients for a hospital, iron ore for a steel mill, manuscripts for a publisher, and green coffee beans for a coffee distributor. Raw materials are often readily available at a low price. Companies such as Xerox, International Harvester, and Hewlett-Packard may depend on as many as 5,000 suppliers. The importance of maintaining good relationships with suppliers was illustrated when several people died after taking Johnson & Johnson's Tylenol capsules. Johnson & Johnson determined that its product had been tampered with and decided to redesign the capsules. This decision directly affected R. P. Scherer Corporation, who supplied Tylenol's hard-shell capsules. Scherer immediately made available a soft capsule that is tamper resistant.⁶

Human Resources. Human resources are employees. Organizations must have a supply of trained, qualified personnel. Without an abundant supply of human resources, an organization will have a hard time producing output. At Mary Kay Cosmetics, a shortage of human resources accounts for a decline in growth and profits in recent years. Avon and Tupperware also face stagnant sales and declining profits because of insufficient human resources.⁷ Many other industries in the United States and Canada also face an era of worker scarcity. The cities of New York, South Bend (Indiana), and Atlanta are experiencing a shortage of everything from waiter's assistants to computer programmers.⁸

Another trend creating uncertainty in the human resource sector is that unions affected by corporate cutbacks are fighting back. They are seeking slots on corporate boards and using pension funds to initiate company buy-outs and hence save jobs. Union targets include Pan Am, Southern Pacific, and Oregon Metallurgical.⁹

Financial Resources. Financial resources reflect the availability of money. The stock and bond markets, banks, and insurance companies are included in this environmental sector. Interest rates also influence the availability of money. The availability of cheap money encourages an organization to grow fast. If an organization has to finance growth internally, growth slows down. Extensive borrowing also may transfer some control of the company to lending agencies.

Market. Customers who acquire goods and services represent the market sector. Hospitals serve patients, schools serve students, supermarkets supply homemakers, airlines move travelers, and government agencies provide benefits to practically everyone. The market influences an organization through demand for the organization's products and services. If the market shrinks, the organization must cut back or diversify into other markets. If the market expands, the organization must expand to supply customer needs, or lose its standing in the industry.

Customers must be taken care of. Organizations typically try to understand and anticipate potential market changes. Mistreatment of customers, even by large, influential organizations can have disastrous results. For example, Burroughs Corporation was sued by 129 users of its small computer systems who were not given the services promised. The current trend by organizations is to be customer driven. Managers often call customers directly to learn their needs to build rapport. The head of Marriott Corporation reads every single customer complaint card to learn exactly how customers are treated.

Technology. Technology is the use of available knowledge and techniques to produce goods and services. The complexity of a technology influences the skill level and organization size required to use that technology. New technological developments can be a threat or an opportunity for organizations. Recent technological developments that threaten some firms are the flat LCD (liquid crystal display) tube that is expected to replace the traditional television tube, typewriters that take dictation, a new generation of zinc chloride batteries that may revolutionize automobiles and utilities, super-efficient propeller-driven airplanes, and fiber optics, computer animation, and computer imaging. The development of digital audiotape recorders has recording industry executives on pins and needles for fear that the demand for traditional records and tapes will sharply decline. The recent development of two-stroke engines that are smaller, lighter, and more powerful than four-strokes provides an enormous opportunity for automobile manufacturers and other engine users.¹⁰ Even in a traditional industry like meat packing, technological change can put companies out of business if they do not adapt:

In a business where success or failure hinges on fractions of a cent profit or loss, Idle Wild Foods is just about as good as they come. If there is anyone better, it's Iowa Beef Processors, which revolutionized the way finished beef is produced. The new technology was first perfected in a huge slaughtering and processing plant IBP built at Dakota City, Nebr. in 1967, and overnight most of the competition had to acquire IBP's cost-cutting skills or get out of the business. Most of them got out.¹¹

Economic Conditions. Economic conditions reflect the general economic health of the country and region where an organization operates. Unemployment rates, consumer purchasing power, interest rates, inflation, and excess production capacity are all part of external economic health. The availability of supplies and labor and the demand for output are related to economic conditions. Economic conditions also affect government and not-for-profit organizations. For example, high tax revenues are a direct result of economic prosperity, and contributions to the Salvation Army and the Red Cross go down during periods of economic recession, just when helping agencies

experience greater demand for their services.¹² Business leaders prefer stable economic conditions with moderate growth and prosperity. Businesses may change locations to be in a prosperous area such as Austin, Texas, or Manchester-Nashua, New Hampshire, that were recently found to experience the greatest growth in the birth rate of new jobs and businesses.¹³

Government. The government includes the regulatory, legal, and political systems that surround an organization. The political system, such as capitalism versus socialism, determines the amount of freedom organizations have to pursue their own ends. In Canada and the United States, organizations operate in a capitalistic economy, but the government specifies the rules of the game through laws and regulations. The federal government influences organizations through the Occupational Safety and Health Administration, fair trade practices, subsidies for certain products and services, libel statutes that encourage or discourage lawsuits against businesses, consumer protection legislation, product safety guidelines, requirements for information and labeling, import and export restrictions, and pricing constraints.

The Reagan administration has reduced business regulation, but those reductions have been offset by increases in state regulation. In a recent year, 250,000 bills were introduced in state governments, of which 50,000 became law. An additional 50,000 regulations were proposed, with about 35,000 adopted. These laws and regulations include everything from "lemon laws" to merger regulations and protective measures to force businesses to buy in-state.¹⁴ For example, Minnesota passed an antitakeover law after an attempted acquisition of local retailer Dayton-Hudson Corporation,¹⁵ and several states are cracking down on Hertz, National, and other car rental agencies that charge up to ten dollars a day for a collision damage waiver that would cost less than one dollar from an insurance company.¹⁶

Sociocultural. This sector includes the demographic characteristics and the value system within a society. Demographic characteristics include age of the population, income distribution, composition of the work force (age, sex, race), whether people live in rural or urban areas or are migrating from one area to the other, and incidence of slums, crime, and educational facilities.

Values and norms are also components of culture that affect organizations. In the 1960s and 1970s, protest groups tarnished the public image of munitions manufacturers, whose stock was divested from many foundations and university portfolios. Ralph Nader led the movement toward consumers fighting back. Corporations were portrayed as uncaring and exploitative, which encouraged lawsuits against companies such as Pacor, Inc., described at the beginning of this chapter.

Organizations have tried to adopt value changes, but some changes have been tough. For example, many companies extended equal employment rights to homosexuals, and now find themselves mired in unanticipated problems. Some gays are demanding full medical and other company benefits for their partners. Many companies don't know how to include gay couples in social activities.

Other sociocultural changes affecting organizations are the aging of the population and the rise in dual-career families. An increasing number of affluent women over thirty creates new market opportunities for cosmetics

and other products. In dual-career families, the parents are more affluent but have less time to make purchasing decisions, and thus give additional power to children in buying clothes and toys. Changing habits in the under-thirty age group—including drinking less coffee and hard liquor, smoking less, and eating highly nutritious foods—change how companies provide products and services to those customers.¹⁷

International. The international sector includes the events and opportunities originating in parts of the world outside a company's host country. The international sector overlaps the national sectors that affect an organization. This sector provides industry competition in a host country, such as when high-quality, low-priced automobiles from Korea and Japan create a permanent change in the American automobile industry. It also provides raw material and market sector opportunities, such as being able to have parts manufactured and assembled at low prices in Mexico, or, with companies like Black & Decker, Coca-Cola, and IBM, finding new and expanded markets around the world. The international sector includes currency exchange rates, language, religion, stage of economic development, government regulations, and the political risk associated with doing business internationally.¹⁸

APPENDIX D

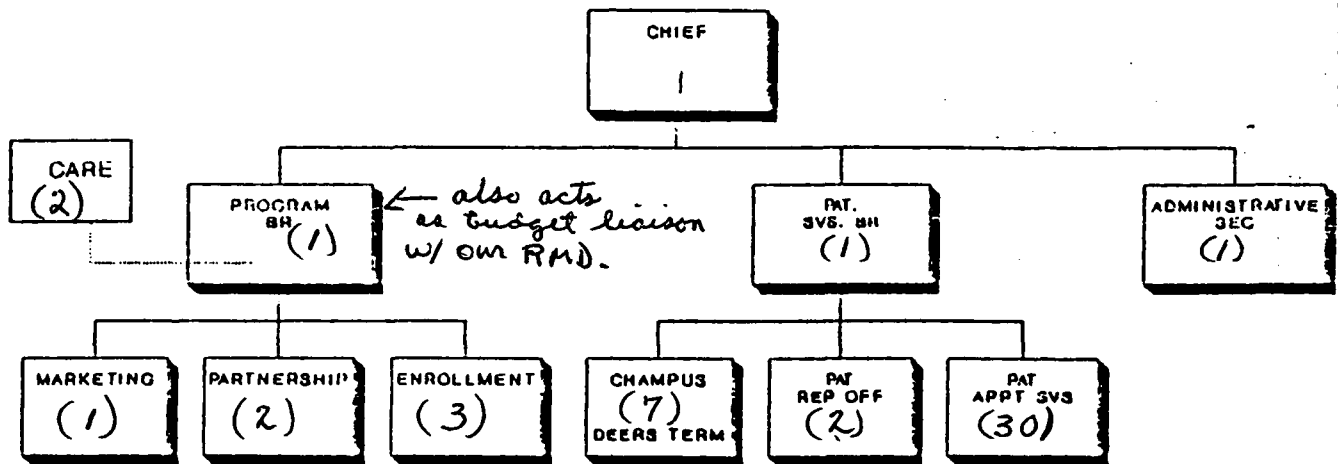
**CONTINGENCY FRAMEWORK FOR ENVIRONMENTAL
UNCERTAINTY AND ORGANIZATIONAL RESPONSES**

ENVIRONMENTAL CHANGE	Stable	Low Uncertainty 1. Mechanistic structure (formal, centralized) 2. Few departments 3. No integrating roles 4. Little imitation 5. Current operations orientation	Low-Moderate Uncertainty 1. Mechanistic structure (formal, centralized) 2. Many departments, boundary spanning 3. Few integrating roles 4. Some imitation 5. Some planning
		<i>Uncertainty</i>	
	Unstable	High Moderate Uncertainty 1. Organic structure (informal, decentralized) 2. Few departments, boundary spanning 3. Few integrating roles 4. Quick to imitate 5. Planning orientation	High Uncertainty 1. Organic structure (informal, decentralized) 2. Many departments, differentiated, boundary spanning 3. Many integrating roles 4. Extensive imitation 5. Extensive planning, forecasting
		ENVIRONMENTAL COMPLEXITY Simple	

APPENDIX E

FT. CARSON PATIENT SERVICES DIVISION

PATIENT SERVICES DIVISION



"REPRODUCED AT GOVERNMENT EXPENSE"

APPENDIX F

**VERIFICATION OF TECHNOLOGY COMPLEXITY
AND INTERDEPENDENCE ASSESSMENT**

HSUD (340a)

20 March 1990

MEMORANDUM FOR

COL INAZU
CPT AGUIRRE

SUBJECT: Verification of GMP Data Analysis

1. The data analysis for my Graduate Management Project (GMP) requires you to verify my analysis of data concerning your functional area.

2. I have developed a list of functions for the Military-Civilian Health Systems Branch. I have analyzed each function in terms of task variety, task analyzability and task interdependence. I have categorized each function in the following manner:

Variety: High or low

Analyzability: High or low

Interdependence: Pooled, Sequential or Reciprocal

3. I would like you to review my analysis for each highlighted function. If you agree with my analysis, please initial next to each categorization. If you do not agree with any of the analyses, please draw a line through the categorization and write the category that best fits the function. I have enclosed operational definitions for each category to assist you with the verification.

4. If you have any questions, please contact me at x4300. Please return the completed verification of analysis to me NLT 26 March 1990.

Encl



BRIAN E. ANSELMAN

CPT, MS

Administrative Resident

"REPRODUCED AT GOVERNMENT EXPENSE"

Technology Interdependence

FUNCTION: a. Conduct workload, utilization and cost analysis to include MEPRS and RCMAS data for the planning, implementation and monitoring of a managed care system.

INTERDEPENDENCE: Reciprocal

This function will require extensive coordination among clinical departments and administrative divisions. There will be frequent exchange of information between the managed care office and RMD and PAD to conduct the required analysis. Other departments and divisions may have to be consulted to assist in interpreting workload and utilizing data.

FUNCTION: b. Identify optimal methods of delivering health care to all beneficiaries in a managed care system. The managed care system will include, Partnership agreements, VA-DoD sharing agreements, DHCPP, Alternate Use of CHAMPUS Funds and other initiatives which maximize the use of the MTF resources.

INTERDEPENDENCE: Reciprocal

The identification of optimal methods for delivering health care will require the managed care office to coordinate among the Commander, DCA, DCCS, PAD and RMD. Other administrative divisions must also be consulted. This process cannot be reduced to a successive, one-way flow of communication and coordination, but must rely on a multi-directional flow of information.

FUNCTION: c. Is responsible for development of statements of work for contract purposes and agreements which support the, VA-DoD sharing agreements, DHCPP, Alternate Use of CHAMPUS Funds and the Partnership program.

INTERDEPENDENCE: Reciprocal

Developing statements of work for the various DoD managed care initiatives dictates the managed care office to coordinate among the DCA, DCCS, CSD, PAD, RMD, QA and appropriate department and service chiefs. The process for developing statements of work necessitates a multi-directional flow of communication.

FUNCTION: d. Responsible for monitoring supplemental care expenditures and identifying cost effective civilian alternatives for supplemental care program use.

INTERDEPENDENCE: Sequential

The process of monitoring supplemental care funds is predominantly a successive, one-way flow of information. The

process originates with the request for Supplemental Care by the recommending physician, approval by the DCCS or PAD Chief, the appointment for the patient and commitment of funds by the Supplemental Care Clerk and the expense for funds by RMD.

FUNCTION: e. Responsible for negotiating agreements and contracts to support the, Partnership Program, Supplemental Care Program, Alternate Use of CHAMPUS Funds and the VA-DoD Sharing Program. Shall not perform contracting officer representative duties in support of any contracting efforts.

INTERDEPENDENCE: Reciprocal

The negotiation process requires a two-way flow of information at a minimum. In addition, the managed care office must make extensive coordination among the departments prior to the negotiation process.

FUNCTION: f. Coordinate with the CHAMPUS Fiscal Intermediary, OCHAMPUS, and the CHAMPUS Division at HSC for CHAMPUS policy guidance, reimbursement policies and practices, special program status and benefits changes.

INTERDEPENDENCE: Pooled

The Health Benefits Advisor normally acts independently to perform this function and does not need to coordinate among other departments in the hospital.

FUNCTION: g. Disseminate information to beneficiaries and providers regarding the CHAMPUS and MTF capabilities and policies. Provide information to beneficiaries and providers concerning health benefits programs available. These include but are not limited to CHAMPUS, Medicare, Medicaid, VA benefits, civilian community health resources, and services provided by charity and state agencies within the catchment area.

INTERDEPENDENCE: Pooled

The Health Benefits Advisor also acts independently to perform this function. No coordination among hospital departments is required.

FUNCTION: h. Conduct continuous monitoring of the health care resources within the catchment area, including the military community, in order to provide current information regarding the availability of services to beneficiaries and the MTF.

INTERDEPENDENCE: Pooled

This function can be conducted independently without the coordination among other hospital departments or divisions.

FUNCTION: i. Issue Non-availability statements (NAS) and maintain the automated NAS issuance system in DEERS for the MTF. Provide information to the commander concerning the numbers and reasons for issuance of NAS within the MTF. Provide information to beneficiaries and providers regarding the requirements for NAS.

INTERDEPENDENCE: Sequential

At times, there is a successive, one-way flow of information among hospital departments before the Health Benefits Advisor may issue a NAS.

FUNCTION: j. Develop and maintain a utilization management system to monitor the progress of services provided under Partnership agreements and other CHAMPUS initiatives.

INTERDEPENDENCE: Reciprocal

Once the managed care office receives the utilization data, it will likely consult various clinics and administrative divisions prior to the managed care office final analysis. The development of a utilization management system will require a multi-directional flow of information for the managed care office as well.

FUNCTION: k. To implement and monitor Alternate Use projects.

INTERDEPENDENCE: Reciprocal

The implementation and monitoring of Alternative Use projects will require the managed care office to coordinate among a variety of departments and divisions.

FUNCTION: l. Responsible for marketing the health benefit packages available to beneficiaries.

INTERDEPENDENCE: Pooled

The marketing function could potentially involve considerable coordination among the managed care office and the other hospital departments. However, the marketing program initially will be relatively independent and would require minimal coordination among hospital departments.

Technology Complexity

FUNCTION: a. Conduct workload, utilization and cost analysis to include MEPRS and RCMAS data for the planning, implementation and monitoring of a managed care system.

VARIETY: HIGH

ANALYZABILITY: LOW

The myriad combinations of analyses that can be performed using workload, cost and utilization data will prevent the function from becoming rote. Moreover, the analysis involved with such data does not lend itself toward standard procedures to follow. The analyst must rely on experience and knowledge to perform such analysis.

FUNCTION: b. Identify optimal methods of delivering health care to all beneficiaries in a managed care system. The managed care system will include Partnership agreements, VA-DoD sharing agreements, DHCFP, Alternate Use of CHAMPUS Funds and other initiatives which maximize the use of the MTF resources.

VARIETY: HIGH

ANALYZABILITY: LOW

Numerous internal and external factors exist that will affect the application and extent of the various managed care initiatives at KACH. This will create a great deal of variety in the performance of the task. Since the optimal delivery of health care depends on each hospital's individual situation, there are no formal standards or guides to assist in the process. The managed care office personnel must rely on their own knowledge and understanding of the various managed care programs.

FUNCTION: c. Responsible for development of statements of work for contract purposes and agreements which support the, VA-DoD sharing agreements, DHCFP, Alternate Use of CHAMPUS Funds and the Partnership program.

VARIETY: HIGH

ANALYZABILITY: LOW

While the statements of work for the Partnership Program are specified by HSC, there is considerable latitude for developing statements of work for the other managed care initiatives. Each of the initiatives will have different statements of work. Since the development of the statements depends on the requirements of the hospital, the collective wisdom, knowledge and experience of the people will be used to perform this function.

FUNCTION: d. Responsible for monitoring supplemental care expenditures and identifying cost effective civilian alternatives for supplemental care program use.

VARIETY: LOW

ANALYZABILITY: HIGH

The monitoring of supplemental care expenditures is a routine process and follows a prescribed process.

FUNCTION: e. Responsible for negotiating agreements and contracts to support the, Partnership Program, Supplemental Care Program, Alternate Use of CHAMPUS Funds and the VA-DoD Sharing Program. Shall not perform contracting officer representative duties in support of any contracting efforts.

VARIETY: HIGH

ANALYZABILITY: LOW

The negotiation process for any of the managed care facilities cannot rely on standard procedures and is subject to a great many unexpected events.

FUNCTION: f. Coordinate with the CHAMPUS Fiscal Intermediary, OCHAMPUS, and the CHAMPUS Division at HSC for CHAMPUS policy guidance, reimbursement policies and practices, special program status and benefits changes.

VARIETY: LOW

ANALYZABILITY: HIGH

The Health Benefits Advisor has standard procedures and several readily accessible references to consult regarding policies, reimbursement and eligibility.

FUNCTION: g. Disseminate information to beneficiaries and providers regarding the CHAMPUS and MTF capabilities and policies. Provide information to beneficiaries and providers concerning health benefits programs available. These include but are not limited to CHAMPUS, Medicare, Medicaid, VA benefits, civilian community health resources, and services provided by charity and state agencies within the catchment area.

VARIETY: LOW

ANALYZABILITY: HIGH

The day to day requirements for this task are repetitious, and references are available.

FUNCTION: h. Conduct continuous monitoring of the health care resources within the catchment area, including the military community, in order to provide current

information regarding the availability of services to beneficiaries and the MTF.

VARIETY: LOW

ANALYZABILITY: HIGH

The procedures to survey and monitor the catchment area are routine and rely on established procedures.

FUNCTION: i. Issue Non-availability statements (NAS) and maintain the automated NAS issuance system in DEERS for the MTF. Provide information to the commander concerning the numbers and reasons for issuance of NAS within the MTF. Provide information to beneficiaries and providers regarding the requirements for NAS.

VARIETY: LOW

ANALYZABILITY: HIGH

The procedures to issue, monitor and report NASs are formally established and repetitious in nature.

FUNCTION: j. Develop and maintain a utilization management system to monitor the progress of services provided under Partnership agreements and other CHAMPUS initiatives.

VARIETY: HIGH

ANALYZABILITY: LOW

Each managed care initiative will have a separate utilization management program tailored specifically to the managed care initiative. This will require understanding and experience and will have few standard procedures to rely on.

FUNCTION: k. Implement and monitor Alternate Use projects.

VARIETY: HIGH

ANALYZABILITY: LOW

Endless possibilities exist for Alternative Use projects. Few guidelines exist for the program beyond demonstrated cost savings. Analysis for Alternate Use projects will not be routine nor will it be able to rely on formal procedures.

FUNCTION: l. Responsible for marketing the health benefit packages available to beneficiaries.

VARIETY: HIGH

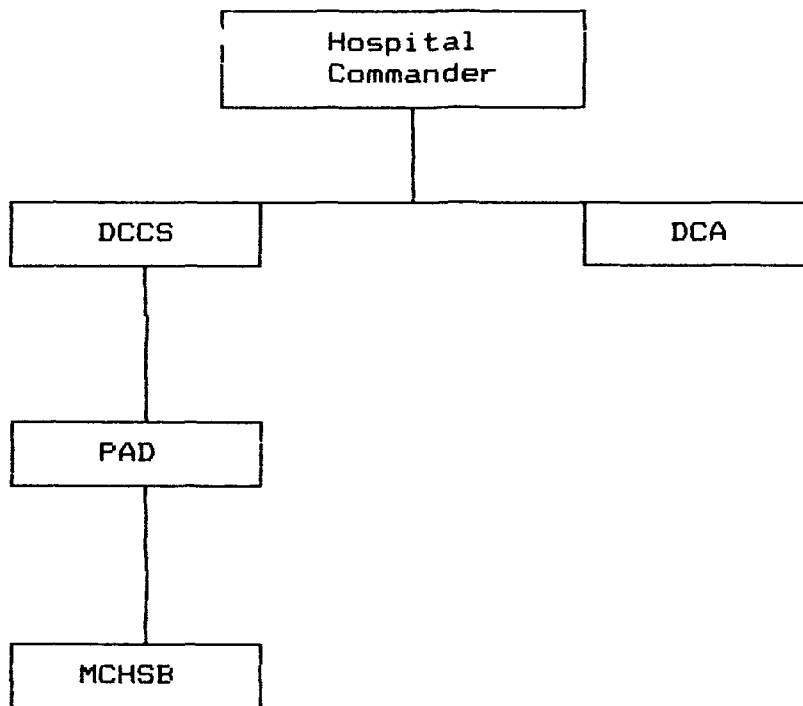
ANALYZABILITY: LOW

Market analysis and promotional campaigns can be quite complicated and is not conducive to rely on established procedures or repetition.

APPENDIX G

ORGANIZATION CHART FOR ALTERNATIVE 1

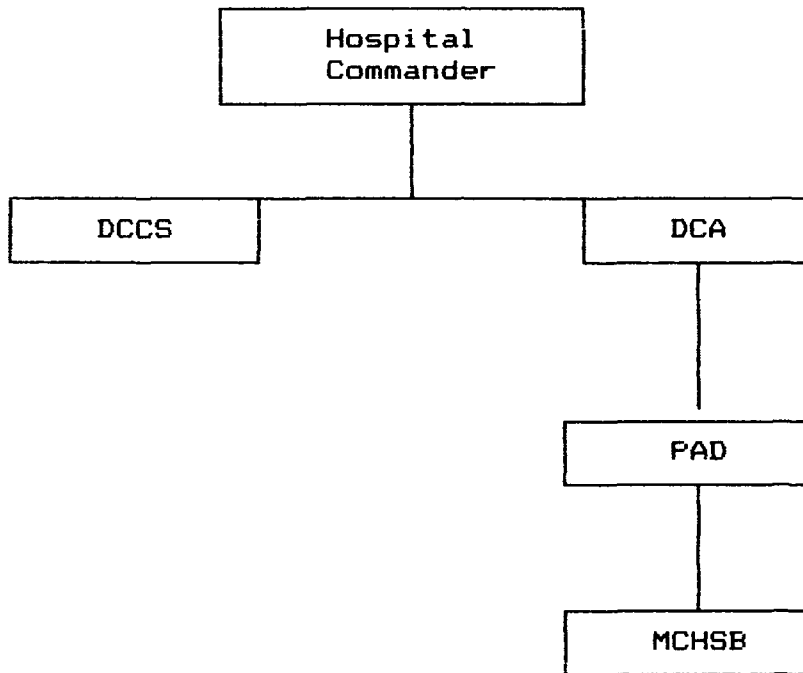
ALTERNATIVE 1



APPENDIX H

ORGANIZATION CHART FOR ALTERNATIVE 2

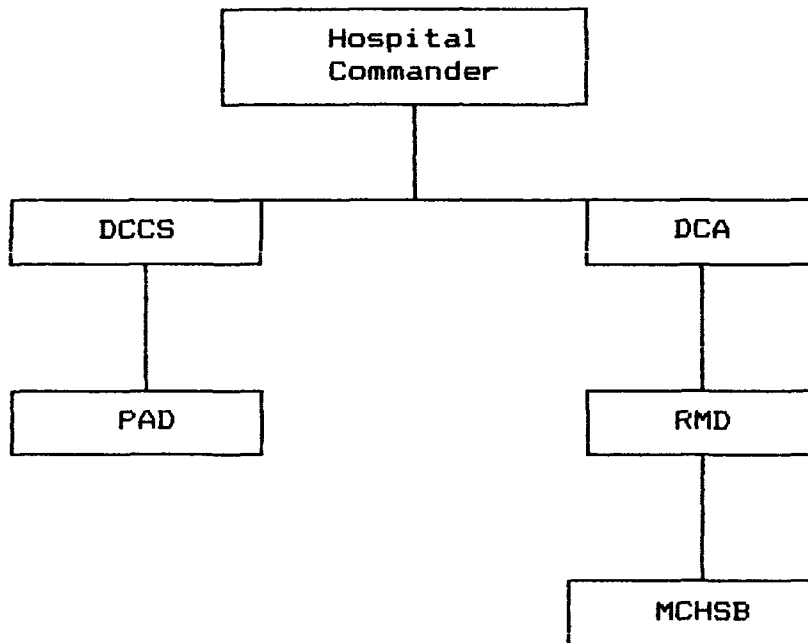
ALTERNATIVE 2



APPENDIX I

ORGANIZATION CHART FOR ALTERNATIVE 3

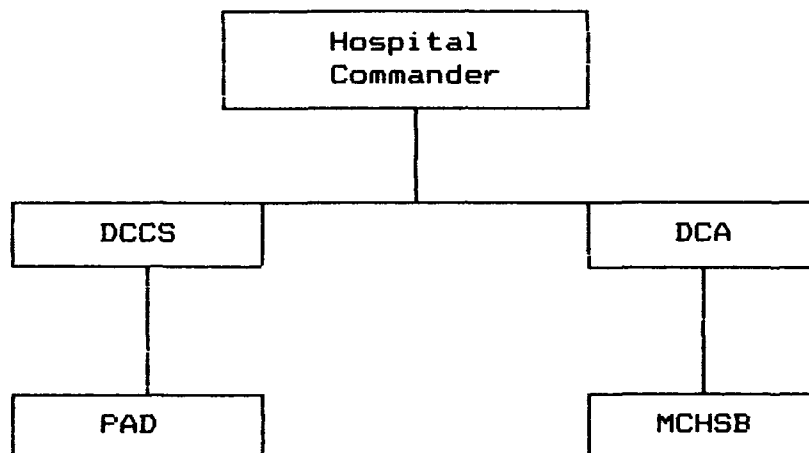
ALTERNATIVE 3



APPENDIX J

ORGANIZATION CHART FOR ALTERNATIVE 4

ALTERNATIVE 4

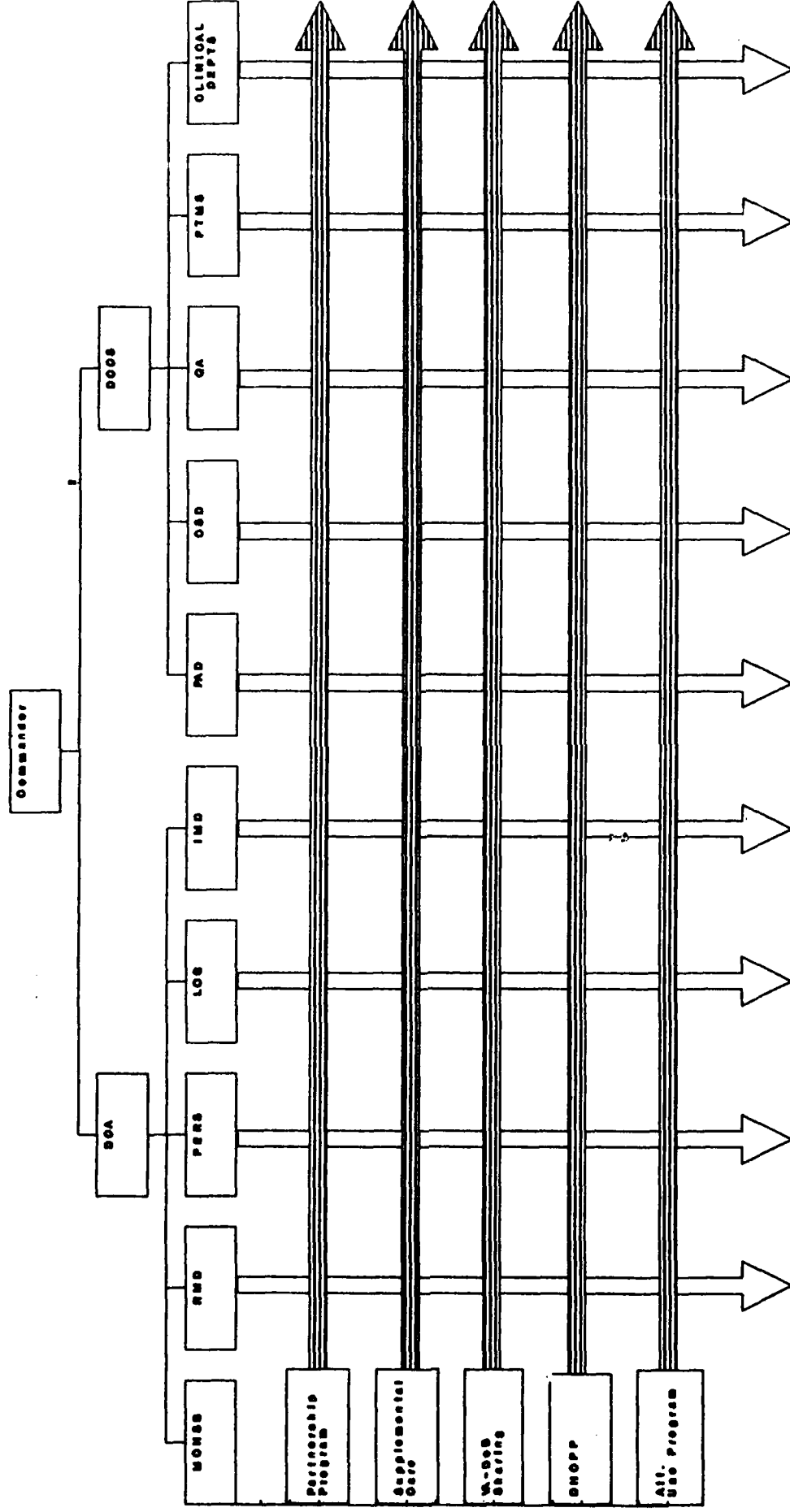


APPENDIX K

PROPOSED MATRIX STRUCTURE FOR THE MCHSB

MANAGED CARE OFFICE

Proposed Matrix Structure at KACH



Vertical Flow of Functional Authority and Responsibility

Horizontal Arrows Reflect Dashed Line Authority and Responsibility for MCHSB Managed Care Programs

EXPENSES
GOVERNMENT
AT
PROGRAMS