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Academic Medical Centers: A Prescription for Success in an Era of Managed Care and Capitation

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	APRIL 1998	FINAL REPORT (07-97 TO 07-98)

4. TITLE AND SUBTITLE
ACADEMIC MEDICAL CENTERS: A PRESCRIPTION FOR SUCCESS IN AN ERA OF MANAGED CARE AND CAPITATION

5. FUNDING NUMBERS

6. AUTHOR(S)
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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
DWIGHT D. EISENHOWER army MEDICAL CENTER
FORT GORDON, GEORGIA 30905-5000

8. PERFORMING ORGANIZATION REPORT NUMBER
4-98

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
US ARMY MEDICAL DEPARTMENT CENTER AND SCHOOL
BLDG 2841 MCCS-HRA US ARMY-BAYLOR PROGRAM IN HCA
3151 SCOTT RD SUITE 1412
FORT SAM HOUSTON, TEXAS 78234-6135

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT
APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

For years Academic Medical Centers (AMCs) have symbolized technological advancements and specialization in patient care. Today, these institutions face a transition to managed care and radical changes in the financing of healthcare. These issues are not unique to the civilain healthcare industry. AMCs within the military must respond to many of the same changes. Their survival may rest on the ability to recognize they can no longer ignore trends that favor lower costs, less specialization, and more primary care. This paper desribes actions being taken at Dwight David Eisenhower Army Medical Center, a 300-bed academic medical center at Fort Gordon, Georgia. The leadership is actively pursuing innovative ways of providing accessible, high quality, and affordable healthcare. In addition to examining changes currently taking place, recommendations are offered for new initiatives, particularly in the area of enrollment-based capitation. To survive, AMCs need strategies on how to operate in this era of managed care and capitation. Only through an understanding of the changing environment will AMCs prevail.

14. SUBJECT TERMS	15. NUMBER OF PAGES
ACADEMIC MEDICAL CENTERS, MANAGED CARE, CAPITATION	50
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
N/A	N/A	N/A	UL

Acknowledgments

I would like to extend my gratitude to my Preceptor, LTC(P) David Rubenstein, for his guidance and support during the residency year. His willingness to share knowledge and experience will not be forgotten.

My love and appreciation goes to my wife, Wanda, and sons, Jonathan and Tyler, for their constant support and encouragement. They demonstrated great patience and understanding during the past two years.

I am grateful to many members of the Eisenhower Army Medical Center staff who assisted me in the research process. A special thanks goes to those who shared their insights contributing to my understanding of the issues surrounding academic medicine.

Finally, I thank MAJ Lance Maley, Hospital Executive Officer and resident from last year. He patiently listened and offered suggestions to assist me in the completion of not only this project, but the entire residency year. It was truly a pleasure sharing this experience with him.

Abstract

For years Academic Medical Centers (AMCs) have symbolized technological advancements and specialization in patient care. Today, these institutions face a transition to managed care and radical changes in the financing of healthcare. These issues are not unique to the civilian healthcare industry. AMCs within the military must respond to many of the same changes. Their survival may rest on the ability to recognize they can no longer ignore trends that favor lower costs, less specialization, and more primary care (Kongstvedt, 1996). This paper describes actions being taken at Dwight David Eisenhower Army Medical Center (EAMC), a 300-bed academic medical center at Fort Gordon, Georgia. The leadership is actively pursuing innovative ways of providing accessible, high quality, and affordable health care. In addition to examining changes currently taking place, recommendations are offered for new initiatives. To survive, AMCs need strategies on how to operate in this era of managed care and capitation. Only through an understanding of the changing environment will AMCs prevail.

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For years Academic Medical Centers (AMCs) have symbolized technological advancements and specialization in patient care. Many enjoyed a long history of medical excellence and financial stability (Nauert, 1995). Today, these institutions are confronted with a transition to managed care and radical changes in the financing of healthcare.

In order to survive, AMCs need strategies on how to operate in this era of managed care and capitation. These strategies must incorporate measures to allow the AMC to compete on the basis of cost and quality. Only through an understanding of the changing environment and learning from the successes and failures of others, will AMCs prevail in the new era of healthcare.

These issues are not unique to the civilian healthcare industry. AMCs within the military must respond to many of the same changes in the delivery and financing of healthcare. Cost containment pressures have resulted in managed care initiatives becoming crucial to the long-term survival of the military health system. This development creates great pressure on the military system to become more competitive and more efficient. The survival of AMCs within the military may rest in their ability to recognize they can no longer ignore trends that favor lower

costs, less specialization, and more primary care (Kongstvedt, 1996).

Dwight David Eisenhower Army Medical Center (EAMC) is a 300-bed academic medical center at Fort Gordon, Georgia. The leadership is actively pursuing innovative ways of providing an accessible, high quality, and affordable healthcare system. In response to the environmental changes facing EAMC, new initiatives need to be pursued.

Conditions Prompting the Study

Managed Care Era

Managed care is rapidly dominating the healthcare financing and delivery system in the United States. The term managed care can embody a wide variety of techniques. These include various forms of financial incentives for providers, promotion of wellness, early identification of disease, patient education, self-care, and all aspects of utilization management. Managed care can be defined as the integration of financing with the delivery of healthcare services that, at the very least, tries to manage the cost and access of healthcare while maintaining the quality of that healthcare. Managed care organizations provide the plans or products that integrate the healthcare financing activities of payers with the delivery of care by providers (Kongstvedt, 1996).

With the rapid growth of managed care, AMCs face many challenges that threaten their ability to perform their academic mission. Kongstvedt believes that the salvation of these academic organizations lies in their ability to recognize that they can no longer operate as a specialty driven institution with no regard to the trends that favor lower costs, less hospitalization, and an increased focus on primary care (1996).

In the United States, the movement toward managed care is accelerating with no end in sight. From 1994 to 1995, the number of employees enrolled in some type of a managed care plan increased from 42% to 63%. Within the next 3 years, services provided through Medicaid will come primarily through managed care. At the same time, Medicare enrollment into managed care plans is accelerating. By the end of the decade, the overwhelming majority of Medicare recipients will be in some form of managed care (Shine, 1997).

The restructuring of the healthcare industry has shifted provider selection decisions to health insurance plans, purchasing groups, and other organizations operating on the managed care principle of lower cost. There is a growing concern among those in the academic medical field that teaching hospitals will not be able to compete since their teaching programs increase costs of care (Kralewski, Hart, Perlmutter, and Chou, 1995). Hospitals that have graduate medical trainees have

substantially higher costs than do non-teaching facilities. The cost of care at an AMC averages approximately 20% higher than that at a non-teaching hospital (Epstein, 1995). These higher costs result primarily because of excess utilization of resources resulting from training situations, higher patient acuity, and in some cases, as a result of caring for a larger mix of the underinsured, underserved population (Lepoff, 1995).

Teaching hospitals represent the backbone of innovation in U.S. medicine. Most of the nation's basic and clinical research advances are made in AMCs (Pardes, 1997). AMCs create new diagnostic and therapeutic knowledge, develop and access new technologies, evaluate new drugs, train the future force of physicians, and provide care for some of the sickest patients. These programs drastically increase the overhead and costs associated with patient care, thus representing a huge disadvantage in a price conscious environment (Nauert, 1995).

Many of the characteristics associated with AMCs place them in an unfavorable position when forced to compete in today's marketplace. The current environment leaves little room for less profitable activities and requires a transformation of the structure and operations of the AMC. The resulting challenge is for AMCs to identify ways to adapt to the changing market mechanisms, for their survival hinges on the ability to compete on the basis of cost and quality in a managed care environment.

These issues and challenges are not unique to the civilian heath care industry. The military entered the world of managed care in 1993 with a program called TRICARE. The goals of this program mirrored those of civilian managed care programs; increase access and contain the growth of the system's costs (General Accounting Office [GAO], 1995). EAMC and other AMCs within the Military Health System (MHS) are possibly facing the same issues of higher costs associated with their teaching role and, if so, must now focus on providing care at a lower cost and on documenting quality in order to compete with non-teaching hospitals.

The clear trend in the civilian healthcare industry is to adopt a strategy to increase ambulatory care facilities, close inpatient facilities, and employ cost effective and aggressive managed care techniques (McGee and Hudak, 1995). An obstacle to fully implementing civilian responses is the fact that the MHS's primary mission remains readiness. It is essential that a basic infrastructure of inpatient facilities and teaching centers remain operational. Dr. Stephen C. Joseph, former Assistant Secretary of Defense (Health Affairs), emphasized this when he stated that a sure way to kill military medical readiness was to separate the twin missions of wartime and peacetime healthcare (Gardner, 1995). The MHS must adapt the efficiencies of the civilian system to the necessity of maintaining inpatient

facilities. In the process, the MHS must preserve a balance between delivery of cost-effective, efficient, quality patient care outcomes, and the continuation of graduate medical education programs (McGee and Hudak, 1995).

Transition to Capitation

In the 1980s, AMCs experienced major changes as their cost-plus reimbursement system was replaced with diagnosis related groups. Fee-for-service payments for physician's visits were also refined using the resource-based relative value scale. Both hospitals and providers had to become more efficient in response to incentives to reduce the costs per stay or visit. Unfortunately, traditional incentives to increase volume were not altered. In the 1990s, the growth of managed care and capitation has put pressure on hospitals and providers to increase efficiency and, at the same time, control the volume of admissions and visits per patient (Goldman, 1995).

Managed care and capitation are replacing indemnity plans and fee-for-service health services as the dominant methods for financing healthcare in the United States (Fogelman et al., 1995). Financial survival in this environment requires a mastery and understanding of capitation. To succeed, AMCs must remain steadfast in their commitment to educational missions while becoming more cost-competitive providers.

Many feel that the roles of AMCs make them virtually noncompetitive in this changing environment. A 1991 study places an average cost of care per admission at $6000 in AMCs compared to $4400 in non-teaching hospitals (Kongstvedt, 1996). The movement toward managed care and capitation has created a clear trend toward lower utilization of tertiary services with fewer admissions and shorter lengths of stay. Academic funding will suffer considerably under these conditions.

Academic leaders must focus on strategies to succeed under these new market mechanisms. The transition to capitation is difficult and stressful. In many cases, it will not be enough for AMCs to form systems and to understand capitation. It is critical for them to rethink entire budgets. To successfully operate in a capitated environment, AMCs need detailed strategies on what is involved, how care will be delivered, the costs of each component, and an integrated information system to link key financial and patient care components (Nauert, 1995).

Again, these challenges with capitation are not unique to civilian academic hospitals. The MHS environment is characterized by increasing costs and limited budgets. EAMC and other military AMCs are facing unprecedented challenges in managing reduced resources to pay for steadily rising healthcare costs, similar to those confronting their civilian counterparts.

Health programs within the military have traditionally been budgeted on the basis of historical resource consumption and workload trends. This approach resulted in a built-in incentive to produce more output or more services than may have been medically necessary. It provided incentives to hospitalize patients for long periods of time. Military providers often hospitalized patients who, in a civilian setting, would have received outpatient treatment (GAO, 1995). Capitation is an important strategy for containing the costs of healthcare and curtailing the misuse of these valuable resources.

Starting in October 1997, the MHS will move forward with its next generation of capitation-based resourcing entitled enrollment-based capitation (EBC). The goal of this program is to provide incentives to encourage decision makers at every level to be accountable for the delivery of high quality and cost effective healthcare (Assistant Secretary of Defense for Health Affairs [ASD-HA], 1997b). The development of strategies to ensure the accurate and timely processing of data is essential for EBC to succeed. The organization must focus on properly deploying and utilizing the necessary data systems. Many of these systems, such as the Medical Expense and Performance Reporting System (MEPRS), take on a renewed importance in this new capitated-based resourcing process (ASD-HA, 1997c).

Additionally, the leadership of the AMCs must direct their focus at developing a vision for their facility that embraces the concept of EBC. A segment of the resulting strategy needs to address the cost structure and the methods used to calculate the costs of providing care in that facility. As was the case for AMCs within the civilian healthcare industry, to successfully operate in a capitated environment, military AMCs need detailed strategies on what is involved, how care will be delivered, the costs of each element, and an integrated information system to link key financial and patient care components.

Statement of the Research Question

The leadership at EAMC seeks to identify methods of providing health services within the emerging environment of managed care and capitation without sacrificing the key teaching mission of the academic medical center.

Literature Review

Academic Medical Centers in a Managed Care Environment

A vast quantity of literature supports the fact that AMCs face many significant challenges in today's heath care industry. In the past, these institutions have enjoyed protected subsidization to offset the increased cost of their teaching and research programs (Lepoff, 1995). Today, these same institutions face the issue of how to maintain the structure and funding required for high quality teaching programs while developing a

service that is competitive with the non-teaching facilities (Kralewski et al., 1995).

The environment where AMCs must operate is highly competitive. There is a growing concern that these teaching institutions will not be able to compete since their teaching and research programs increase the costs of care and create an environment that is often not patient friendly. Today's healthcare industry also places the AMC at the mercy of several demands including lower costs, reduced utilization, and organizational effectiveness (Lepoff, 1995).

In addition to their higher costs, the organizational structure and culture of AMCs negatively affect their ability to adapt to the emerging competitive environment. The AMCs structure forms a bias against primary care, outcomes-based decision making, and sound business principles. The traditional structure of AMCs has the physician or individual departments as the main focus. The physician or specialty department controls access and, therefore, generates revenue. The political and individual power struggles within the organization and between the departments inhibit the ability of the AMC to make critical decisions in a cohesive and rational manner. In a managed care environment, payers insist on the cost-effective delivery of health services (Kongstvedt, 1996). Leadership must begin the process of transforming the traditional culture into one that embraces the

principle of providing cost-effective healthcare through the practice of sound business principles. Kongstvedt suggests that leadership is instrumental for AMCs to overcome this barrier to change (1996).

Managed care is credited for raising many of the issues facing AMCs. But Pardes suggests that managed care is only a messenger from the public telling the industry that the cost for healthcare is too high (1997). Instead of totally blaming managed care, he feels it is more important for the AMCs to focus their energy on becoming more efficient in the use of their resources and begin developing strategies to address these fiscal challenges. Pardes suggests strategies to include emphasizing primary care and wellness, becoming more user-friendly, re-engineering clinical care processes, and moving procedures to the ambulatory care setting (1997). Each of these strategies are referenced in numerous publications as possible answers to some of the challenges facing AMCs.

Chessare and Herrick agree that AMCs have traditionally focused on inpatient care and have been staffed by faculty physicians. Primary care providers have generally been underrepresented at the AMC because of the focus on tertiary care (1996). Current literature emphasizes the importance of a primary care strategy for success in an industry operating under the principles of managed care. In an environment of capitation and

managed care, AMCs want and need more members than patients because the money in a capitated system comes from members who use few or inexpensive medical services. Primary care providers are essential to maintain a patient base that is viewed as fundamental for the financial survival of the AMC. Current strategies for maintaining a loyal patient base rest upon an efficient network formation. As the total inpatient and specialty service volume declines, AMCs must focus on gaining covered lives to remain viable (Kongstvedt, 1996).

While establishing the primary care base is important, the teaching mission of the AMC requires a continued commitment to the specialty and tertiary services as well. Primary care cannot be seen as a means to support these services. To maintain the required level of specialist and tertiary care, AMCs need to serve larger populations. Options to support this include broader geographical linkages with community providers as well as increased referrals within the primary service area or network (Kongstvedt, 1996).

The leadership of the AMC must also recognize that the economics of the marketplace is not the only factor concerning the purchasers of healthcare. They want information regarding the quality and experience to assist in making healthcare decisions. Managed care organizations are responsive to this need and support the evaluation of outcomes, utilization control, and

other measures to improve and document quality (Kongstvedt, 1996).

AMCs have always claimed superior results but now they are at a point where these results must be documented to justify to the purchaser why their facility should be chosen over another. Lacking convincing evidence of superior quality of care, AMCs have traditionally depended on their reputation to negotiate higher prices. A study by Blumenthal and Meyer revealed that AMCs within more advanced managed care markets are finding it more and more difficult to depend on reputation alone as proof of quality healthcare delivery (1996).

Finally, the absence of information regarding clinical processes is a significant barrier to competing effectively. Information about internal costs and clinical processes become necessary for success in today's healthcare industry. The AMCs information system of the future must combine clinical and financial data to document quality as well as manage processes and outcomes effectively (Kongstvedt, 1996).

Military Health System

For Fiscal Year 1998, potential beneficiaries seeking care within the MHS totals some 7.3 million, to include 1.59 million active duty personnel, 2.19 million dependents of active duty, 2.04 million retirees and dependents under 65 years of age, and 1.44 million retirees and dependents over age 65. This care will

be provided at 98 hospitals or medical centers and 488 clinics (Association of the United States Army, 1997). With these numbers, it is easy to see that the MHS is one of the nation's largest healthcare systems, costing over 15 billion dollars annually (GAO, 1995).

In the past decade, EAMC, as well as other medical facilities within the MHS, have experienced many of the same challenges confronting the nation's healthcare system, to include increasing costs and limited budgets (ASD-HA, 1997a). The MHS recognized the need to change from the traditional healthcare delivery model focusing on the inpatient facility. Various military managed care initiatives tested throughout the 1980s indicated that the MHS could adapt to the managed care model of the civilian healthcare delivery system. These initiatives eventually evolved into a comprehensive Department of Defense program called TRICARE, a triple-option healthcare delivery model that integrates health services for the nation's 7.3 million MHS eligible beneficiaries (Cort-Johnson, 1996).

The philosophy of TRICARE is to alter provider and consumer behavior to optimize healthcare quality and access while constraining cost escalation (McGee and Hudak, 1995). Once fully implemented, TRICARE will give the MHS a chance of surviving against shrinking budgets and rising expenditures (Cort-Johnson, 1996). The challenge for AMC leaders within the MHS is to adapt

to the transition to managed care while still maintaining high-quality education and research functions (Kralewski et al., 1995).

Capitation-Based Resourcing

Capitation is based on providing care to a defined number of enrollees at a fixed rate per member per month. In a capitated system, revenue is earned up front (Fogelman et al., 1995). Within the AMC, additional government and public funding has subsidized the teaching mission, but this support is tempered by a strong sentiment to lower the national deficit. AMCs must face the threat of diminishing revenues under managed care with no likelihood of greater government support (Kongstvedt, 1996). To successfully operate within a capitated environment, the actual units and costs of care provided by AMCs must be at or below the projections that went into the calculations of the capitation rates. For AMCs to compete with non-teaching hospitals, the leadership must create a unified approach to accept and manage risk for defined populations. This requires a budgeted, unit cost approach to patient care, using projected consumption patterns across a full continuum of care or for certain segments or episodes of care (Nauert, 1995).

Within the MHS, TRICARE, like other managed care programs, uses capitation as the method to allocate funds. The movement to capitation represented a radical departure in principle and

practice from previous military budgetary strategies. Prior to capitation, the more work a facility performed, the more resources it could expect the following year. This resource allocation method provided an incentive to deliver more care, even when it may have been medically unnecessary (McGee and Hudak, 1995). These incentives are the exact opposite of the incentives needed to support an effective managed care operation in the late 1990s.

In 1994, the concept of capitation financing was a well-established component of the civilian managed care industry. Because of this, a modified capitation model was one of the major components of the TRICARE program. The recent development of enrollment-based capitation represents the next version of the capitation methodology that will be used by the MHS. This method will give EAMC, as well as other individual facilities, full accountability for all the resources used by their TRICARE Prime enrollees. Each facility will now know exactly which patients they are financially responsible for and how much funding they are being given for the care of these patients. (ASD-HA, 1997c).

The phased implementation of EBC, beginning 1 October, 1997, will give the leadership at EAMC the time and feedback they need to position and validate the standard systems they will depend on in the future. This change in financing requires the leadership at EAMC to develop new strategies such as trimming marginal

costs, eliminating duplicative functions, implementing systemic utilization and case management, and embracing performance-based efficiency measures (McGee and Hudak, 1995). Strategies emphasizing preventive services will also become increasing important, especially if they can successfully demonstrate the ability to avoid more expensive alternatives in this emerging capitated-based resourcing environment (Goldman, 1995).

Purpose

The purpose of this study is to observe, analyze, and document policies and literature concerning the impact that managed care and capitation are having on EAMC and other academic medical centers. Knowledge of the past characteristics of the AMC along with the current and expected impact of managed care and capitation are essential to this study. A thorough evaluation of these areas can provide valuable insight into possible alternatives for EAMC to pursue. The objective of this study is to determine how EAMC can provide cost-effective, high quality, and accessible healthcare without sacrificing the teaching mission of the medical center.

Methods and Procedures

This Graduate Management Project opportunity allowed me to combine previous experiences as a healthcare manager, and the skills and knowledge acquired in the didactic and early residency phases of the U.S. Army-Baylor University Program in Healthcare

Administration. My goal was to produce a study that objectively evaluated the impact that managed care and capitation have on AMCs and provide possible alternative healthcare delivery strategies to the leadership at EAMC. In order to provide this feedback, I compiled an extensive literature reference list by reviewing and analyzing professional journal articles, government documents, and any other pertinent references; interviewed key personnel involved in formulating healthcare delivery strategies; and identified civilian AMC healthcare delivery lessons learned or strategies and examined their value to determine if they can be successfully applied at EAMC.

This is a qualitative study designed to identify and evaluate the impact that managed care and capitation are having on AMCs. Issues and lessons learned from other AMCs were compared and analyzed to identify appropriate healthcare delivery strategies for EAMC to pursue. The two primary research publications used in this study were Business Research Methods (1995) by Cooper and Emory and Case Study Research: Design and Methods (1989) by Yin.

The issues of construct validity and reliability were addressed based on recommendations from Yin's book on case study research (1989). To enhance construct validity, Yin recommends the use of at least one of the following techniques: use multiple sources of evidence, have an established chain of evidence, and

have the draft study reviewed by key informants. I applied the two techniques of multiple sources of evidence as identified in the references and the review of the study by key informants to include my preceptor and other key leaders at EAMC. To address reliability, I established and maintained a data source file consisting of all research generated notes and documentation. This file demonstrates, to a degree, the consistent results of the research, a step necessary according to Cooper and Emory to show reliability in a study (1995).

To ensure the study complies with ethical guidelines, all personnel interviewed were informed of the purpose of the study and their right not to participate in any part of the process. Anonymity and confidentiality was maintained unless proper release of information was granted from the source.

Results

The Literature Review

The literature review for this study was conducted at several military libraries located at Fort Gordon, Georgia. Additional information was also obtained from sources on the Internet. The vast majority of the background data and current civilian issues pertaining to academic medicine and managed care were found during the literature search.

Interviews with key personnel provided a critical dimension to the understanding of the issues impacting on academic medical

centers as a result of the transition to a managed care environment. These individuals were extremely knowledgeable about possible directions that AMCs might take to succeed in this new healthcare environment.

Major Findings

Competition has emerged as a powerful force in the healthcare sector as a result of the growth of managed care. The struggle to balance access, cost, and quality of healthcare within a price-competitive, market-driven environment has changed the nature of traditional healthcare institutions. Among these institutions, academic medical centers have been placed at maximum risk and stand to suffer the most as a result of managed care (Carey and Engelhard, 1996).

AMCs do not fit naturally within managed care systems because their missions are so different. Managed care plans anticipate that the majority of health services will be for routine patient care in a relatively healthy population. AMCs provide care for the sickest patients, invest in research, educate healthcare students, and train physicians. The cost of these special programs make AMCs 30-40% more expensive than nonacademic hospitals (Dobson, Coleman, and Mechanic, 1994). Major changes will be required on the part of AMCs if they are to survive.

AMCs are trying to determine how they can keep up with nonteaching hospitals. They are seeking answers to the questions of how to pay for educating medical students and provide expensive specialized services while fitting into a system that wants to maintain lower costs. Greg Hart, general director at the University of Minnesota Hospital and Clinic, emphasized the importance of this quest when he stated that AMCs have to reposition their organizations to be more valued patient care partners by being more cost-competitive, emphasizing quality, and becoming leaders in outcomes measurement. He followed by stating that society is demanding academic medicine to develop more cost-effective care (Montague, 1993).

Ten private academic medical centers were represented at a Private Sector Conference held at Duke University Medical Center. The conference was entitled "Beyond Managed Healthcare: The Role of the Academic Health Center." It concluded that the competition in the new market had only begun to squeeze the excess capacity of providers, reduce the growth of expenditures, and hold physicians to stricter professional account. The destructive effect on academic medicine was a key issue. Three general strategies emerged as avenues to pursue: restructure the organization, maintain a patient base through expansion of primary care, and increase emphasis on improving and documenting quality healthcare (Iglehart, 1997).

Restructuring the Organization. A cohesive, well-integrated clinical faculty is an essential component of a competitive AMC. This often requires a reconfiguration of the financial system and a reorganization of the academic departments to more closely align both of these structural components with the medical center's goals. The medical group practice model used by many very successful academically oriented physician groups, such as the Mayo Clinic, offers a very promising approach (Kralewski et al., 1995) and is being used in some AMCs. This approach focuses on interdepartmental collaboration, development of program-oriented centers, and a smooth interface between inpatient and outpatient services (Carey, and Engelhard, 1996).

To succeed, AMCs will need to undergo major structural reorganization and adapt to changes in resource allocation to capitation. Leadership is essential for overcoming the barriers to such change. By emphasizing the inevitability of managed care, AMC leaders can use market imperatives to begin the process toward transforming the organization (Kongstvedt, 1996).

Many AMCs are already responding to the changing environment by undertaking major reforms in their management and organization structures (Blumenthal, Campbell, and Weissman, 1997). Like their civilian counterparts, EAMC has undergone reorganization in response to the changing healthcare environment. EAMC has adopted the medical group practice model and placed similar clinical

departments, including the inpatient component, under a common management umbrella. This reorganization took place to take advantage of quality and financial gains that can be made once non-value-added processes were eliminated along with unnecessary overhead. Additionally, patient satisfaction should also increase as continuity of care and access improve.

It will not be enough for AMCs to focus only on changing the organizational structure in the face of the market trend. To truly succeed and achieve financial stability in the new era of managed care, the most salient competitive feature is the mastery of capitation. In order to compete with community providers, AMCs are creating a unified approach to accept and manage risk for a defined patient population. This requires the effective management of capitation (Nauert, 1995).

Capitation is not a resource allocation process found only in civilian institutions. Starting in Fiscal Year 1998, the MHS will be moving forward with the next generation of capitation-based resource allocation entitled, Enrollment-Based Capitation (EBC), consistent with the evolutionary development of TRICARE. This method will be used to allocate resources and provide the proper incentives to encourage every commander, provider, and decision maker to be fully accountable for delivering high quality, cost-effective healthcare services to their beneficiaries. EBC will empower the commander at EAMC and other

military facilities with full accountability for all resources needed to support their enrolled population (Nauert, 1995).

To succeed in this new environment, the leadership at EAMC must redirect their attention, energy, and vision. With this new set of economic rules and incentives, comes an opportunity to focus on the cost structure and integrity of the methods to calculate the costs of delivering health services. The leadership is in the process of altering the mission and vision of the organization to reflect the most appropriate menu of services and the right volume of services to be offered. This presents a challenge to mange the costs experienced both inside and outside of the facility.

Maximizing enrollment in TRICARE Prime and the integrity of the data are two of the most important responsibilities facing the EAMC leadership. The phased implementation of EBC beginning 1 October, 1997, is intended to give commanders the time and feedback they need to install, operate, and validate the standard systems they will soon depend on (ASD-HA, 1997c).

Improving and Documenting Quality. Strong utilization review capabilities must be in place to identify needed care regimens while at the same time identifying procedures being done solely for the purpose of education. In a capitated environment, the costs of care must be at or below the projections that were used to calculate the capitation rate. If cost exceeds this rate, the

AMC must absorb the cost. This means that diagnosis and treatment must be correct the first time. There is little room for error or poor quality in the new era of managed care (Nauert, 1995).

There is tremendous variation in the economic and clinical performance of individual providers. Ideally, there is a method to promote the best health possible for the patient. The process of identifying the most effective and efficient practices results in proven clinical pathways. In the ideal, one clinical approach will be better, more cost-effective, and less risky than another (Kongstvedt, 1996).

Some AMCs have realized that by evaluating current processes and adjusting practice patterns to align with cost containment and quality goals, overall value can be optimized. Although clinical intuition cannot be ignored, a database that knows how 100,000 patients responded to a particular treatment compares favorably with a physician who has seen 100 patients (Kongstvedt, 1996).

Adherence to proven clinical pathways is a strategy being adopted by several AMCs. Physicians and nonphysicians alike will be aided by protocols, guidelines, or critical pathways that will help the system reduce variation and increase efficiency (Goldman, 1995). EAMC is in the process of publishing a treatment guideline for asthma with the goal of not only standardizing the treatment protocol, but also improving the quality of care to the

patient. Eckholm supports this strategy and commented that department by department procedures must be standardized detailing what tests should come before and after a given surgery or other procedure and specify which drugs and devices to use. He concluded by stating the financial survival of AMCs depended on their adoption of and adherence to this type of a strategy (Nauert, 1995).

A commitment to advancing technologies such as telemedicine will also enable AMCs to improve the quality of healthcare in an era of cost containment. These methods will be used for consultation, patient information transfer, and self learning (Carey and Engelhard, 1996). For example, as home telemedicine systems mature, physical therapy can be administered, nutrition counseling conducted, and occupational therapy supervised via telemedicine (Schlachta, 1996).

One such system at EAMC, Electronic Housecall Version 1.0, allowed nurses to visit chronically ill patients at home using telemedicine. The hypothesis was that frequent electronic home visits would replace expensive emergency room encounters and inpatient admissions. During the initial data collection, 117 electronic home visits were made by the patients. Of those visits, three admissions and 35 outpatient visits were estimated to be avoided (Center for Total Access, 1997). Table 1 presents the cost benefit using five of the most chronically ill patients.

As shown, significant potential exists to not only improve hospital utilization, but also provide more cost-effective treatment.

Table 1

Electronic Housecall Version 1.0 Cost Savings

Patient	Savings
#1	$ 5,472
#2	$ 4,408
#3	$ 7,777
#4	$ 0
#5	$ 7,777
TOTAL	$25,434

Maintaining a Patient Base. Maintaining a patient base is fundamental for the survival of AMCs. Realizing this, many AMCs have adopted a strategy emphasizing the importance of primary care for success in a market dominated by managed care (Kongstvedt, 1996). The emphasis of managed care organizations on reducing utilization requires a point of control which is dramatically underrepresented in most academic medical centers. Primary care physicians may constitute only 10% or less of the full-time staff in some AMCs (Lepoff, 1995). At EAMC, 30% of the full-time staff are primary care physicians.

Realizing this deficiency, most AMCs are taking actions to increase primary care providers. One study concluded that AMCs are working to increase the numbers of their covered lives, generally through mechanisms to create a better mix of primary and specialty care providers (Gold, 1996). Frank Loge, Clinical Director at the University of California at Davis Medical Center, credited his organizations success, partly on its large family practice program (Montague, 1993).

AMCs recognize the importance of primary care providers and understand they are necessary to gain covered lives. For the AMC, this is mandatory for maintaining quality education and training. They also realize that to compete successfully in the market, reductions in the use of specialist and improved population health through preventive care also depend on primary care physicians (Kongstvedt, 1996).

Preventive services will be increasingly important, especially if they can demonstrably avoid more expensive alternatives in a capitated system (Goldman, 1995). Those AMCs that incorporate preventive health services and seize the opportunity to promote wellness and good nutrition will have a better chance of success. The major responsibility for prevention clearly lies with the generalist, and primary care providers will have to be continuously educated about the latest information

regarding efficiency and effectiveness of primary preventive measures (Carey and Engelhard, 1996).

Discussion

The extent to which managed care and capitation will ultimately alter the traditional role of AMCs in the American healthcare system is unclear, but successful adaptation in the short term is essential to survival. Although many strategies exist, three emerge as the most common: restructure the organization, develop and implement quality improvement initiatives, and maintain a patient base.

Restructuring the Organization. A number of centers are evaluating their department-based structures, or redesigning them along product lines, in an effort to break down existing barriers and find ways to provide more cost-effective health services (Iglehart, 1997). Success with this restructuring will depend more on leadership than traditional management to create a clear mission and vision and foster cooperation and collaboration (Kongstvedt, 1996).

EAMC has gone through a series of reorganizations over the past few years. In 1996, EAMC reorganized internally from the traditional, standard department of nursing, department of surgery, department of medicine to directorates that work more along a product-line basis (Joyner, 1997). This type of a reorganization follows along the same lines as the medical group

practice model being used by other organizations. The key feature of this model is the unification of similar clinical departments under a common manager to reduce overhead, reduce patient hand-offs and the possibility of repeat tests, and increase the overall quality and cost-effectiveness of the system (McGee and Hudak, 1995).

In response to a changing healthcare environment, EAMC leadership continues to evaluate the validity of the mission and vision of the medical center. An off-site conference held in 1997 highlighted more structural changes that needed to take place for the organization to more effectively accomplish its mission. One of the changes involved moving away from product line management by reorganizing the department of nursing. The leadership continues to observe and evaluate how well the organization is functioning as a result of the restructuring. Other AMCs are responding to the changing environment as well by making major reforms in their management and organization with the goal of becoming more efficient and competitive in the new market of managed care and capitation (Blumenthal et al., 1997).

With the emergence of enrollment-based capitation in the MHS, EAMC assumes responsibility for providing health services to a defined population for a fixed premium per beneficiary. This emphasizes the importance to develop an efficient organization where care is provided in the most cost-effective setting,

emphasizing the use of preventive services, and carefully monitoring the volume of services being provided (ASD-HA, 1997a).

The key to success with EBC is accurate, timely data gathering and processing. Linking occasions of service to the patient's enrollment status and accurately determining costs are crucial to success under this program. Mature and fully developed data systems that provide complete and accurate information are the foundation that EBC is built upon. Clearly, maximizing enrollment and the integrity of data are two of the most important responsibilities of leadership. As in civilian AMCs, transition to capitation will be difficult and stressful, but to achieve financial stability in the new era of managed care requires a mastery of this competitive feature (Nauert, 1995).

Improving and Documenting Quality. Real gains in quality improvement and productivity will result from greater provider use of information in managing processes and outcomes. This results in improved efficiency through the development and use of critical pathways. By evaluating current practices and adjusting practice patterns to align with cost containment and quality goals, overall value can be optimized (Kongstvedt, 1996).

This strategy responds to a common theme that emerged from many AMCs across the nation. That was a concern about the quality of utilization management and a perceived excessive use of unnecessary resources in the academic environment. The use of

standard guidelines will assist in decreasing much of the variation and misuse of resources in those areas where pathways are in place (Culbertson, 1996).

At EAMC, a clinical guideline is being developed for the treatment and education of asthma patients. The goals of this program mirror those mentioned above. These include the standardization of treatment protocols to provide higher quality care for the patient and the decrease in unnecessary hospital visits and costs as a result of inadequate patient education. Other areas are being looked at within EAMC to initiate treatment guidelines with the goal of making the same gains anticipated from the use of the asthma treatment protocol.

Quality improvement initiatives are also being studied using telemedicine technology. The entire arena of case management can be facilitated by home telemedicine technology. Identification of patients at risk for costly healthcare utilization and intervention can be achieved using telemedicine as a tool for monitoring, conducting frequent visits, or providing follow-up. This expands the scope and effectiveness of case management. In the face of capitation, telemedicine becomes an efficient system to provide quality care in a cost-effective manner.

Electronic Housecall Version 1.0 tested at EAMC demonstrated the potential to not only improve hospital utilization, but also

provide more cost effective care through increasingly affordable computer technology and advance telecommunications. From this limited study, the hospital estimated a savings of over $ 25,000 from avoided admissions (Barnes, 1996).

With technology advancing, researchers want to further explore the potential of this system (Baker, 1997). The success of the first version allowed for a follow-on effort to refine the operational process. Electronic Housecall Version 2.0 is a continuing effort to provide home healthcare to chronically ill patients(Center for Total Access, 1997). The latest version is currently being tested in the Family Practice Clinic at EAMC. Both asthma and diabetes patients are being followed using this system.

Maintaining a Patient Base. The majority of AMCs agree that their survival hinges on the immediate expansion of their primary care base in order to gain covered lives (Nauert, 1995). In an environment of capitation, providers want and need more members than patients because most of the money in a capitated system comes from members who use few or inexpensive services. Current approaches for maintaining a patient base within an AMC rest upon both primary care and specialty strategies (Kongstvedt, 1996). To the extent that an AMC can develop a large primary care network, it can support some of its specialty services and perhaps much of the routine teaching and clinical care (Goldman, 1995).

EAMC has adopted this strategy and has made significant progress in expanding their primary care base. Brigadier General Griffin, EAMC Commander, stated in an interview that his goal was to strengthen the primary care role at EAMC (Joyner, 1997). While many AMCs struggle to gain covered lives because of a 10 percent ratio of generalist to specialist, EAMC has overcome this with a 30 percent ratio of primary care physicians.

Conclusion

From this research, it is clear that the managed care revolution will present major challenges to AMCs. This will be particularly threatening given their commitment to research and education. AMCs must become competitive in cost and quality of care. Only in this way will they be perceived as offering true value.

The rapid changes brought about by market-driven managed care will be stressful under the best of circumstances and devastating to AMCs that do not respond quickly and effectively to preserve their flow of patients (Carey and Engelhard, 1996). EAMC and many other AMCs are already reengineering around three common strategies: restructure the organization, improve and document quality, and maintain a patient base.

As mentioned many times throughout this research, the military healthcare community is also in the throes of an unprecedented change in the way it is operated and financed. This

calls for a reevaluation of the military facilities' traditional organization as well. EAMC has responded to many of the issues outlined in manners similar to those of their civilian counterparts.

The extent to which managed care will ultimately alter the traditional AMC within the American healthcare system is unclear. In the short term, AMCs will have to adapt to a new healthcare delivery environment through optimization and restructuring. Many believe AMCs can survive in this new environment by responding broadly, flexibly, and in a timely fashion, aligning themselves with the ever-changing healthcare scene.

Recommendations

While AMCs are clearly going to be dramatically affected by the changes taking place in the healthcare delivery system, and especially by managed care programs, this research suggests there are no technical reasons why they cannot adapt to these changes and successfully compete. AMCs vary considerably in their organizational and financial structures, making a single strategy for success that covers all AMCs unlikely. The three strategies discussed in this research were common among the majority of AMCs identified in the literature. This suggests that the following prescription for success, which complements the three common strategies, be entertained by the EAMC leadership:

1. Continue to reengineer clinical care processes through the development of clinical pathways or guidelines. The asthma guideline currently being finalized is an example of actions being recommended across the nation to decrease costs and improve patient treatment and education.

2. Monitor the accuracy and evaluate the implications of the data generated to develop the monthly EBC scorecard. It is essential that the organization be represented accurately on the scorecard, given the direct impact this has on funding the organization. EAMC staff and its managed care contractor must work together to ensure the key data systems are properly deployed and staffs are adequately trained.

3. Continue to promote and evaluate the use of technology like the Electronic Housecall. Having access to, and developing unique and innovative ways to use, telemedicine and other technology is an advantage AMCs have over the smaller community hospitals. It is an area many AMCs are evaluating to improve their efficiency and cost-effectiveness.

4. Consider the complete restructuring of the organization from traditional departments into product lines. Researchers suggest that quality and financial gains can be made if non-value-added processes are eliminated along with unnecessary overhead. The product line structure aligns clinical accountability with fiscal accountability, thereby encouraging

informed medical and business decisions. Achieving optimal medical outcomes in the most cost-effective manner will be instrumental in the capitated environment facing EAMC. Many AMCs recognize this as a viable alternative to increase their efficiency and improve patient care.

There is legitimate concern that EAMC, as well as other AMCs, could see their financial viability jeopardized by competitive forces and the influence such forces may have on available funding and patients. Institutions with the best chance of success are those that exhibit an entrepreneurial spirit, maintain an adequate patient base to support teaching, and provide care at competitive prices. The strategies revealed in this research, along with other emerging strategies, will enable AMCs to make this transition and prevail in the new era of managed care and capitation.

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