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### STRATEGY RESEARCH PROJECT

# ASSURING FORCE READINESS AND BENEFICIARY HEALTH THROUGH HEALTH PROMOTION AND PREVENTIVE MEDICINE IN THE MILITARY HEALTH SYSTEM

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#### USAWC STRATEGY RESEARCH PROJECT

## ASSURING FORCE READINESS AND BENEFICIARY HEALTH THROUGH HEALTH PROMOTION AND PREVENTIVE MEDICINE IN THE MILITARY HEALTH SYSTEM

by

LTC Robin J. Tefft

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#### **ABSTRACT**

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The evolution of the Military Health System (MHS) from a traditional model to a system of managed care precipitated a fundamental shift in the design and delivery of health care. These MHS changes mirror trends in the civilian sector: orientation to prevention and health promotion; a more quantitative approach to quality of care; and a customer-focused approach. The MHS has always provided health promotion and preventive medicine (HP/PM) services. In the current prevention-oriented system, however, HP/PM becomes a focal point in the continuum of care by contributing to cost savings or cost avoidance in addition to providing high quality, customer-focused care tailored to the MHS population. This paper will propose the elements of a health system that delivers HP/PM as a focal point, describe the transition of the MHS to a prevention approach, and discuss the work that needs to be done to achieve an accountable, comprehensive prevention-oriented system. The MHS has the opportunity to emerge as a model health care delivery system.

iv

#### TABLE OF CONTENTS

ACKNOWLEDGEMENTS	vii
INTRODUCTION	1
THE CHANGING FACE OF HEALTH CARE IN THE UNITED STATES	3
HEALTH PROMOTION AND PREVENTIVE MEDICINE WORKS	5
EVOLUTION OF THE MILITARY HEALTH SYSTEM	9
National Security	
MHS Strategic Plan	
Force Medical Protection	
Health Promotion and Disease Prevention Directive	
Put Prevention Into Practice Policy	
HP/PM In Perspective	
A MODEL HEALTH SYSTEM FOR PREVENTIVE CARE AND HEALTH PROMOTION	13
Population-Based Planning and Evaluation	
Systems Approach	
Leadership through a Culture Change	
Evidence-Based Criteria	
Information Management Systems	
Accountability	
Partnerships for Healthy Communities	
THE CHALLENGES AHEAD FOR THE MHS	ι7
Standard HP/PM Benefits	
Developing Management Information Systems	
Building Healthy Communities	
Marketing	
Measuring Performance	
CONCLUSION	21

#### TABLE OF CONTENTS (Continued)

GLOSSARY		23
ENDNOTES		25
BIBLIOGRA	PHY	33

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### ASSURING FORCE READINESS AND BENEFICIARY HEALTH THROUGH HEALTH PROMOTION AND PREVENTIVE MEDICINE IN THE MILITARY HEALTH SYSTEM

The system for delivering health care to military beneficiaries is in a state of rapid evolution and development. The stimuli for these profound changes include the changing role of the military in a post-cold war era, the imperative to contain medical care costs, and increasing need for accountability to stakeholders.<sup>1</sup> Changes in the Military Health System (MHS) mirror civilian sector trends: movement to managed care systems; orientation to primary care and preventive medicine; concerns about quality of care; and market demands of customer satisfaction.<sup>2</sup>

Health promotion and preventive medicine (HP/PM) initiatives constitute a cornerstone<sup>3</sup> of health care for all beneficiaries<sup>4</sup> in the MHS. For active duty service members particularly, readiness is the compelling reason for maintaining a state of optimal health. The Department of Defense Medical Readiness Strategic Plan (under development) outlines the importance of HP/PM for the active force. One of the key tenets of the Strategic Plan is the goal of a "healthy and fit force." The achievement of good health is equally important for family members and retirees. It is integrally linked with the concept of managed care: proactive, prevention-oriented health care to improve quality of life by minimizing the burden of disease, increase satisfaction in the health care system, and ultimately, reduce costs.

The purpose of this paper is to take stock of the MHS relative to HP/PM as it transitions from a traditional method of delivery (analogous to a fee-for-service system in the civilian sector) to a managed care system in which HP/PM services become a predominant benefit. This transition is consistent with the initiative to "exploit the revolution in business affairs" wherein efficiencies of business practices are integrated into the Department of Defense (DoD) infrastructure and management. This paper will trace the evolution of the MHS into managed care; describe the elements of a successful health delivery system and MHS adoption of these principles; and finally, examine critical issues in the MHS that will determine its ultimate success.

#### THE CHANGING FACE OF HEALTH CARE IN THE UNITED STATES

President Clinton's emphasis on health reform in the early 1990s reflected the concern about spiraling, unfettered health costs and the need to reevaluate health care delivery and payment systems. Although the Health Security Act<sup>7</sup> did not pass in the 103<sup>rd</sup> Congress, vestiges of the proposed legislation continue to evolve in the marketplace. A fundamental premise of the proposed health care reform was the balance in the dynamic tension among the core aspects of cost, quality, and access.<sup>8</sup>

The most fundamental development in the marketplace and the government sector is the rapid expansion of managed care. The term managed care has been variously defined and interpreted. In its broadest application it is "any method of health care delivery designed to reduce unnecessary utilization of services, contain costs, and measure performance, while providing accessible, quality, effective health care. Managed care can take on many organizational forms in the marketplace.

In the private marketplace, employers are the largest purchasers of health care. Managed care has become the dominant form of delivery, with 75 percent of employees enrolled in some form of a managed care system.<sup>12</sup> The federal government is promoting managed care for Medicare and Medicaid beneficiaries as a way to achieve cost savings and high quality care. The recently enacted Balanced Budget Amendment of 1997 has introduced the most sweeping changes to Medicare and Medicaid in since the original bill was enacted over thirty years ago.<sup>13</sup>

Although the roots of managed care began in the early part of the twentieth century<sup>14</sup>, the concept of "health maintenance" was first articulated by Paul Ellwood in the early 1970s.<sup>15</sup> Considered to be the "father of the modern HMO movement"<sup>16</sup>, Ellwood espoused the importance of preventive services and overall health maintenance in the delivery of health care. This proactive approach to personal health management was distinctly different from the reactive, problem-driven approach to health care existing at that time.<sup>17</sup>

Ellwood's proposal of a health system designed around keeping people healthy represented a radical shift in the orientation of health care, and gained popularity in the early 1990s as a way to contain health care costs. If the fundamental premise was to maintain good health, then the system needed redesigning to accomplish this goal: "a highly diversified and competitive health maintenance industry...It is essentially a market-oriented approach in which medical care is delivered by organizations." 18

Ellwood envisioned a system of care provided by organizations, oriented to the maintenance of health, that would be market-driven.<sup>19</sup> This essentially describes the changing face of health care in the U.S. today, with one important addition: oversight of quality. The "quality movement" proposes that, in a free market, measures are needed so that purchasers and consumers can compare both quality and cost in choosing among plans.<sup>20</sup>

HP/PM plays a pivotal role in the health maintenance approach to health care. It also contributes significantly to the overall quality of health care provided, because it provides a holistic, proactive, systematic approach to reducing the burden of disease. Given this conceptual framework, it would seem intuitive that health care delivery systems would embrace the HP/PM approach to care, yet implementation has been slower than projected.<sup>21</sup> Kreuter and colleagues point out that the health maintenance approach is in its "formative" stages in an emerging health care system and needs time to mature as the system evolves.<sup>22</sup> To discover why physicians are loath to incorporate HP/PM in their practice, Kottke et. al. conducted a study to evaluate barriers in the health delivery system. The results indicated multiple impediments: design of delivery systems favoring sick care over wellness care and urgency over severity; time constraints and patient demands require physicians to be respondents, not initiators; patients give negative feedback regarding behavior change; and the notion that preventive services are not consistent with the physician's self-image<sup>23</sup>.

Clearly the role of HP/PM is still unfolding in the managed care environment. Incorporation of a prevention focus into the system of care delivery will entail a systems-approach<sup>24</sup>, reeducation, and appropriate support systems. The components of a model system will be discussed in a subsequent section.

#### HEALTH PROMOTION AND PREVENTIVE MEDICINE WORKS

A fundamental assumption of Ellwood's health maintenance strategy is that preventive health care ultimately works: people will achieve optimal health, and the health delivery system will save money by avoiding expensive treatment. The ultimate challenge in promoting HP/PM is a paradox: demonstrating cost-effectiveness for a service which results in "nothing happening," that is, the avoidance of illness or injury as a result of proactive intervention.<sup>25</sup> Phillips and Holtgrade compare the nonevent of prevention to the more tangible circumstance of successful treatment in a clinical setting where "something happens."<sup>26</sup> Chapman laments that difficulty in documenting what does not happen results in "a soft feel to the program," limiting its credibility among decision makers.<sup>27</sup> The long term benefits of investing in HP/PM are difficult to show in the short run. In the civilian health care market, a considerable barrier to incorporating HP/PM as a defined benefit is that the payer does not necessarily benefit from cost savings because payoff is long term or is intergenerational.<sup>28</sup> MHS leaders appreciate that the prevention approach involves perhaps a five to ten year lag time between implementing programs and realizing the goals of cost savings and a healthier population.<sup>29</sup> The ultimate benefit, however, will be improvement in quality of life in addition to conserving resources.<sup>30</sup>

The HP/PM movement, therefore, has been under scrutiny for a number of years to demonstrate savings in the health care dollar. It is not sufficient in this cost-conscious environment that improving health is the morally right thing to do or that it can potentially improve the quality of life; the fiscal benefit derived from the expenditure of funds must be empirically based.

The medical care system has been characterized as running on "separate tracks" from health promotion programs.<sup>31</sup> Fries and colleagues take a pragmatic view of HP/PM, proposing that the definition of health promotion be expanded to include financial health in addition to physical health.<sup>32</sup> Arguing that most diseases are preventable, they proposed a new concept, demand management, in which the demand for medical services can be reduced through appropriate preventive measures.<sup>33</sup> The notion of demand management frames the managed care system around an orientation toward health instead of illness. This forms the theoretical basis for a system that is designed around promoting optimal health instead of merely treating illness.

The literature is replete with evidence that HP/PM will save health care dollars. Two measures are used to document the fiscal impacts of HP/PM programs: cost-effectiveness and cost-benefit.<sup>34</sup> Cost-

effectiveness is the cost of the program divided by the change in outcome.<sup>35</sup> Cost-effectiveness analysis allows the comparison among different programs or strategies; it is a measure of relative cost.<sup>36</sup> The cost-benefit ratio is the cost of a program divided by the financial savings associated with the program.<sup>37</sup> This expresses the outcomes in monetary terms, allowing comparison among different alternatives.<sup>38</sup> These methods are the most commonly employed empirical methods for determining the cost of HP/PM, although much research in this area is not quantified in a methodologically consistent manner.<sup>39</sup>

To asses the costs of health promotion programs, Aldana conducted a literature search on all studies documenting a financial impact that were published between 1975 and 1997.<sup>40</sup> Thirteen studies were found that calculated the cost-effectiveness of health promotion programs. The author concluded that the studies "tend to support the hypothesis that health promotion programs are cost-beneficial based entirely on savings in reduced medical care expenditures and absenteeism."<sup>41</sup>

Similarly, Pelletier surveyed the literature for analysis of health promotion programs that include both health and cost outcomes.<sup>42</sup> Results are again promising. The author concludes that these programs represent "positive models of the future of managed care and responsible demand management."

When evaluating the literature from the viewpoint of methodological rigor, however, the results are more equivocal. Gold and colleagues expressed concern that cost-effectiveness studies did not apply a uniform analytic approach.<sup>44</sup> Heaney and Goetzel evaluated multi-component worksite programs on the outcomes and also scientific methods, such as randomization, or whether a comparison group was used if the program was not randomized.<sup>45</sup> Other issues include the length, comprehensiveness, and intensity of the programs. Overall, the authors express "cautious optimism" that the programs work; about two thirds show a reduction in health risk. They caveat their conclusion with two conditions: that the intervention be targeted to high risk individuals, not the general population; and that the program be designed of a sufficient duration (at least 1 year) to achieve results.<sup>46</sup>

Despite these encouraging results, the implementation of health prevention strategies is not consistent among various Health Maintenance Organizations (HMOs). In a cross-sectional survey of 22 HMOs, a wide variance in the scope and number of HP/PM services were found.<sup>47</sup> This is contrary to the commonly perceived core value of HMOs.<sup>48</sup>

Comprehensive reviews about HP/PM programs are, therefore, now becoming available to show the cost-benefit and cost effectiveness of these programs. Unlike commercial health delivery systems, the MHS has implemented HP/PM services as a core value for decades. The MHS has demonstrated the importance of HP/PM in promoting the health to maintain readiness of the forces. It is incumbent on MHS leaders to formalize these programs under a comprehensive framework and begin documenting the value of HP/PM for MHS beneficiaries.

#### **EVOLUTION OF THE MILITARY HEALTH SYSTEM**

The changes occurring in the MHS parallel the developments in the private sector and other government agencies. Faced with rapidly escalating health care expenditures, the Department of Defense initiated several demonstration projects starting in the late 1980s to test the feasibility and impact of managed care approaches under CHAMPUS.<sup>49</sup> The National Defense Authorization Act for Fiscal Year 1994 mandated the implementation of a nationwide managed care system in DoD.<sup>50</sup> The resulting plan was the TRICARE program, which incorporated key features of the demonstration projects.<sup>51</sup> TRICARE is currently in deployment.<sup>52</sup> It is available in nine regions and expected to be in place in the remaining three regions by May 1998.<sup>53</sup> The advent of TRICARE has de facto transformed the MHS into an integrated delivery system (IDS): a single organization providing a full range of health services to a defined population, within a market area.<sup>54</sup> An IDS can wield the power of improving health by incorporating the continuum of care at the community level. This concept will be discussed in greater detail later.

Incorporation of managed care precipitated a significant and rapid shift for military medicine, involving a reorientation to a business approach and a re-engineering of the delivery system. So As expected, the transition to managed care has also meant a renewed interest in the organization and delivery of HP/PM. In his remarks at the 1998 TRICARE Conference, the Undersecretary of Defense for Personnel and Readiness Rudy de Leon outlined seven priorities for TRICARE. Two of these involved HP/PM: protecting the deployed forces from health hazards, and promoting health and wellness. In contrast to traditional care in the civilian sector, the MHS has always provided HP/PM services. Military medicine depends on prevention to protect the health and well-being of service members through such initiatives as immunization, sanitation, and safety programs. The distinction under managed care, however, is the emphasis on planning HP/PM services using a population-based approach and evaluating the outcomes of care. Managed care, by definition, includes comprehensive planning as well as performance measurement to assure high quality, appropriate care.

#### **National Security**

The unique mission of the MHS, in contrast to other health care organizations, is to maintain the health readiness of the active duty service member. The foundations of our National Security Strategy are to *shape* the international environment, *respond* to crises, and *prepare* now for an uncertain future.<sup>59</sup> U.S. Forces must

be capable of operating in "a broad range of anticipated missions and operating environments." Characteristics of future warfare, as described Joint Vision 2010, include information superiority, dominant maneuver, precision engagement, full dimensional protection, and focused logistics. The battlefield of the future will be considerably different from previous experiences: fewer combatants, who are more highly trained, using technology rather than mass of forces to dominate. The operations tempo is faster, with an increased number of deployments now that in the early 1990s. Traditionally, one of the most significant contributions in preparing the service member, whether in a theater of war, on a humanitarian mission, or in garrison, is to reduce the incidence of disease and non-battle injury (DNBI) through effective, broad-based preventive medicine measures. The combination of fast-paced, highly technical jobs, deployments around the world, and fewer personnel, however, subjects our forces to increased stress and health risks. The current military environment highlights the need for a reinforced emphasis on health promotion as well as preventive medicine as "major tasks of military health care."

#### MHS Strategic Plan

Responding to the need to organize comprehensive systems of care from a prevention perspective for both the active service member and the non-active beneficiaries, the MHS has implemented a number of plans and policies relating to HP/PM. The MHS Strategic Plan, developed and endorsed by the Acting Assistant Secretary of Defense for Health Affairs and the three Service Surgeons General, establishes the standard for a preventive approach to health care and promotes the concept of wellness versus illness. Goal 1 of the plan, Joint Medical Readiness, states "We will help to ensure that military members of the Armed Forces attain an optimal level of fitness and health and are protected from the full spectrum of medical and environmental hazards." Goal 2, Healthy Communities, states "We will forge partnerships to create a common culture that values health and fitness and empowers individuals and organizations to actualize those values."

#### Force Medical Protection

The difficulties researching and defining Gulf War Veteran's Illness highlighted the need for a sensitive and specific tracking system that would yield information about health exposures during deployment. Concerns were raised at the highest levels of government. On 8 November 1997, President Clinton issued a statement directing the Departments of Defense (DoD) and Veteran's Affairs (VA) to create a force health

protection program in which all service members would have a "comprehensive, lifelong medical record to track exposures and illnesses they incur and treatment they receive." Similarly, the National Defense Authorization Act of 1998 directs the Secretary of Defense to establish a medical tracking system for members deployed overseas. 68

The Force Medical Protection (FMP)<sup>69</sup> initiative, which satisfies the executive and legislative intent to establish a health protection system, is delineated in DoD policy documents.<sup>70</sup> FMP represents a significant shift in the conceptualization of health care. The former (MHS) was a pluralistic one with military unique issues on one side of a "wall" and traditional medical care on the other side. The new notion considers the needs of the military member at various known points in a "deployment life cycle": accession; garrison; a deployment cycle (pre-deployment, deployment, operation, redeployment, and post-deployment); and retirement/separation.<sup>71</sup> The idea is to anticipate and serve the needs of the military member as deliberately and effectively as we attain and maintain our equipment systems. The oversight body for FMP is Joint Preventive Medicine Policy Group, chartered to improve preventive medicine support during deployments and recommend policy guidance.<sup>72</sup>

#### Health Promotion and Disease Prevention Directive

DoD policy outlines broad guidance on health promotion.<sup>73</sup> The current draft, which replaces a previous version dated 1986, outlines the importance of coordination among the medical, personnel, Reserve Component, and force management elements of DoD in planning for health promotion and disease prevention activities. It recognizes that health maintenance is not solely in the medical arena and involves intervention at the worksite and in the environment. Program guidelines include tobacco prevention and cessation; physical fitness; nutrition; stress management; alcohol and drug abuse prevention; communicable and chronic disease prevention; and trauma and/or injury prevention programs.

#### **Put Prevention Into Practice**

DoD Health Affairs demonstrated its commitment to a healthy and fit force by mandating a tri-service demonstration project to implement *Put Prevention into Practice* (PPIP) in the MHS. The PPIP plan, instituted and approved in late 1997<sup>74</sup>, outlines key prevention interventions to be tested at selected Army, Navy, and Air Force installations.

PPIP, developed by the Office for Disease Prevention and Health Promotion, Department of Human Services, is a comprehensive program to improve the delivery of clinical preventive services.<sup>75</sup> The program outlines recommended clinical preventive services to be delivered, and includes educational materials, reference materials, and other practical tools for implementation in the clinical setting.<sup>76</sup> Additionally, DoD is fielding a data collection system, Public Health Care System (PHCS), as a component of its larger data tracking system, the Composite Health Care System (CHCS), to expedite data management.<sup>77</sup>

PPIP is designed to overcome the barriers to implementing preventive services described previously by Kottke. The PPIP initiative is intuitively appealing. It uses an evidence-based approach to current practice of clinical preventive services and provides a comprehensive model for integrating preventive services at the level it is needed: the primary practice physician. Perhaps this is the reason DoD is interested in fielding PPIP worldwide before the demonstration project is complete.<sup>78</sup>

#### HP/PM In Perspective

Commitment to health promotion in the MHS has never been more clearly delineated and supported.

FMP is a high priority: the recent implementation of Anthrax vaccines for deploying forces is supported by a data tracking system; the Joint Preventive Medicine Policy Group is currently working on a mental health initiative. The PPIP demonstration program is in progress. Health promotion initiatives are in operation at the service level.<sup>79</sup>

As previously mentioned, HP/PM is in its formative stages as an integral component of health delivery. The next section will examine the elements of success in a model delivery system that incorporates HP/PM as the baseline of care and investigate how the MHS measures up.

#### A MODEL HEALTH SYSTEM FOR PREVENTIVE CARE AND HEALTH PROMOTION

Although the health maintenance approach is in its infancy, a number of extant health maintenance organizations have been in existence since the 1930s and 1940s.<sup>80</sup> There is a lot to be learned from the these organizations as well as the Canadian experience, in which HP/PM approaches were invigorated by the seminal 1974 Lelonde Report.<sup>81</sup> The following is a discussion of the criteria important for implementing a preventive health care approach in a managed care organization.

#### Population-Based Planning and Evaluation

The foundation of managed care is the ability to plan and evaluate services for a known population.

The ultimate goal is to influence the health or health behaviors in the entire defined population. The health risks and utilization patterns in the population can be analyzed and used to plan, manage, and evaluate HP/PM programs, increasing efficiency and focusing on the empirical-defined needs of beneficiaries.

Examining data at the population level can also provide a measure of the quality of care of the health plan. Siu and colleagues propose specific reasons why the population-based approach is important for quality management. It represents the entire population whether or not services are used; it examines the entire delivery system; it can evaluate the underuse and overuse of services; and it can control for variables beyond the control of the plan.<sup>83</sup>

#### Systems Approach

The experiences of Group Health Cooperative of Puget Sound, a staff model HMO<sup>84</sup>, offer long-range insights in the preventive approach to health care. In an article describing 20 years' experience, Thompson and colleagues state "that merely developing and disseminating guidelines is insufficient to make it happen and to keep it happening."

85 One of the lynchpins of success is the holistic approach of systems thinking.

86 Berwick elegantly states that "every system is perfectly designed to achieve exactly the results it gets."

A corollary to this, stated in the current vernacular is, "if you do what you always did, you will get what you always got."

The integration of HP/PM involves an approach that incorporates interventions at all levels of the organization. It requires a commitment to HP/PM as a basis of the health delivery system, an understanding of the interrelationships in the system, and communication of the plan. The system to be developed is integrally

linked to the population-based approach, and requires leadership to enact.<sup>88</sup> The *Put Prevention Into Practice* is an example of a HP/PM model developed with a systems approach.

#### Leadership through a Culture Change

Leadership is a key element in all aspects of the military. In this application, focused leadership is imperative for changing the culture of medical care. Physicians have traditionally been trained as clinicians managing the care of individual patients, not as managers of care for a population. Training will be needed for all care providers to increase awareness and improve knowledge and to integrate new skills, such as behavior change techniques. Thompson and colleagues depict this preparation as building a "prevention culture."

#### Evidence-Based Criteria

The health delivery system of the future will increasingly rely on research and guidance developed by expert panels or professional groups. Practice guidelines based on clinical data can be used in developing screening programs, clinical preventive care, and health promotion interventions. The implementation of a planned, standardized, evidence-based approach will improve the quality of care, instill efficiencies in the delivery system, and improve the overall health of the population.

The U.S. Preventive Services Task Force, an independent panel of experts published the *Guide to Clinical Preventive Services* a comprehensive, evidence-based practice guide for planning and providing HP/PM.<sup>90</sup> This guide represents state-of-the-art guidance for planning HP/PM services.

#### **Information Management Systems**

The population-based approach to health care will rely heavily on information management systems to support epidemiological methods for assessing population needs and documenting outcomes of care. In addition to the existing administrative, utilization, and financial data, systems the health delivery system of the future will require patient-level clinical data to guide planning and evaluation of services. Data will be needed on demographics, the incidence and prevalence of disease, health risk indices, health behaviors, utilization of preventive services, and outcomes of care.<sup>91</sup>

#### Accountability

A distinguishing feature of a managed care system, compared with the traditional, non-system model of care is the capability and the necessity for accountability at the health plan level. Whereas accountability for clinical processes and outcomes has been available and desirable at the provider level, accountability of care in a system is a considerably more powerful indicator of overall care. Kellie and Griffith assert that organizational accountability is important for the future diffusion of HP/PM<sup>92</sup>.

The traditional method of accountability has been the quality management approach of inspection, accreditation, licensure, and privileging.<sup>93</sup> While these are important structural measures, health care delivery systems need accurate and reliable performance measures to evaluate the processes and outcomes of the health care system, that encompass total health care of its members.<sup>94</sup> Dimensions of performance measurement include patient satisfaction; clinical quality; clinical outcomes; and financial and administrative performance.<sup>95</sup>

The National Committee for Quality Assurance (NCQA), a not-for-profit organization, has taken the lead in developing performance measures for managed care organizations (MCOs). NCQA serves as an accrediting body for MCOs and has developed a set of performance measures, called the Health Plan Employer Data and Information Set (HEDIS®). HEDIS indicators are designed to measure the quality of care provided by MCOs so that employers can make comparisons among health plans. The current version, HEDIS 3.0, includes the following categories of measures: effectiveness of care; access and availability of care; satisfaction with experience of care; health plan stability; use of services; cost of care; informed health care choices; and health plan descriptive information. NCQA accreditation and use of HEDIS measures have become the industry standard for assuring quality of care in MCOs.

In a consumer driven market, a particularly important measure of quality of care is patient satisfaction. To address the need for a standardized survey for comparing health plans, the Agency for Health Care Policy Research provided a large grant to develop the Consumer Assessment of Health Plans (CAHPs). CAHPs is a set of survey instruments, tested for validity and reliability, developed for various populations: members of private health plans, members of MCOs serving Medicare and Medicaid patients, and members in fee-for-service plan under Medicare and Medicaid. NCQA and the developers of CAHPs are working together to merge their respective survey instruments to serve as the single industry standard. The use of a single

instrument over time will be a powerful tool in measuring and comparing consumer satisfaction among the many health plans available in the marketplace.

#### Partnerships for Healthy Communities

One of the far-reaching capabilities of a prevention-oriented health delivery system is the establishment of healthy communities. The attainment and maintenance of healthy communities will entail collaboration among various organizations and at various levels of care to improve the overall health of a population. One of the goals of the Canadian health care system is to improve the capacity and environment for HP/PM. To achieve this, a steering committe was developed to strengthen the coordination of health care among health care planners, community and social agencies, care providers, and administrators to achieve a common vision for health.<sup>101</sup>

In a market with a high penetration of integrated delivery systems, Rundall and Schauffler postulate that health delivery systems will be oriented toward community-based health.<sup>102</sup> In this mature market, health care delivery systems will envision HP/PM at the community level fundamental to their mission<sup>103</sup>. This offers the promise of reducing overall health care costs while improving the health of a population.<sup>104</sup> The achievement of healthy communities will include not only the health delivery systems, but also, incorporate environmental health provisions, public policy formulation, and influence of legislation.

#### THE CHALLENGES AHEAD FOR THE MHS

The MHS began its transition to managed care only three years ago with the implementation of TRICARE contracts, and is deploying contracts in the remaining regions now. With the advent of TRICARE, the MHS has made tremendous progress in the transition to a population-based, accountable, prevention-oriented managed care system. As the largest single health care system in the United States, the MHS will not change easily or quickly. The MHS serves 8.4 million beneficiaries worldwide on a budget of \$15.4 billion. 105 Considering the magnitude of change that will be required to fully implement a managed care environment, DoD has made a successful, albeit turbulent, transformation in the delivery of health care. TRICARE has decreased the annual cost of heath care by over \$2 billion; without TRICARE in place, fewer services would have been available. 106 As expected in a changing environment, issues abound, such as reimbursement rates and claims management, 107 controlling pharmaceutical costs, 108 caring for Medicare-eligible retirees, 109 to name only a few.

The MHS leadership has taken bold steps to modernize the system of health care delivery in consonance with the best practices of health care in the U.S. The MHS Strategic Plan articulates a commitment to a joint medical system which promotes healthy communities using a population-based approach to overall care. The plan clearly promotes an accountable, systems-based approach to health care for all beneficiaries. A prime example to this commitment is the recently installed policy of publishing report cards<sup>110</sup> at every medical treatment facility (MTF) on quality indicators at that facility.<sup>111</sup>

HP/PM services are well entrenched in the military health system. Service members and other beneficiaries can take advantage of a comprehensive selection of HP/PM services. The issue, however, is not availability of services, but the application of a population-based approach, using established protocols. The following is a discussion of issues that remain unresolved as the MHS transitions to a prevention-oriented health care delivery system.

#### Standard HP/PM Benefits

The reorganization of the MHS into TRICARE regions served to encourage local control and creative innovations in the delivery of health care. Given the transient nature of the MHS population, however, the resultant lack of standardization from one region to another can give the perception of disparity in the health

delivery system. Beneficiaries should expect to receive the same services as they move from region to another.

Currently, the contracts in each TRICARE region offers different HP/PM benefits. A tri-service working group established in support of the MHS Strategic Plan, has been tasked to develop of a uniform benefits package. 112

**Developing Management Information Systems** 

The population-based approach to health care depends on a sensitive computer-based information system. DoD currently has a number of information management/information technology initiatives (IM/IT) to collect data at the aggregate level for population-based planning and management. A corporate level system, Executive Information Systems (EIS) is in development to integrate the multitude of legacy data systems. The EIS development plans recently have been redesigned to include more specific clinical data to enable population-based management. The information information as a sensitive computer-based information system.

One computer database in development for fielding throughout the MHS is the Health Enrollment

Assessment Review (HEAR) questionnaire. The HEAR is an instrument to enroll members into the TRICARE

system. It includes health status and health behavior indicators, which can form the basis of health service

planning.

Another system recently developed to enable tracking of HP/PM is the PHCS system, alluded to earlier. This system is designed specifically to document preventive health interventions and clinical indicators.

#### **Building Healthy Communities**

Goal 3 of the MHS Strategic Plan is "Healthy Communities." This goal is a far-reaching one, and possibly the most difficult to define and measure. A major step in achieving this goal is the implementation of the PPIP program. The PPIP is designed to "enhance the delivery of preventive care in primary care practice and to achieve the health promotion and disease prevention objectives of the nation established in Healthy People 2000." The military PPIP program targets prevention at the individual level, at the worksite, and at the community level.

One distinction of the MHS compared to the civilian market is the need to ensure military readiness.

This emphasis was the genesis of the Force Health Protection model described earlier. FHP and PPIP are independently planned interventions. At some point, the two systems should be merged into one overarching

concept. PPIP is a program that targets the entire MHS beneficiary community; FHP is a subset of it, unique to the needs of the active duty force.

#### Marketing

MHS beneficiaries are accustomed to the traditional model of health care delivery, since that was the practice model until the initiation of TRICARE in 1995. Beneficiaries will need clear guidance and time to become comfortable with the managed care delivery system. MHS leaders conducted initial marketing efforts through briefings and written information. It is clear now that the mass briefing approach, while initially necessary, will need modification. Beneficiaries will need targeted information about accessing care, based on their individualized needs. It will take time and confidence in the system for beneficiaries to learn to access care using a primary care manager (PCM) and understand the gatekeeper function of the PCM.

#### Measuring Performance

The MHS has launched a number of initiatives to measure and report performance. As mentioned earlier, each MTF is publicizing report cards that reflect quality of care. Additionally, the MHS compiles selected HEDIS indicators, and has designed its own MHS Performance Report Cards, which are available on the Internet. Neither reporting system captures HP/PM data comprehensively. The MHS Performance Report Card includes a section on health behaviors, but it currently measures only tobacco and alcohol behaviors. Future revisions need to include measures on the entire scope of HP/PM interventions, as defined in DoD Directive 1010.10 and the PPIP plan.

The measurement of performance is a necessary goal in an accountable, efficient system. MHS leaders must develop appropriate metrics to measure progress. The MHS has no shortage of measures; a recent survey revealed over 250 metrics for health processes and outcomes among the three services. A Tri-Service Metrics Task Force has been formed to develop performance measures appropriate for decisions.

Survey data of customer satisfaction is imperative in managed care. DoD currently administers numerous surveys, to include the Annual Healthcare survey of DoD Beneficiaries, DoD Survey of Health Related Behaviors Among Military Personnel, the HEAR, Bi-annual MHSS User Survey, and Customer Satisfaction Survey. <sup>118</sup> With respect to HP/PM, these surveys need to be developed to measure specific MHS

goals. Survey questions should be directly linked with policies outlined in DoD Directive 1010.10 and the PPIP plan.

In the future, MHS planners may want to consider adopting the customer survey that is produced by the CAHPs and NCQA collaborative group. This will allow for benchmarking the MHS with the civilian market.

#### CONCLUSION

The implementation of a prevention model in the MHS is in a state dynamic transition. MHS leaders are committed to a system of care that seeks to keep beneficiaries healthy through proactive planning, management, intervention, and tracking. With all this activity, there is a risk of duplication, incompatible systems, and inability to merge processes developed among the three services. The plan and the will for a cohesive system is in place. The next step is reorganizing the entire system as a complete, cohesive whole.

#### **GLOSSARY**

Cost Effectiveness. "A ratio of the cost of a program divided by the documented change in health risk outcome." 119

Cost-Benefit. "An analysis to compare program costs with the financial savings associated with the health outcome." 120

Fee-For-Service. "The full rate of charge for a private patient without any type of insurance arrangement or discounted prospective health plan." <sup>121</sup>

Force Medical Protection. "A unified strategy that protects service members from all health and environmental hazards associated with military service." 122

Health. "A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." 123

Health Promotion. "A balance of awareness, education, motivation, and integration activities (physical, emotional, spiritual, intellectual, and social) designed to facilitate behavioral and environmental alterations in lifestyle that will optimize health and total fitness or prevent disease or injury. It includes those activities intended to support and influence individuals to manage their own health through self care, health maintenance, and avoidance of modifiable disease and injury risks. Operationally, health promotion and disease prevention encompasses clinical preventive services, and lifestyle issues of tobacco prevention and cessation, physical fitness, nutrition, stress management, alcohol and drug abuse prevention, communicable and chronic disease prevention (including cancer and cardiovascular disease prevention), and other efforts to reduce preventable illness and injuries." 124

Healthy Military Communities. "A fundamental to the quality of the force, promotes a sense of well being among its members with a commitment to readiness and caring." 125

Integrated Delivery System. "...a single organization or a group of affiliated organizations that provide a full range of health care services to a population of enrollees within a market area which consists of physicians, dispersed clinic settings, hospitals, a referral network, and full continuum of after-care offerings..." 126

Medical Readiness. "Encompasses the ability to mobilize, deploy, and sustain field medical services and support for any operation requiring military services; to maintain and project the continuum of healthcare resources required to provide for the health of the force; and to operate in conjunction with beneficiary healthcare."

#### **ENDNOTES**

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- <sup>2</sup> Robert S.Thompson, Timothy A. McAfee, Michael E. Stuart, Anne E. Smith, Julie Wilson, and Matthew R. Handley, "A Review of Clinical Prevention Services at Group Health Cooperative of Puget Sound," *American Journal of Preventive Medicine* 11 (1995): 414.
- <sup>3</sup> Dorothy Smith, MAJ, USA, Office of the Surgeon General, interview by author, 18 March 1998, by telephone.
- <sup>4</sup> Beneficiaries of the MHS include active duty personnel; active duty family members; retired military service members; and family members of retired service members, and certain former spouses of members of the military.
- <sup>5</sup> Congress, House of Representatives, Committee on Appropriations, National Security Subcommittee. Statement by Edward D. Martin, M.D., Acting Assistant Secretary of Defense for Health Affairs, 105<sup>th</sup> Cong., 2<sup>nd</sup> Sess., 12 February 1998.
- <sup>6</sup> Department of Defense, Report of the Quadrennial Defense Review (Washington, D.C., May 1997), 15.
- <sup>7</sup> Congress, Senate, *Health Security Act*. 103<sup>rd</sup> Cong., 1<sup>st</sup> sess., S1757.
- <sup>8</sup> Frank J. Thompson, "The Quest for Quality Care: Implementation Issues," in *Making Health Reform Work*, ed. John J. Dilulio, Jr. And Richard R. Nathan (Washington, D.C.: The Brookings Institution, 1994), 85.
- <sup>9</sup> Peter D. Fox cautions that one should "distinguish between the techniques of managed care and the organization that performs the various functions". Peter D. Fox, "An Overview of Managed Care," in *The Managed Health Care Handbook*, ed, Peter R. Kongstvedt (Gaithersburg, MD: Aspen Publishers, Inc., 1996), 3.
- <sup>10</sup> Richard Rognehaugh,. *The Managed Health Care Dictionary* (Gaithersburg, MD: Aspen Publishers, Inc., 1996), 109.
- <sup>11</sup> The major types of organizations are Health Maintenance Organizations (HMOs); Preferred Provider Organizations (PPOs); Physician-Hospital Organizations PHOs); and Point of Service (POS) Plans. For a succinct review, refer to Eric R. Wagner, "Types of Managed Care Organizations" in *The Managed Health Care Handbook*, ed, Peter R. Kongstvedt (Gaithersburg, MD: Aspen Publishers, Inc., 1996), 33-45.
- <sup>12</sup> In the private marketplace, the percent of workers in a managed care plan increased from 29 percent in 1988 to 75 percent in 1996. U.S. Department of Health and Human Services, *Strategic Plan*. (Washington D.C., accessed 8 April 1998); available from http://www.aspe.os.dhhs.gov/hhsplan/intro.htm; Internet, p. 5.
- <sup>13</sup> Congress, House of Representatives, House Ways and Means Committee, Subcommittee on Health, Statement of Nancy-Ann Min Deparle, Administrator, Health Care Financing Administration on "Preparing the Health Care Financing Administration (HCFA) for the 21<sup>st</sup> Century", 105<sup>th</sup> Cong., 2<sup>nd</sup> Sess., 29 January 1998, 1.
- <sup>14</sup> Fox. 4-5.
- <sup>15</sup> Paul M. Ellwood, Nancy N. Anderson, James E. Billings, Rick J. Carlson, Earl J. Hoagberg, and Walter McClure, "Health Maintenance Strategy," Medical Care 9 (May-June 1971):291-298.

- <sup>16</sup> Fox, 6.
- <sup>17</sup> Larry S.Chapman, "Worksite Health Promotion in the Managed Care Era." *The Art of Health Promotion* 1 (January/February 1998), 2.
- 18 Ellwood, 295.
- <sup>19</sup> The author has been careful to avoid describing the traditional method of care delivery as a system. The feefor-service method of payment is characterized by payment for care after it is rendered, without central oversight of medical necessity, cost, or assessment of outcome.
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- <sup>21</sup> Thomas E. Kottke, Milo L. Brekke, and Leif I. Solberg. "Making 'Time' for Preventive Services." *Mayo Clinic Proceedings* 68 (1993): 785-791.
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- <sup>23</sup> Kottke, 785-791.
- <sup>24</sup> Peter Senge characterizes systems thinking as the "fifth discipline". It is a "framework for seeing interrelationships, rather than things, for seeing patterns of change...". Peter M. Senge, *The Fifth Discipline* (New York: Doubleday Currency, 1990), 68-69.
- <sup>25</sup> Thompson, McAfee, et. al., 409.
- <sup>26</sup> Kathryn A. Phillips and David R. Holtgrave, "Using Cost-Effectiveness/Cost-Benefit Analysis to Allocate Health Resources: A Level Playing Field for Prevention?" *American Journal of Preventive Medicine* 13 (1997), 21.
- <sup>27</sup> Chapman, 5.
- <sup>28</sup> Phillips, 20.
- <sup>29</sup> Congress, Senate, Committee on Appropriations, Subcommittee on Defense, *Posture Statement by Lieutenant General Ronald R. Blanck, The Surgeon General of the United States Army*, 105<sup>th</sup> Cong., 2<sup>nd</sup> Sess., 1 April 1998.
- <sup>30</sup> Congress, Senate, Committee on Appropriations, Subcommittee on Defense, FY99 Medical Expenses Statement of Lieutenant General Charles H. Roadman, II Air Force Surgeon General, 105<sup>th</sup> Cong., 2<sup>nd</sup> Sess., 1 April 1998.
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- 33 Ibid., 321.
- <sup>34</sup> Patricia Z. Barry and Gordon H. DeFriese, "Cost-Benefit and Cost-Effectiveness Analysis for Health Promotion Programs," *American Journal of Health Promotion* 4 (July/August 1990): 448-452.
- <sup>35</sup> Steven G. Aldana, "Financial Impact of Worksite Health Promotion and Methodological Quality of the Evidence," *The Art of Health Promotion* 2 (March/April 1998), 3.
- <sup>36</sup> For example, comparing the cost per client of two smoking cessation programs using the overall costs and the quit-rate for each. Barry, 449.
- <sup>37</sup> Ibid., 3.
- <sup>38</sup> For example, the cost of controlling blood pressure divided the monetary savings (e.g., reduced medical costs, reduced absenteeism) achieved by the intervention. This could be compared with a cost-benefit ratio of intervention on a different health problem, such as controlling high cholesterol. Aldana, 3.
- <sup>39</sup> For a more in-depth explanation of cost-benefit and cost-effectiveness analyses, refer to the two previous references.
- 40 Aldana, 1.
- <sup>41</sup> Ibid., 8.
- <sup>42</sup> Kenneth R. Pelletier, "A Review and Analysis of the Health and Cost-effective Outcome Studies of Comprehensive Health Promotion and Disease Prevention Programs at the Worksite: 1993-1995 Update, *American Journal of Health Promotion* 10 (May/June 1996), 380-388.
- <sup>43</sup> Ibid., 387.
- <sup>44</sup> Marthe R Gold, and Kristine I. McCoy, "Assessing Outcomes in Population Health: Moving the Field Forward, *American Journal of Preventive Medicine* 13 (1997), 4.
- <sup>45</sup> Catherine A. Heaney, and Ron Z. Goetzel, "A Review of Health-related Outcomes of Multi-component Worksite Health Promotion Programs," *American Journal of Health Promotion* 11 (March/April 1997), 290-307.
- 46 Ibid., 305.
- <sup>47</sup> Larry S. Chapman, Lou Nelson, Beverly Sloan, and Robert Plankenhorn, "Primary, Secondary, and Tertiary Prevention Capabilities of Selected HMOs: Findings of an Employer Survey," *American Journal of Health Promotion* 12 (November/December 1997)107.
- 48 Ibid., 107.
- <sup>49</sup> CHAMPUS is an acronym for Civilian Health and Medical Program of the Uniformed Services; it augments the direct health care system by providing care to non-active duty beneficiaries through civilian providers. John F. Boyer and Larry Sobel, "CHAMPUS and the Department of Defense Managed Care Programs," in *The Managed Health Care Handbook*, ed. Peter R. Kongstvedt, 3. Gaithersburg, MD: Aspen Publishers, Inc., 1996., 781-787.
- <sup>50</sup> General Accounting Office, Defense Health Care Reimbursement Rates Appropriately Set; Other Problems Concern Physicians (Washington, D.C., February 1998), 4.

- <sup>51</sup> TRICARE is the Department of Defense medical program for military personnel and beneficiaries (see endnote 4). It offers three options: Prime (similar to an HMO); Extra (a PPO option); or Standard (same as CHAMPUS). Boyer, 784.
- <sup>52</sup> The first TRICARE contract became operational in 1995. Senate Appropriations Committee 1 April 1998, LTG Blanck.
- <sup>53</sup> Senate Appropriations Committee 1 April 1998, Lt. Gen. Roadman.
- <sup>54</sup> Rognehaugh, 96.
- <sup>55</sup> Examples of these changes include marketing, building an infrastructure (e.g., contracts, partnerships), enrolling the population; conducting hospitality training; and collecting and disseminating performance data. Senate Appropriations Committee, 1 April 1998 LTG Blanck and Lt. Gen. Roadman.
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- <sup>57</sup> David H. Trump, CAPT, USN, Director, Preventive Medicine and Health Surveillance, OASD(HA), interview by author, 10 March 1998, Pentagon, DC.
- <sup>58</sup> James W. Kirkpatrick, "Medicine, Military," in *International Military and Defense Encyclopedia*, ed. COL. Trevor N. Dupuy, USA (Ret) (New York: Brassey's (US), Inc., 1993). 1712.
- <sup>59</sup> President, "A National Security Strategy for a New Century", (May 1997), 6-13.
- 60 Report of the Ouadrennial Defense Review, 16.
- 61 Ibid., 39-41.
- <sup>62</sup> Scott Beaty, "The Revolution in Military Affairs," Parameters (Winter 1997-98) 70.
- <sup>63</sup> Robert A. Leitch, COL, H.R. Champion, and J.F. Navein, "The Future of the U.S. Military Health Service in a Time of Great Change (Washington, DC: manuscript obtained from author, 1998), 6.
- <sup>64</sup> Edward D. Martin, LTG Ronald R. Blanck, VADM Harold M. Koenig, and Lt Gen Charles H. Roadman, III, "MHS Strategic Plan," (Office of the Assistant Secretary of Defense for Health Affairs 19 February 1998, accessed 5 March 1998); available from http://www.ha.osd.mil/ppc/strat\_ov.html: Internet, 5.
- 65 Ibid., 2.
- 66 Ibid., 3.
- <sup>67</sup> Quote from President Clinton, presented on a slide. COL Lynn Ray, "DoD Scope and Partnership Intentions," (CHCS Program Office, accessed 5 March 1998) available from http://www.ha.osd.mil/rmo/briefs/gcpr/DoD/sld002.html: Internet, slide 2.
- <sup>68</sup> National Defense Authorization Act for Fiscal Year 1998, Public Law 105-85, Sec. 765, (18 November 1997).

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- <sup>69</sup> Alternatively referred to as "Force Health Protection" or "Medical Surveillance"; for consistency, this paper will use the term FMP. As is often the case with rapidly evolving policies and systems, different terminology emerges for the same initiatives. The FMP concept has its roots in the emerging policy for medical surveillance initially proposed in 1992. Trump, interview 10 March 1998.
- <sup>70</sup> Department of Defense, *DoD Directive Number 6490.2, Joint Medical Surveillance*, (30 August 1997), and Department of Defense, DoD Instruction 6490.3, *Implementation and Application of Joint Medical Surveillance for Deployments*, (7 August 1997).
- 71 RADM Cowan.
- <sup>72</sup> John F. Mazzuchi, "Joint Preventive Medicine Policy Group." (Office of the Assistant Secretary of Defense for Health Affairs 21 January 1998, accessed 25 March 1998); available from http://www.ha.osd.mil/main/chtrjpmp.html; Internet.
- <sup>73</sup> Department of Defense, DoD Directive Number 1010.10, Health Promotion and Disease Prevention (Draft revision; 1998).
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- <sup>75</sup> Department of Defense, "Policy for Put Prevention into Practice (PPIP)." (Office of the Assistant Secretary of Defense for Health Affairs Draft Memorandum 1998), 1.
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- <sup>81</sup> Health and Welfare Canada. A New Perspective on the Health of Canadians (The Lalonde Report). Ottawa: Health and Welfare Canada, 1974.
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- <sup>87</sup> Donald M. Berwick, "From Measuring to Managing the Improvement of Prevention," American Journal of Preventive Medicine 11 (1995), 385.
- <sup>88</sup> Rodney Dueck, "An Institutional Perspective on Quality Improvement and Preventive Services," *American Journal of Preventive Medicine* 11 (1995), 419.
- 89 Thompson, McAffee et. al., 410.
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