TRICARE is modeled on civilian managed-care organizations. It includes two enrollment options. The first option, TRICARE Prime, is a health maintenance organization (HMO). Beneficiaries who do not enroll in Prime are covered by a preferred provider organization (PPO). This option offers MTF care when it is available and two civilian alternatives: TRICARE Extra, for those who elect to use the civilian provider network, and TRICARE Standard, for those who use non-network providers. This menu of health-plan choices closely resembles that of civilian managed-care plans.

As in any managed-care organization, TRICARE’s cost-effectiveness depends on its provider network and utilization management program and on its ability to attract beneficiaries to its more highly managed options, especially Prime. Network provider selection, contracting, managed-care operations, and marketing are important elements of a successful plan.1

Making optimal use of MTF capacity is critical, as it is in any managed-care organization with its own providers. The DoD operates TRICARE with the assistance of managed-care support contractors, who supply a wide variety of services, such as establishing the civilian network, managing and paying claims for the care delivered in

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1Civilian managed-care strategies may be changing in response to a growing public reaction to utilization management (Dowling, 1995; Ginsburg, 2000). More-subtle strategies to shape a cost-effective system of care may be replacing administrative reviews, for example, that patients view as blocking their access to care.
the network, enrolling beneficiaries in the HMO, and providing marketing, beneficiary, and appointment services.

A separate contract is awarded in each of the 12 TRICARE regions in the U.S. The TRICARE Management Activity procures these managed-care support contracts. Contracting out of some managed-care operations is also widespread among civilian managed-care organizations, although the DoD contracts are somewhat unusual.

Because TRICARE is in many respects a typical managed-care program, it seems reasonable to look to other managed-care programs for guidance on organizational design. In the remainder of this chapter, we draw on the experiences of civilian managed-care organizations for lessons that can be applied to the MHS.

As the health-care industry has grown and responded to high cost increases by adopting managed care, organizational scholars have attempted to discover what organizational structure is most effective in delivering health care. And, as the industry continues to evolve, so does the organizational literature.

Our review of organizational structure outside the MHS sought to identify structures that are consistent with organizational theory, the conclusions of recent studies of health-care organizations, and the current practice of leading health-care companies. Here, we focus on the specific approaches used to structure managed-care organizations. These approaches were highly consistent with the theoretical literature, which is briefly discussed in Appendix B.

**ORGANIZATION OF MANAGED HEALTH CARE**

Although the literature often refers to managed-care organizations as a single group, there are in fact many differences among them. One key difference is that between health-care providers (hospitals, physicians, and others) and health plans (health insurers, health maintenance organizations). Health plans are the financial intermediaries who design benefit packages, enroll individuals (usually employees and dependents), and pay their health-care bills. Managed-care plans also establish provider networks and actively promote cost-effective health care in various ways. The purchasers of the
health plans are employers whose compensation packages includes health benefits and the individuals covered by these benefits.

The relationships between employers (and other purchasers), providers, and health plans are varied. For example, large employers may pay health plans to accept the financial risk for their employees' health care or they may assume the risk themselves and only buy administrative services from the health plans. Health plans and providers may be jointly owned or linked by contract, and each may assume different levels of financial risk. Clearly, the organizational structure for a managed-care organization will depend on the extent of its responsibilities and the nature of its relationships with providers.

Over the past 20 years, the growth of managed care has altered the organization of health plans and providers. Unlike traditional health plans, managed health-care organizations are designed to promote cost-effectiveness through the design of provider networks, benefits packages, and active management of high-cost cases (Cave, 1995; Dowling, 1995; Gillies et al., 1997). Their goal is what some researchers call an organized delivery system, defined as

A network of organizations that provides or arranges to provide a coordinated continuum of services to a defined population and is willing to be held clinically and fiscally accountable for the outcomes and the health status of the population served (Shortell et al., 1996).2

The key to success of organized delivery systems is the coordination of the health care provided to the same individual by different providers over time (Dowling, 1995). Not surprisingly, research on managed-care organizations has attempted to identify the organizational approach that most effectively promotes effective coordination and, consequently, succeeds in the marketplace. Most authors are quick to point out that the industry is undergoing rapid restructuring and that no dominant organizational model has emerged

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2This type of network is also called an integrated delivery system, although this term is sometimes used to refer to single ownership of many different types of provider groups.
To help identify what some of the key features of an effective model are likely to be, we augmented our review of the literature with information gained from visits to three civilian managed-care organizations and a telephone interview with a fourth organization. We chose large managed-care organizations that operate in more than a single market area and have an overall record of success. The four companies are described in Table 3.1. We also reviewed annual reports and other information provided on the Web sites of other large managed-care organizations. We found that both the information on the Web and the literature consistently supported the conclusions we drew from the four managed-care organizations we studied more intensively.

How Managed-Care Organizations Are Structured

A decade ago, many researchers who study health-care organizations thought that the coordination of health-care services would be most effective in vertically integrated organizations that own facilities and employ providers (Wholey et al., 1992; Shortell et al., 1994). However, in the 1990s, evidence accumulated that vertical integration was no more effective in health care than in other industries (Walston, 1996). Several researchers have noted the trend toward disintegration of vertically integrated managed-care organizations (Robinson, 1997; Ginsburg, 1999). Hospital- or physician-sponsored health plans have not succeeded as well as health plans independent of provider interests. To remain competitive, numerous vertically integrated health plans have sold their provider groups and provider groups have dropped their health plans.

Several reasons have been advanced for the poor performance of vertically integrated managed-care organizations: (1) inherent conflict of interest between providers and health plans (Ginsburg, 1999; Robinson, 1999); (2) inefficiencies typically found in large, complex organizations (Barr, 1995; Cave, 1995); and (3) lower productivity of
### Table 3.1

**Characteristics of Civilian Managed-Care Organizations**
**Visited or Interviewed by Telephone**

<table>
<thead>
<tr>
<th></th>
<th>Kaiser Permanente</th>
<th>Sutter Health System</th>
<th>Tenet Healthcare</th>
<th>UnitedHealthcare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health plans</td>
<td>Group-model HMO</td>
<td>None</td>
<td>None</td>
<td>Independent practice; HMO; PPO</td>
</tr>
<tr>
<td>Providers</td>
<td>Exclusive contracts with Kaiser hospital and physician groups</td>
<td>Owns/leases hospitals and physician groups</td>
<td>Owns hospitals, most large; divesting its physician groups</td>
<td>Contract only</td>
</tr>
<tr>
<td>Other products</td>
<td>None</td>
<td>Other provider services</td>
<td>Other provider services; insurance</td>
<td>Information, analysis, and administrative services</td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of hospitals</td>
<td>30</td>
<td>27</td>
<td>110</td>
<td>3,500</td>
</tr>
<tr>
<td>Number of providers</td>
<td>11,000 M.D.s</td>
<td>5,000 M.D.s</td>
<td>—</td>
<td>340,000 M.D.s</td>
</tr>
<tr>
<td>Number of enrollees</td>
<td>8.1 million</td>
<td>—</td>
<td>—</td>
<td>14.5 million</td>
</tr>
<tr>
<td>Revenues</td>
<td>$16.8 billion</td>
<td>$2.9 billion</td>
<td>$11.4 billion</td>
<td>$19.6 billion</td>
</tr>
<tr>
<td>Location</td>
<td>11 states; primarily California</td>
<td>California: Sacramento; Oakland and other communities in East Bay Area</td>
<td>17 states</td>
<td>National (44 markets)</td>
</tr>
</tbody>
</table>

*NOTE: Non-financial data are the most recent figures posted on the health plans’ Web sites as of early 2001. Financial data are for 1999, except for Tenet, which are for fiscal 2000.*

Salaried physicians (Ginsburg, 1999). Instead of vertical integration, managed-care organizations seek “virtual integration” through contractual relationships. In most cases, these contracts are nonexclu-
Reorganizing the Military Health System

...but Kaiser Permanente is an example of an organization with exclusive contracts between the health plan and provider organizations.³

Even virtually integrated health systems require a governance structure that integrates decisions across the continuum of care and aligns governance with clinical practice (Shortell et al., 1994; Shortell et al., 1995; Cave, 1995; Goes and Park, 1997). This implies involving physicians in decision-making (Whooley et al., 1992; Shortell et al., 1995; Morrisey, 1999).

Whether they are health plans or provider groups, large managed-care organizations almost always structure themselves geographically and decentralize their management (Hurley et al., 1995). Decentralization appears to be more efficient, for two reasons: (1) any economies of scale in management within a centralized organization are apparently offset by the inefficiencies of centrally directing a large, geographically dispersed organization and (2) local knowledge is critical for effective management of health care.⁴ Thus, operating units are established to manage local market areas. These local units report through regional managers to corporate headquarters; at each level, six to eight units report to a single manager.

Local managers are assigned responsibility for most operational decisions affecting their area, including investments up to $1,000,000 (Walston et al., 1996). They tailor the system of care to the patient needs and the medical resources in their areas. The specific decisionmaking for which they are responsible differs by type of managed-care organization. The responsibilities of health plan managers include selective contracting with local providers, exploiting local capabilities for cost-effectively treating different kinds of pa-

³At first glance, Kaiser appears to be a vertically integrated organization. However, it is actually three legally separate entities—a health plan, physician group, and hospital group—that operate jointly through exclusive contract. Each entity has defined responsibilities, but planning and operations are collaborative. Although Kaiser resembles the MHS in many respects, Kaiser’s providers provide a much higher fraction of the care for its enrollees and it has no mission other than managed care.

⁴Given (1996), Christianson et al. (1997), and Wholey et al. (1996) agree that economies of scale disappear in managed-care organizations with enrollments above 50,000. This is consistent with evidence that coordination within these organizations is costly (Barr, 1995; Clement, 1997).
tients, conducting the local marketing effort, and managing both employer and enrollee relations. Provider group managers hire providers and support staff, oversee health-care delivery, and negotiate contracts with health plans. If the contract between the health plan and provider group is exclusive, staffing decisions will be closely coordinated with the plan.

Regional and corporate responsibilities are limited. Regional managers set targets for and monitor the performance of the local units for which they are responsible. They help coordinate the activities of units in adjacent markets. Regional staffs are usually small, but may include experts in areas such as contracting who are not needed full time at the local level. Corporate managers determine the company’s objectives and strategy, set targets for and monitor the performance of regions, determine major investments, develop brand-name marketing, and negotiate contracts that cut across regions. In health plans, corporate responsibilities also include the design of benefit packages, multi-location employer accounts, and underwriting.

The flow of resources in civilian managed-care organizations, shown in Figure 3.1, is consistent with the largely decentralized management structure and is kept simple. Purchasers, typically employers, pay a specified amount (known as a “capitated payment”) for each person or family enrolled with the managed-care organization. These payments accrue directly to the local unit if the enrollees all live in the local area.

If an employer has multiple locations or enrollees might plausibly obtain their primary care from one of several local units (such as in metropolitan areas large enough to justify multiple local units), the corporation receives the payments and passes them down through the regions to the units responsible for the enrollees, based on where they live and obtain most of their care. If enrollees use services from a local unit other than the one responsible for them, funds are transferred to pay for the services. Thus, each management entity in the organization can readily identify its enrollees and payments, or revenues (including transfer revenues).

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5Coordination appears to be productive for market areas no more than 50 miles apart.
Costs are also incurred locally, largely in the form of payments made to providers (hospitals, physicians, and others). Provider organizations and vertically integrated managed-care organizations often have salaried providers. Fee-for-service payments, in which health plans pay providers according to a fee schedule for each service provided, are still common.

For a number of years, more health plans were moving to capitated provider payments, which established fixed amounts in advance for each enrolled patient. These fixed payments might cover primary care services only or also include some or all specialty and hospital care. In recent years, enthusiasm for capitated physician payment has dimmed because many physician groups proved unable to successfully manage the financial risk they assumed in accepting capitation (Bernstein, 1999; Ginsburg, 1999) and the public increasingly worried about the incentive capitation gives physicians to limit their patients’ access to care. Like many other aspects of managed care, payment mechanisms are still in transition.
Accountability, Performance Evaluation, and Incentives

The organizational structure described in the previous section creates a single authority for the covered population in each locality. If the organization is vertically integrated and operates both the health plan and the delivery system, a manager will have authority over a single locality (for instance, a city). If the organization is a health plan only, a manager may oversee multiple localities (such as those in an entire state). In either case, the person in charge of each locality is readily identified. The same principle holds at higher management levels.

To promote efficiency, decentralized assignment of responsibility is accompanied by strong accountability for outcomes that are clearly specified in advance and evaluated afterward (Hanchak, 1996; Hurley, 1995). In the managed-care organizations we visited, accountability is achieved through a standard annual business planning process. Performance is assessed using a limited number of key outcomes. Overall business success is measured by profit (or net revenue for non-profit organizations). Because revenues and costs are measured at the local level and can be easily aggregated to regional and corporate levels, assessing profitability is straightforward at all management levels. Profitability is measured for each type of business—typically, the types are large/national employers, small/local employers and individuals, Medicare, and Medicaid.

Beyond the financial bottom line, intermediate outcomes include the key factors in profitability (such as enrollment or pharmaceutical costs) and quality measures including patient satisfaction. Global measures of quality of care are not yet available and so do not appear to be as visible in the business planning process. Indicators of quality for specific types of care are used in quality improvement (discussed in the next section) and individuals at one organization we visited told us that they hoped to incorporate quality in their strategic planning process.

At the beginning of each year, performance targets are set for each local unit. In more-centralized managed-care organizations, corporate managers are largely the ones who determine the targets. In more decentralized managed-care organizations, targets are negotiated in a series of meetings between corporate and regional man-
agers and between regional and local managers. Local managers bring an awareness of local circumstances to the planning process and corporate managers focus on broader trends. Regardless of the method used for setting the targets, implementation plans and budgets are developed locally (Smith et al., 2000), consistent with decentralized execution and resource control.

All the companies we visited review their units’ performance in meeting their targets at least quarterly and sometimes more often. The formats for these interim performance reports focus on any deviations from the plan.

Incentives are tied to performance in meeting and even exceeding targets and they take several forms. Performance reporting triggers an automatic incentive from the desire to perform well. Most managed-care organizations further strengthen this incentive through a system of rewards explicitly tied to performance reports (Appleby, 1995; Gold et al., 1995). Health plan managers receive bonuses based on financial performance. In addition, they may be rewarded through promotion within the company or better job offers from other companies. One of the managed-care organizations we visited rewards performance with additional investment funds for new equipment, cutting edge programs, or even added professional development.

Reward systems for physicians and other health-care providers are also common and apparently effective (Fan et al., 1998; Hellinger, 1996). They may take the form of bonuses or payment withholds and are used primarily to reward financial performance or patient satisfaction. Financial rewards for technical quality of care appear to be less common, presumably because it is more difficult to measure.

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6However, Newhouse (1996) argues that clinical performance measures without adequate adjustment for enrollee health may induce “adverse selection,” in which healthy enrollees, who might be expected to generate more favorable outcomes, are favored over sick enrollees.

7The managed-care organizations we visited did not disclose the specifics of their bonus plans, but one managed-care organization told us that its bonuses accounted for an average of 25 percent of compensation.

8A percentage is withheld from the payments made to the providers, and partially or entirely returned to them at the end of the year, depending on performance.
Quality is enhanced through continuous quality improvement programs (Cave, 1995). These programs use a wide variety of standardized measures to assess quality outcomes. These outcomes include access to care and patient satisfaction and, increasingly, measures of the appropriateness of the treatments provided and health outcomes. In a continuous cycle, managers look for problem areas, design interventions and set specific targets for improvement, implement the interventions, and determine whether the targets are met. Targets are quantifiable and specific as to level and timing. As with business targets, progress is measured on a regular schedule.

Experts on the corporate staff play an important role in quality improvement. As we discuss in the next section, they develop and maintain the data systems. They support (and monitor) local and regional quality efforts with analytical expertise and education in problem identification, implementation, and assessment methods. Corporate experts also are responsible for identifying quality issues that cut across the company and transferring knowledge about effective treatments acquired from academic and industry sources. An effective quality improvement program requires a close working relationship between unit and corporate staff.

**Information Systems**

Increasingly, information is key to the management strategy of managed-care organizations (Dowling, 1995; Shortell et al., 1995; Kralewski et al., 1996). The managed-care organizations we studied are investing considerable effort and money in collecting the basic data and structuring effective management information systems and analytic toolkits. Information systems are developed and operated at the corporate level to eliminate duplication of effort and ensure that data are comparable across units and informative. Data sources include patient-care records or claims with sufficient clinical detail to develop quality indicators, regular patient surveys to determine overall performance in customer service and assess specific types of

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9Most managed-care organizations use the Health Plan Employer Data and Information Set (HEDIS) measures, which are required for HMO accreditation by the National Committee for Quality Assurance and by many payers, including the Health Care Financing Administration.
care and even individual providers, and up-to-date enrollee and provider characteristics.

Many managed-care organizations have scrambled to improve their information systems in recent years. Sometimes, the requisite data weren’t being collected, but often the problem was inadequate attention to data integration, quality and consistency, ready access, and analytic support for managers.

Information systems are also increasingly valuable as care management tools. The public backlash against intrusive care management practices has caused many managed-care organizations to rethink their managed-care strategies. Instead of reviewing the appropriateness of individual referrals and treatment decisions, managed-care organizations are attempting to induce more effective decisionmaking by their providers. Through the continuous quality-improvement process described in the previous section, the managed-care organizations identify patterns of practice that are inappropriate or unnecessarily costly (or both) and work with their providers to effect improvement. Interventions might include the adoption of formal care guidelines for specific types of patients or the development of new provider and/or patient education programs.

Recently, one of the largest managed health-care plans announced that it would eliminate its treatment review and authorization process entirely and rely exclusively on its information-driven continuous improvement program. Whereas other managed-care organizations have not followed suit, they are nevertheless taking more modest steps in the same direction.

SUMMARY OF LESSONS FROM CIVILIAN HEALTH-CARE ORGANIZATIONS

Civilian managed-care organizations deliver different sets of products. Some offer health plans but provide no health-care services, some deliver only health care, and some do both. Despite these differences, they have similar organizational structures, which are designed to facilitate management of health care for the populations they serve. Key elements of civilian health-care organizations include the following:
• **Geographic organizational structure.** Because almost all health care is provided locally, the basic operating unit of the health plan and provider group is local to the population served. The local operating units report to regional intermediate managers. The structure is designed to produce a reasonable and balanced number of reporting entities at each level. Resources, costs, and measured outcomes can be “rolled up” from local to regional to corporate levels.

• **Decentralized operational management and clear lines of authority.** Each local area has a single manager, although the same manager may have responsibility for more than one local area. Within a health plan, resources are allocated strictly according to enrollment, preserving the financial incentives associated with capitation payments. Decentralized management allows an organization to exploit its knowledge of local market conditions.

• **Clear responsibility for health-plan management versus health-provider management.** Experience suggests that an inherent conflict of interest between providers and health plans makes separate management desirable.

• **Strong accountability through regular and timely performance evaluation.** Establishing specific and quantifiable targets at each management level for annual performance and for new initiatives allows for early identification of problem areas and areas of unexpected success (an indicator of innovation).

• **Incentives to achieve a balanced set of outcomes.** Tangible individual and group rewards enhance the incentives already created with performance reports.

• **Sophisticated management information systems.** Increasingly, civilian managed-care organizations rely on high-quality, timely data for planning, monitoring performance, and determining rewards.

The literature is replete with reasons why effective private-sector organizational structures may not be easily adapted to the public sector or as effective there (Rainey, 1997). For example, political considerations may forestall decentralized management and interfere with decisionmaking at all levels of management. Public employees are thought to have weaker performance incentives and tend to resist
change. Nevertheless, it seems reasonable for the MHS to consider carefully the organizational approaches that appear to be effective in civilian managed-care organizations.

There is increasing evidence that some private-sector practices may be applicable to the public sector. Another large public health-care organization—the Veterans Administration—reorganized its system about five years ago to incorporate these private-sector practices (Kizer, 1995; U.S. General Accounting Office, 1999a; Luck and Peabody, 2000). More generally, the use of outcome-based performance agreements appears to be reaping benefits in a number of federal agencies (U.S. General Accounting Office, 2000).

HOW THE TRICARE ORGANIZATION COMPARES WITH CIVILIAN ORGANIZATIONS

As we noted earlier in this chapter, civilian managed-care organizations are structured geographically, with clear (and usually separate) assignment of health-plan and health-provider responsibilities at each level in the organization: local, regional, and corporate. We also observed that the resource flows were consistent with the assignment of responsibility.

Responsible health-plan managers are allocated resources in proportion to the population they serve and have considerable discretion over these resources. Health-provider managers also control resources in direct relation to the activities they oversee.

As described in Chapter Two, the TRICARE organization includes multiple provider organizations, as do some civilian managed-care plans. With the exception of the Air Force, each of these provider organizations is structured according to most civilian norms.

10The veteran’s health system is managed through 22 geographic Veteran’s Integrated Service Networks (VISNs). Each VISN receives a share of the annual budget based on the complexity of the patient population in its area. The VISN has considerable discretion in allocating resources to the VA facilities in its area and it pays for care provided by non-VA providers.
• The Army and Navy health-care delivery systems are structured geographically, with the MTFs reporting through a regional chain of command.

• Responsibility for each MTF, and for the delivery of services to its defined population, is clearly assigned to the MTF commander.

• The MTF commander has considerable discretion in allocating operations and maintenance funds and in employing assigned personnel. Subject to civilian hiring quotas and civil service personnel regulations, the commander has discretion in hiring civilian personnel. As is true throughout the DoD, however, funds cannot be transferred between the personnel and operations accounts. Also, authority to procure equipment and make other capital investments is limited.

• Under TRICARE, a considerable share of MTF activity is directed toward managing Prime enrollees. Plans to place MTF budgets on a capitated basis have not been realized to date.\(^{11}\) No mechanism exists to ensure that the funding allocated to individual MTFs reflects their population and health-care responsibilities.

With regard to the health-plan function, the TRICARE organization displays few of the characteristics of civilian organizations.

• The ASD/HA has corporate authority over TRICARE, but has little authority over the allocation of resources, including military personnel, which account for 35 percent of the DHP budget (Defense Health Program, 1999). Our interviews with DoD officials and others concerning the MHS suggest that, in practice, decisionmaking in TRICARE is often shared between the ASD and the three Surgeons General.

• The TRICARE lead agents do not have authority to allocate the resources for their region. They serve primarily as coordinators, with little authority to implement managed-care initiatives. One exception to this is the “strong lead agent” initiative implemented on a test basis in the TRICARE Region 11 this year. This region, which includes Washington, Oregon, and the western

\(^{11}\)The system that was developed for capitated MTF budgeting, called “Enrollment Based Budgeting,” has not been implemented.
edge of Idaho, has the most mature TRICARE program. This program is discussed further in Chapter Six.

- There is no clear assignment of TRICARE authority for individual "market" areas. The MTF commander has general responsibility for the beneficiary population in his or her catchment area, which is defined as roughly 40 miles in all directions from the MTF. However, the commander does not have effective authority over the contractor for his area or the resources that are consumed in the civilian sector. In areas with more than one MTF, responsibilities overlap.\textsuperscript{12} As already indicated, the TRICARE regions do not have the authority to assume this management role.

### Accountability, Incentives, and Information

Where responsibility and authority are not clearly and separately defined, accountability is not possible. Because the health-plan responsibilities are not clearly delineated in TRICARE, it is easy to see why so many of the DoD officials we interviewed noted that no single authority is accountable for TRICARE (see Chapter Five for more details).

Accountability for MTF and contractor performance has been strengthened over the past several years by the introduction of improved methods of measuring performance.\textsuperscript{13} The published performance reports incorporate standard measures that allow for comparison within the military system and between it and the civilian sector. These measures describe utilization patterns, access to care, and patient satisfaction fairly comprehensively. They include limited information on clinical quality of care and, for MTFs, no

\textsuperscript{12}The number of locations with multiple MTFs decreased significantly in the 1990s due to base closures. Nevertheless, a number of such locations continue to exist—most notably, in Washington, D.C., and San Antonio, Texas. An effort to establish a joint medical command in San Antonio was not successful, although planning continues for more integration of the two large military medical centers there. The Washington situation was the subject of a recent report by the U.S. General Accounting Office (1999b).

\textsuperscript{13}See the HEDIS 3.0 MTF Reports listed under “Browse by Topic” on the TRICARE Web site (www.tricare.osd.mil).
information on financial performance. Consistent with the weaker accountability for overall TRICARE performance, the reports are prepared by the service, contractor, and even the individual MTF but there is no report on overall performance at the local level.

The DoD has limited authority to employ incentive pay to reward performance and although there has been some interest in bonuses and other discretionary pays, equity and accountability concerns probably will prevent the DoD from employing the kinds of incentive pays used in the private sector. Furthermore, performance bonuses may not be as desirable in the TRICARE setting as they are in civilian health-care organizations. The literature argues that performance pay may not work well when outcomes are highly variable and employees are highly risk averse. Health system outcomes for small populations, such as those served by many MTFs, are notoriously uncertain and studies of public employees, including military personnel, conclude that their risk aversion is relatively high.

The military has potentially very effective non-monetary incentive systems. The most obvious of these are the processes for promoting personnel, assigning them to jobs, and selecting them for command positions. By recording individual and group performance using measures designed in accordance with organizational goals and directing that promotion and assignment selection appropriately weigh these measures, the military services can provide strong performance incentives to uniformed personnel. An assessment of performance evaluation and promotion or assignment selection practices for medical personnel was beyond the scope of our study; therefore, we cannot say whether they provide the incentives for performance that they might.

Until now, the MHS data systems would not have allowed the DoD to match the best performance evaluation practices in the civilian sector and implement robust incentive schemes. The automated outpatient data system, implemented in 1998, provided the last of the basic data elements needed, and the DoD is just now fielding an effective management information system that combines all the data

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14 See U.S. Department of Defense (1999) and Williamson (1999) for descriptions of the performance evaluation and promotion systems for officers and enlisted personnel, respectively.
elements and provides reports and analytic capabilities to managers throughout the system. Complete contractor data are still not timely, so managers will not know where TRICARE standard expenditures stand in time to make mid-course corrections. Finally, the MTF financial data continue to be of inconsistent quality.

The MHS has made a considerable effort to remedy its information system inadequacies. It is too soon to tell whether the new MHS information systems are ready to support the information-based management strategy that characterizes the best civilian health-care organizations.

**Lessons for TRICARE from the Private Sector**

Based on this discussion, it would appear that the most significant organizational lessons for TRICARE are as follows:

- Establish health-plan responsibility for TRICARE at the local, regional, and system-wide levels
- Ensure that the funding flows and other management authorities are consistent with this assignment of responsibility
- Strengthen MTF financial reporting and performance evaluation for the system overall
- Review the individual performance evaluation and promotion systems to ensure that they provide the right incentives
- Continue to improve the information systems.

Civilian managed-care organizations provide models that the MHS could emulate. However, some adjustments would be necessary because TRICARE is a public program. But, before we can consider organizational alternatives for TRICARE, we must first consider how the MHS is structured for readiness and the ways in which readiness and TRICARE interact.