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The “New VA”: A National Laboratory for Health Care Quality Management

Kenneth W. Kizer, MD, MPH

In 1995, the Veterans Health Administration (VHA) initiated the most radical redesign of the veterans health care system since the system was formally created in 1946. One of the goals of this reengineering effort has been to ensure the consistent and predictable provision of high-quality care everywhere in the system. To accomplish this goal, the VHA has organized more than 100 different quality improvement activities according to a structure-, process-, and outcomes-focused quality management accountability framework (QMAF) that targets 10 interrelated dimensions of quality management (QM). Each of these dimensions utilizes a defined strategy and employs a menu of quality assessment and assurance tactics. Organizing these many different quality improvement activities into an accountability framework should facilitate the development of policies and procedures that will systematize the VHA's QM. The VHA's new operational structure and its approach to quality improvement provide a unique national laboratory for health care QM.

The quality of health care in the United States varies widely. Overuse, underuse, and misuse of medical care occur in all delivery systems and with all financing mechanisms (1–5). This variance in health care quality results in adverse consequences for millions of Americans every year.

The veterans healthcare system—the largest fully integrated health care system in the USA—appears to be a microcosm of the larger American health care system with respect to quality. Consequently, one of the overarching goals of the reengineering effort initiated by the Veterans Health Administration (VHA) in 1995 has been to systematize QM to ensure the provision of consistent and predictable high-quality care across the entire system. However, since health care QM is still a nascent science with significant knowledge gaps and since no best practices have yet been identified for deploying quality improvement across large health care

systems (4), the VHA's QM approach should be viewed as a work in progress.

This article will briefly review the origin and missions of the veterans health care system, some of the early results of the VHA's reengineering effort, and the strategic intent, evolving approach, and unique opportunity to increase knowledge about health care QM in the “new VA”.

HISTORY AND FUNCTIONS OF THE VETERANS HEALTH CARE SYSTEM

History

Ever since colonial days, the United States has provided some type of medical care and other support to persons who suffer untoward effects from service in the nation's armed forces. The evolution of veterans programs is very briefly outlined here and is described in detail elsewhere (6–10).

The first American law providing support for disabled soldiers was passed by the Plymouth Colony in 1636 for pilgrims who were maimed in the colony's defense against the Pequot Indians. This was based on a longstanding precedent established in English law. One hundred fifty-three years later, in 1789, one of the first laws passed by the new US Congress provided pensions to disabled Revolutionary War veterans and their dependents.

Over the next 140 years, the provision of medical care and other veterans services was handled by a variety of federal agencies, and interest in veterans issues waxed and waned according to the interval since the last major armed conflict. A changing set of needs for veterans, along with serious problems in the provision of veterans services, prompted the creation of the Veterans Administration (VA) in 1930. Unlike other entities previously responsible for veterans pro-

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grams, the VA had responsibility for essentially all veterans assistance programs.

Despite a number of positive developments in veterans programs over the next 15 years, the strains of World War II contributed to the VA being unable to respond adequately to the massive influx that occurred in 1945 of veterans who needed health care. In response, Congress established the VA Department of Medicine and Surgery in January 1946; this formally created the veterans health care system.

Over the next several decades, the veterans health care system grew, as did other veterans programs. In March 1989, the Veterans Administration was replaced by the Department of Veterans Affairs, making the VA the 14th cabinet-level department in the executive branch of the federal government (9). (The abbreviation "VA" was retained because of its familiarity.) Today, the VA is the second-largest agency in the federal government, with a workforce of about 230,000 and an annual budget of over \$42 billion.

The principal operating units of the VA are the Veterans Health Administration, which accounts for about 80% of the Department's staff and half of its budget; the Veterans Benefits Administration, which provides disability compensation and pensions and administers a number of education, home loan, and insurance programs for veterans; the National Cemetery Administration, which manages 115 national cemeteries located throughout the USA and in Puerto Rico; and the Board of Veterans Appeals, which adjudicates disputes about VA benefits.

Missions of the Veterans Health Care System

While the veterans health care system had its genesis in treating combat-related injuries and helping to rehabilitate veterans with service-connected disabilities, the system has expanded in both size and responsibility over the years. It is now one of the largest and most managerially complex health care systems in the world. Its multiple missions and public accountability provide a unique opportunity to advance health systems thinking for the benefit of veterans and of the nation as a whole.

At present, the VHA has 4 missions prescribed by law. These are as follows:

1. *Medical care.* The primary mission of the veterans health care system is to improve the health and functioning of America's veterans and to reduce the impact and burden of illness, injury, and disability of those conditions related to their service in the armed forces of the United States—especially those conditions re-

sulting from combat. To do this, the VHA provides a full continuum of care in a vast array of settings located in all 50 states and in the District of Columbia, Puerto Rico, the Virgin Islands, Guam, Samoa, and the Philippines. The VHA's current medical care assets include 172 hospitals, over 600 ambulatory care and community-based clinics, 132 nursing homes, 40 domiciliaries, 73 home health care programs, 206 counseling centers, and a number of contract care programs.

2. *Education and training.* The VHA's second statutory mission is to conduct education and training programs that enhance the quality of care provided to veterans. Each year, about 110,000 students and trainees in more than 45 health care disciplines receive some or all of their clinical training in VHA facilities through affiliations with over 1200 universities, colleges, and other educational institutions. Approximately one third of postgraduate physicians ("residents") and one half of all medical students receive all or part of their clinical training at VA medical treatment facilities each year. Nearly two thirds of all physicians in the USA have received at least some of their training through the VA.

The VHA has become an indispensable part of the health care professional training enterprise in the USA, and it is becoming even more important as managed care transforms private health care and diminishes the number of clinical training opportunities available in the private sector. This is one of several ways that the entire US population benefits from the veterans health care system.

3. *Research.* The VHA's third statutory mission is to conduct research that will enhance health care for veterans. Over the past several decades, the VHA's research portfolio has become quite diverse. Currently, it has combined intramural and extramural funding of about \$1.1 billion per year, and it encompasses a wide array of projects, ranging from basic science studies and multi-institutional clinical trials to health services delivery and clinical outcomes projects. This is another area where the general public benefits from the VA, since so many of the research findings benefit both veterans and nonveterans.

4. *Contingency support and emergency management.* The VHA's most recently added statutory mission is to provide primary contingency backup to the Department of Defense (DoD) medical care system during times of war and to assist the Public Health Service (PHS) and the National Disaster Medical System in providing emergency medical care to victims of natural and other disasters. As a result of the abolition of the direct-care capability of the PHS and of the devolution of DoD's health care system, the veterans health care

system is becoming the federal government's primary asset to operationalize disaster plans that require a medical care response. Again, while the genesis of this mission is a need to support the military, the general public gains substantial benefits as well. The VA has been especially active in responding to disasters in recent years.

In addition to its 4 statutory missions, the veterans health care system has a number of corollary responsibilities that derive from its core missions. For example, since about 40% of homeless adult males are veterans, the VA has become the nation's largest direct provider of services for homeless persons, providing medical care to over 65,000 homeless persons a year and providing other services to many more. The VA is the only federal agency providing substantial assistance directly to homeless people. Further, because the VHA's service population consists primarily of poor and socioeconomically disadvantaged veterans, (6, 10–13) the system has become an integral element in the federal public health safety net. Important to note, however, is that veterans benefits are viewed differently than welfare or other social support programs. US public policy has always considered veterans benefits to have been earned through service to the nation, with the VA being the institutional expression of the nation's gratitude to veterans.

Although linked exclusively to veterans in the minds of most people, the veterans health care system clearly provides many important services to the entire US population. Indeed, today's VA health care system is, quite simply, a vital national resource.

Who Uses the Veterans' Health Care System?

About 10% of the US population are veterans of the armed forces—some 25.6 million persons today—although the majority of these veterans cannot use VA medical treatment facilities. Unlike Medicare or Medicaid, veterans health care is not a federal entitlement program. Funding for VA medical care is a discretionary appropriation, and access to the system is limited by its funding and by a Congressionally directed priority order.

In federal fiscal year (FY) 1998, the VHA provided care for 3.4 million persons at VHA treatment facilities or through various contractual programs. This is out of the approximately 9.4 million veterans who qualified for VA health care because of service-connected disability or income level. Limited VA funding and the relatively long distances to VA treatment facilities

have been the major impediments to the use of VA care by more veterans (14–17).

As a group, veterans using VA health care are considerably older and more socioeconomically disadvantaged than the general US population, and they are characterized by a markedly more significant disease burden and by a much higher incidence of substance abuse and chronic mental illness (10–13). It is a population whose service needs present many, and sometimes extraordinary, challenges.

REENGINEERING THE VETERANS HEALTH ADMINISTRATION

The Changing Environment and Forces of Change

Powerful societal, demographic, and industrywide forces of change are rapidly transforming American health care. The veterans health care system is being buffeted by these same forces. Most prominent among these are the market-based restructuring of health care in general and the rise of managed care in particular; the explosive growth of scientific and biomedical knowledge and concomitant technological advances that are dramatically expanding the ability to treat illness and injury; unprecedented developments in information management; and the changing demographics, including aging, of America. In addition, the veterans health care system is affected by the public's changing views about the role and size of government in general and about the federal government in particular.

The rapidly changing nature of American health care and dissatisfaction with VA health care prompted a number of reviews of the veterans health care system in the early 1990s (18–24). These reports described serious operational and managerial problems, which are briefly summarized in Table 1. These and other concerns raised questions about the viability and future role of the system (25).

Other industries facing similar challenges have found that those entities that provide high-quality products and services for an affordable cost (ie, those which provide the best value) are the ones most likely to survive and thrive in a changing environment. Thus, providing excellent health care value has been the central tenet of the VHA's transformation (26, 27).

The VHA's Reengineering Strategy

Insofar as value can be functionally defined as quality divided by cost, the VHA's reengineering has, in

Table 1
Critical Problems of the “Old” Veterans Health Care System

Hospital-focused and specialist-based, resulting in uncoordinated and episodic treatment of illness
Independent, competing medical centers not functioning as nor realizing the benefits of being a system
Substantial and unexplainable interfacility and interprovider variability in the provision of care
Difficult to access
Centralized and hierarchical management structure that suppressed innovation and was too slow in making decisions
An inefficient bureaucracy governed by volumes of rigid policies and procedures
Too inwardly focused
A very complex resource allocation system that perpetuated unnecessary inpatient care and other inefficiencies
Inconsistent leadership
Management, capital asset, and resource use decisions too often based on political considerations

effect, pursued 2 interrelated transformations—first, an operational transformation to improve the effectiveness and efficiency of day-to-day operations, and second, a quality transformation. While both efforts are viewed as essential for the system to thrive in the 21st century, the experience of other entities that have undertaken quality transformations has shown that such efforts typically require sustained effort over a period of 7 to 10 years or longer. Given the political, financial, and industrywide climate of the latter half of the 1990's, VHA management felt that the system needed to quickly demonstrate a much better return on taxpayer dollars if it were going to survive and sustain its support base long enough to effect the quality transformation. As a result, much of the VHA's initial reengineering has highlighted operational issues, including the operationalization of performance indicators that would facilitate valid comparison between VA and non-federal health care providers, as well as the refinement of already-established QM methodologies and the laying of groundwork for new QM activities.

Implementing the VHA's Transformation

In brief, following various planning efforts and consensus building in late 1994 and 1995, the VHA implemented a new operational structure in late 1995. This new structure changed the basic operating unit of the organization from previously independent and often competing large hospital medical centers, with their associated clinics, nursing homes, and other care delivery sites, to 22 regional networks called Veterans Integrated Service Networks, or VISNs (pronounced

“visions”). The VISNs were premised on the concept of funding care for populations rather than facilities, with a concomitant shift in the primary focus of care from hospitals to ambulatory and community-based settings. An average VISN encompasses 7 to 10 hospitals, 25 to 30 ambulatory care clinics, 4 to 7 nursing homes, 1 to 2 domiciliaries, and various other assets.

The philosophical and conceptual underpinnings of the VISN structure, some of the initial transformation results, and selected other aspects of the VHA's reengineering effort have been described elsewhere (26–47). Of note, the VHA's reengineering effort commenced at the same time that the federal government was shut down twice in 2 months because of a dispute between Congress and the President about the FY 1996 budget (for the first time in US history); these government shutdowns symbolized the climate and sense of urgency with which the VHA's change process was launched.

In addition to fundamentally redesigning the system's operational structure, concerted actions have been taken to enhance and standardize quality, facilitate access to care, decentralize operational decision making, reduce operating costs, optimize patient functional status, allocate resources equitably, and improve information management. Likewise, aggressive steps have been taken to increase collaboration with other government and private health care providers, to implement best practices (administrative and clinical), and to enhance service satisfaction.

The VA's former disease-oriented, hospital-based, professional discipline-focused paradigms are being replaced by ones that are patient-centered, prevention-oriented, and community-based and that are premised on universal primary care. In the “new VA”, care is increasingly being provided by interdisciplinary teams of physicians and other licensed practitioners who share responsibility and accountability for patient care.

Changing Operational Results

Although the VHA's transformation is still early in its evolution, the operational results achieved to date are unprecedented in American health care. Examples of these results include the following.

- Between September 1994 and September 1998, 52% (27,319 of 52,315) of all VHA acute care hospital beds were closed.
- From October 1995 through September 1998, the VHA's bed-days of care per 1000 patients decreased 62% (the VHA's national average decreased from

3530 to 1333, with the VISN range = 980–1757). The VHA's current rate is now about 5% lower than the projected Medicare rate for the same time period.

- Beginning with about 10% of patients enrolled in primary care at the end of 1994, universal primary care has been implemented, and by March 1998, 80% of patients surveyed could identify their primary caregiver.
- Compared with FY 1994, annual inpatient admissions in FY 1998 decreased 32% (284,596), while ambulatory care visits per year increased by 43% (from 25.0 to 35.8 million per year).
- Since September 1995, the management and operation of 50 hospitals have been merged into 24 locally integrated health care systems.
- Between October 1996 and August 1998, 216 new community-based outpatient clinics (CBOCs) have been established to improve access to care. All of these CBOCs have been funded by redirected savings—ie, there have been no new funds for these clinics.
- From September 1995 through March 1998, the percent of surgeries performed on an outpatient basis increased from 35% to 75% of all surgeries. Associated with this shift to ambulatory surgery has been increased surgical productivity and reduced mortality.
- Between December 1994 and September 1998, system-wide staffing decreased by 11% (23,112 of 206,578 full-time employee equivalents), whereas the number of patients treated per year increased by 18%. This included 8% more psychiatric/substance abuse treatment patients, 19% more homeless patients, and 53% more blind rehabilitation patients.
- Since October 1995, telephone-linked care ("call centers") has been implemented at all VA medical centers, as well as temporary lodging ("hoptel") beds.
- During the 3-year period FY 1995–1997, over 2700 (67%) VHA forms were eliminated, and all remaining forms and directives were put on CD-ROM or other electronic means.
- A pharmacy benefits management program implemented in FY 1995 (47) had produced an estimated cumulative savings of \$347 million by May 1998.

Changes in Quality of Care Indicators

At the same time that the VHA has been undergoing radical operational change, a number of related actions have been taken to improve the VHA's quality of care. The results have been encouraging, showing increased

longevity rates for persons having serious medical conditions, lowered rates of surgical morbidity and mortality, improvements in indicators tracked by formal quality of care indexes, as well as significantly improved patient-reported outcomes or service satisfaction.

The VHA has designed and is operationalizing a number of specific quality-of-care indexes to allow comparison of VHA and private-sector health care outcomes. For example, the VHA's Prevention Index consists of 9 quality outcome indicators that measure how well the VA follows national primary-prevention and early-detection recommendations for diseases with major social consequences, such as cancer, smoking, and alcohol abuse (Table 2). Compliance with these recommendations nearly doubled (from 34% to 67%) in FY 1997, compared with baseline results obtained in late FY 1995 and FY 1996. Average VA FY 1997 performance on these measures exceeded average private-sector performance for all indicators where comparable data exist, ranging from being 5% to 69% better on individual quality indicators (Table 3) (48–51). In addition, the VA surpassed the US Public Health Service's "Healthy People 2000" goals for 5 of the indicators. Results for the first 3 quarters of FY 1998 show significant further improvement.

Similarly, the VHA's Chronic Disease Care Index consists of 14 quality outcome indicators that measure how well the VA follows national guidelines for high-volume diagnoses such as ischemic heart disease and diabetes (Table 4). Percentages reflect the number of patients who actually receive a required medical intervention as determined by external review of patient records. The Chronic Disease Care Index in the aggregate rose 73% in FY 1997 compared with baseline data obtained at the end of FY 1995 and in FY 1996. Again, where comparable data exist, the VA's FY 1997 average performance exceeded the private sector's average performance on all measures, ranging from being 21% to 124% better on individual quality indicators (Table 5) (48, 52). Results for the first 3 quarters of FY 1998 show continued improvement.

Another example in this regard is the VHA's newly developed Palliative Care Index that measures care provided at the end of life (Table 6). For unprecedented improvement in this area, the VHA received a commendation from Americans for Better Care of the Dying in December 1997. Finally, the VHA also has implemented an innovative mental health report card (53) and plans to implement a Long Term Care Index and an Occupational Safety and Health Index in FY 1999.

As part of its reengineering effort, the VHA also has

Table 2
The VHA's Prevention Index

Condition/Indicator	Definition
Immunizations	
Pneumococcal vaccination	The percent of persons age 65 or older, or who are at high risk of pneumococcal disease, that have documentation of ever receiving pneumococcal vaccine
Influenza immunization	The percent of persons age 65 or older, or who are at high risk of influenza, that have documentation of receiving influenza vaccine in the past year
Cancer screening	
Screening for colorectal cancer	The percent of persons age 50 or older that have documentation of fecal occult blood screening in the past year or sigmoidoscopy in the past 10 years
Screening for breast cancer	The percent of females age 50 to 69 that have documentation of mammography in the past 2 years
Screening for cervical cancer	The percent of females 65 and younger who have not had hysterectomy that have documentation of a Pap smear in the past 3 years
Prostate cancer screening	The percent of males age 50 and older that have chart documentation of discussion of risks and benefits of prostate-specific antigen testing
Tobacco consumption	
Tobacco use screening	The percent of persons whose charts document screening for tobacco use in the past year
Smoking cessation counseling	The percent of current smokers whose charts document advice to stop smoking in the past year
Alcohol consumption	
Screening for alcohol use	The percent of persons whose charts document screening for alcohol using a standardized instrument

been tracking the 1-year survival rate for 9 high-volume conditions, both as a measure of quality of care and as a way to assess the impact of the systemic changes on especially fragile cohorts of patients. In the aggregate, these 9 conditions account for about 12% of all VHA patients, but they account for some of its most medically vulnerable ones. Using FY 1992 as the baseline, the 1-year survival rate for several of these cohorts has significantly improved, and it has remained stable in the other cohorts that already have a high survival rate (Table 7).

Notable improvements in the VHA's surgical out-

Table 3
The VHA's Prevention Index Results
for FYs 1996 and 1997

Indicator	VA FY 96 ^a	VA FY 97 ^a	1997		US Public Health "Healthy People Year 2000" Goals
			Non-VA ^a Performance ⁽⁴⁸⁻⁵¹⁾	Perfor-	
Immunizations					
Pneumococcal	26	61	58		60
Influenza	28	61	36		60
Cancer screening					
Colorectal CA	34	62	55		50
Breast CA	68	87	70		60
Cervical CA	64	90	70		85
Prostate CA discussion	1	37	No data		^b
Tobacco consumption					
Screening	49	86	No data		100
Counseling	35	79	61		100
Alcohol consumption					
Screening with standard instrument	2	40	No data		100

^a Average percentage of patients receiving the intervention.

^b No goal established.

^c CA = cancer.

comes also have been documented in recent years. These changes have their roots in the VA's National Surgical Quality Improvement Program (NSQIP)(54-61), Cardiac Surgery Review Program (62-65), and other efforts initiated before the VHA's reengineering commenced. For example, overall 30-day postoperative mortality and morbidity rates for major surgical procedures decreased 9% and 30%, respectively, (with no change in patient risk profile) since 1994 (61). The VA's mortality rates for colectomy, abdominal aortic aneurysm repair, carotid endarterectomy, cholecystectomy, and total hip replacement are the lowest, or equal to the lowest, in the country according to a 10-year review of published studies of surgical outcomes (personal communication, Shukri Khuri, MD).

Continuing Reengineering

Much about the VHA's reengineering has charted new territory, since no established health care system of the VHA's size and complexity has ever accomplished such a radical change. Likewise, no public agency having the complexity of missions and the political sensitivity of veterans' health care has ever changed so quickly. There are no directly comparable models for accomplishing such a reengineering effort.

Table 4
The VHA's Chronic Disease Care Index

Condition/Indicator	Definition
Ischemic heart disease	
Aspirin administration	The percent of appropriate post-acute myocardial infarction (AMI) outpatients with chart documentation of the administration of aspirin
Beta blocker administration	The percent of appropriate post-AMI outpatients with chart documentation of the administration of beta blockers
Cholesterol management plan	The percent of post-AMI outpatients with chart documentation of a plan to manage cholesterol
Hypertension	
Nutrition counseling	The percent of appropriate patients with chart documentation of counseling about nutrition and weight control during past 2 years
Exercise counseling	The percent of appropriate patients with chart documentation of counseling about exercise during past 2 years
Chronic obstructive pulmonary disease (COPD)	
Inhaler observation, outpatients	The percent of persons with COPD on inhaled drugs, first receiving an inhaler in the past three years, with documentation that they were instructed and were observed properly using the inhaler
Inhaler observation, inpatients	The percent of persons with COPD using an inhaler, admitted to the hospital in the past three years with diagnosis of COPD, whose use of inhaler was subsequently observed and corrected if necessary
Diabetes mellitus	
Inspection of feet	The percent of diabetics, other than bilateral amputees, with chart documentation of visual inspection of feet in the past year
Examination of pedal pulses	The percent of diabetics, other than bilateral amputees, with chart documentation of examination of pedal pulses in the past year
Sensory examination of feet	The percent of diabetics, other than bilateral amputees, with chart documentation of foot sensory examination in the past year
Retinal eye exam	The percent of diabetics with chart documentation of funduscopic examination of the retina in the past year
Hemoglobin A1c	The percent of diabetics with chart documentation of hemoglobin A1c determination in the past year

Table 4
Continued

Condition/Indicator	Definition
Obesity (Body Mass Index, > 27)	
Nutrition counseling	The percent of overweight persons with chart documentation of nutrition counseling during the past 2 years
Exercise counseling	The percent of overweight persons with chart documentation of counseling about exercise during the past 2 years

The VHA's reengineering has progressed in 3 phases so far. These have occurred at differing rates in different parts of the system, although these phases are not precisely defined nor completely distinct from each other.

Phase 1 of the VHA's reengineering began in late 1994 and continued through the end of 1995. This phase consisted of analyzing the future; defining the problems of the then existing system (Table 1); describ-

Table 5
The VHA's Chronic Disease Care Index Results for FYs 1996 and 1997

Indicator	VA FY 96 ^a	VA FY 97 ^a	1997 Non-VA ^a Performance ^{48,52}	US
				Public Health's "Healthy People Year 2000" Goals
Ischemic heart disease				
Aspirin therapy	91	92	76	^b
Beta blocker therapy	71	83	62	^b
Cholesterol management	74	98	No data	^b
Hypertension				
Nutrition counseling	37	78	No data	100
Exercise counseling	26	76	No data	100
COPD				
Inhaler use (outpatient)	19	44	No data	^b
Inhaler use (inpatient)	16	61	No data	^b
Diabetes mellitus				
Foot inspection	73	90	45	^b
Foot pulses checked	46	74	No data	^b
Foot sensation checked	35	69	No data	^b
Retinal eye exam	47	69	42	^b
Hemoglobin A1c	51	85	38	^b
Obesity				
Nutrition counseling	44	85	No data	100
Exercise counseling	26	78	No data	100

^a Average percentage of patients receiving intervention.

^b No goal established.

Table 6
The VHA's Palliative Care Index

Condition/Indicator	Definition
Individualized comprehensive service that includes the following:	
Discussion of resuscitation status	The percent of persons not enrolled in hospice or an equivalent program whose record documents a discussion of patient and family preference pertaining to resuscitation
Assessment of nutritional and/or hydration needs	The percent of persons not enrolled in hospice or an equivalent program whose record documents an assessment of nutritional and/or hydration needs
Psychosocial support	The percent of persons not enrolled in hospice or an equivalent program whose record documents that emotional or social support or guidance was provided to the person and/or family, or other caregiver
Caregiver support and instruction	The percent of persons not enrolled in hospice or an equivalent program who were discharged to home and whose record documents that both the person and the family or other caregiver were provided instruction for posthospital care and that the family or other caregiver was provided with information about respite and other caregiver support
Plan for pain management	The percent of persons not enrolled in hospice or an equivalent program whose record documents that for those persons who experienced pain there was a plan for pain management
Plan to manage dyspnea	The percent of persons not enrolled in hospice or an equivalent program whose record documents that for those persons who experienced dyspnea there was a treatment plan
Plan to manage depression	The percent of persons not enrolled in hospice or an equivalent program whose record documents that for those persons who experienced depression there was a treatment plan
Enrolled in VA hospice	The percent of persons enrolled in a formal VA hospice program
Enrolled in home-based primary care	The percent of persons enrolled in the VA's Home-based Primary Care Program
Enrolled in community-based hospice	The percent of persons enrolled in a formal hospice program sponsored by community outside of VA

Table 7

1-Year Survival Rates for 9 High-Volume VA Conditions^a

Condition	1-Year Survival Rate (%)	
	FY 1992	FY 1997
Chronic renal failure	74.4	81.4
Congestive heart failure	76.7	83.5
COPD	85.0	88.0
Pneumonia	82.6	89.2
Diabetes mellitus	94.7	94.7
Angina pectoris	96.0	96.7
Major depressive disorder	98.1	98.5
Schizophrenia	98.2	98.3
Bipolar disorder	98.0	98.5

^a Risk-adjusted percentage of patients surviving the fiscal year, VA system-wide.

ing a vision of the new VA (26); developing a plan for transforming the system; gaining consensus on that plan (this included 6 months to secure Congressional approval); creating new programs and hiring new staff, as well as eliminating programs that were no longer needed; and otherwise laying the groundwork for changes actualized in the next phase.

Phase 2 began in early 1996 and has continued through 1998. This phase has been characterized by operationalizing the new, integrated-service, network management structure with its more decentralized decision-making processes; implementing and validating a new, capitated, resource allocation system, with its attendant funding shifts and new operating incentives (66-67); substantially changing the manner in which services are provided (eg, the major shift from inpatient to outpatient care, implementation of universal primary care, establishment of community-based outpatient clinics, inauguration of regional and multi-institutional service lines); implementation of a pharmacy benefits management program, including a national formulary; restructuring the VHA's education and research programs (33, 42-46); major reductions in personnel; enactment and implementation of landmark eligibility reform legislation with its myriad consequent effects, including a formal enrollment system (68); merging numerous facilities (69); markedly expanding and modernizing information management capabilities; and initiating fundamental and far-reaching changes in personnel practices, program functions, and performance assessment.

As the end of 1998 approaches, the VHA appears to be entering Phase 3 of the reengineering effort, during which the many new ways of doing business are becoming fully operationalized and are being refined according to early experience with them. Likewise, the

new organizational culture that was birthed in Phase 2 will grow and mature in Phase 3.

Given the intrinsic inertia in a bureaucracy as large as the VHA and with as many sources of internal and external resistance to change, a substantial degree of centralized direction has been necessary to launch the VHA's operational transformation and to establish the foundation for a new organizational culture. (Not surprisingly, this amount of rapid change, with its requisite central direction, has produced significant turmoil, anxiety, and uncertainty among staff!) During Phase 3, there is expected to be continued change, but the nature of the change is expected to be somewhat less intense as the organization assimilates the many new ways of doing business that were initiated in Phase 2 and as the new organizational culture matures. It should be a period characterized more by bottom-up refinement and adjustment than by the top-down, radical changes initiated in Phase 2. (Of course, if further major environmental changes occur, there may be a need for more centrally directed change.) While the operational transformation has been the defining characteristic of Phase 2, it is expected that the quality transformation will be the defining characteristic of Phase 3.

QUALITY MANAGEMENT IN THE NEW VA

The VHA strives to improve quality of care through a comprehensive performance management system that aligns its vision and mission with quantifiable strategic goals, defines measures to track progress in meeting those goals, holds management accountable through performance agreements for results achieved, and advances quality within the context of patient-centered care across the continuum of care, while maintaining sound resource management. In general, the VHA's specific quality assessment and assurance instruments are similar to those employed by private-sector health care providers, and many of these activities are described in detail elsewhere (70–83).

While the VHA's experience in implementing and institutionalizing QM technologies appears to be similar to that of the private sector, its experience is also unique in some respects. For example, the VHA's extensive involvement in health professional education and research has provided particular opportunities for increasing the knowledge base about and encouraging innovation in quality improvement, as illustrated by the recent creation of the VA National Quality Scholars Fellowship Program (84), the VA Faculty Fellows Program for Improved Care at the End of Life that was

recently funded by the Robert Wood Johnson Foundation (85), and the VHA's Quality Enhancement Research Initiative (QUERI) that was launched in 1998 (86).

The public and highly political nature of veterans health care also has presented some particular challenges, especially with regard to the anecdotal reporting of quality-of-care problems—a number of which have been brought to light as a result of reengineering the system. Indeed, the VA's public image for quality of care is somewhat checkered, despite a variety of published data showing the VA's clinical processes and outcomes to be comparable with, or better than, non-federal health care (57, 59, 60, 64, 79, 87–104). These data are supported by findings from other sources. For example, in FYs 1995 and 1996, 20% of the VA hospitals undergoing JCAHO accreditation in those years received accreditation with commendation (the highest possible level of accreditation); this compared favorably with 11% of private hospitals. In the same vein, 70% of the VA's nearly 14,000 physicians have a university faculty appointment, and 85% (107 of 126) of US medical schools use VA hospitals as primary teaching facilities. It seems highly unlikely that this would be the case if the VA provided poor care.

Many factors contribute to the VHA's uneven reputation for quality of care. Prominent among these are the combination of unparalleled external oversight and the VA's public nature, which together set the stage for anecdotal and often sensational reporting of problems. VA's quality-of-care problems are rarely presented in context—ie, rarely in the glare of the public spotlight is information provided about the complex nature of such problems and their similar occurrence in all types of healthcare systems. This results in an often-distorted perception of VA quality of care. In addition, the VA's performance has been portrayed inconsistently and sometimes inaccurately by politicians, by veterans service organizations and other stakeholder groups, by professional organizations, and even by its own staff when such misleading presentations served personal, organizational, or political agendas. The VA's large size and historically inward focus and an inherent institutional defensiveness have also contributed to erroneous public perceptions.

Systematizing Quality Management

In recent years, the VHA has made concerted efforts to improve and to systematize QM. These efforts began prior to the VHA's reengineering, but they have assumed greater significance and have been an integral

part of the reengineering commenced in 1995. The biggest and most difficult challenges in this regard have been and continue to be the inadequacy of currently available health care QM technology, especially the lack of reliable ways to link the many discrete practitioner-related and facility-based QM activities into a coherent national QM system that results in the provision of consistent and predictable high-quality health care over time and distance. Indeed, industrial-strength levels of deployment of quality improvement remain elusive in health care everywhere. This problem is increasingly an issue for the private sector as a result of the growing emphasis on quality of care and the pressure from market forces on previously independent, local health care providers to coalesce into regional and national systems of care.

The VHA's goal is to have a QM system that ensures that America's veterans receive the highest quality health care possible everywhere in the veterans health care system "the first time, every time." It is the VHA's intent that its QM system will work to eliminate inappropriate or unnecessary overutilization and underutilization and to reduce misuse and medical errors to the fewest possible. The goal is to provide the right amount of care in the right way and in the right place at the right time for the right cost.

Guiding Principles

The VHA's approach to QM is predicated on a number of principles and underlying concepts, especially the following fifteen.

- The VHA should strive to achieve the highest possible quality of care and should not be satisfied with providing care that is as good as someone else provides or that is the current best. The VHA should seek to make care as good as it can be.
- Improved quality is the result of actively managing performance. This requires a structured process for systematic measurement, monitoring, and evaluation of clinical activities, their outcomes, and their improvement. Organizational processes should facilitate and personnel should be empowered to identify or develop, as necessary, practice protocols and performance standards incorporating best practices; to disseminate these protocols or standards; to monitor adherence to them; to take action if discrepancies are found; and to update or revise the protocols or performance standards according to outcomes.
- All institutional processes, practices, and policies contribute either directly or indirectly to the quality of care provided. Quality management is not a separate and distinct program. It is an essential aspect of all processes and practices. Therefore, all organizational processes, practices, and policies must be continually reviewed, analyzed, and refined in light of outcomes.
- Broad-based, continuous quality improvement is an essential management method and an organizational imperative, but it is an iterative process and should be viewed as a long journey involving continuous self-criticism, learning, and change.
- Improving quality requires commitment and involvement at all levels of the organization and by all staff and their representatives.
- Resource allocation and personnel payment methodologies should be strategically linked to quality improvement.
- Health care quality improvement depends on having readily available, relevant, and reliable information about what services are needed and who needs them, how services are provided and what their outcomes are, and what those services cost. In this regard, for an outcome to be a valid measure of quality of care, it must be closely related to processes of care that can be manipulated to effect the outcome. Likewise, for a process to be a valid measure of quality, it must be closely related to an outcome that is important. These process- and outcome-related data must be actively managed.
- The cost effectiveness of care is best improved by developing better services and better processes of care (instead of by restricting care or rationing funds). Better processes of care include aggressive health promotion and disease prevention programs that reduce the demand for care, as well as actively involving and empowering the patient in clinical decision making and care processes.
- Quality of patient care is most immediately influenced by those practitioners closest to the site of service delivery. Therefore, the VHA must have proactive systemwide policies and procedures for measuring, monitoring, and evaluating quality of care at the site of service delivery and for consistently and quickly feeding back relevant information to front-line practitioners. Lessons learned about quality of care should be rapidly operationalized by caregivers.
- Human knowledge, judgement, and skill are imperfect and vary over time and distance. Quality-of-care problems most often result from process-related or systems-related failures that allow suboptimal decisions to be made, acted upon, and brought to completion. The inherent nature of human imperfection must be recognized by health care organizations, and processes and systems must be designed to min-

imize the occurrence of human error by detecting, intercepting, and preventing erroneous actions so that they are not completed.

- Health care delivery organizations must create environments in which practitioners think critically about the processes and technology of care, proactively identify real and potential problems, and aggressively develop and implement needed changes. The organizational environment must welcome the identification of errors because the system views errors as opportunities for improvement.
- While achieving high-quality health care is everyone's responsibility, practicing physicians must provide active and visible leadership in improving health care quality. Likewise, both physicians and nurses must be intricately and extensively involved in all processes that affect the quality of care.
- Since health care today is primarily provided by teams of practitioners, the functioning of those teams must be oriented towards preventing errors and untoward outcomes resulting from the care process, as well as towards coordinating care among settings and practitioners and ensuring that relevant and reliable information is available when needed. In team-based health care delivery systems, physicians must view themselves as leaders of integrated comprehensive care systems instead of as solo practitioners.
- Research is an integral part of any high-quality health care system, and the primary mission of a health care organization's research program should be to improve the quality of care provided to its patients. The research program should focus on the needs of the system's users, and organizational policies should facilitate the discovery of new and innovative ways to meet patient's needs. The VHA's health services research program should be especially focused on the needs of veterans and on seeking solutions to problems of health care management in the veterans' health care system.
- Improving the quality of health care should reduce its overall cost.

The VHA's Quality Management Accountability Framework

In operationalizing its goal of systematizing QM, the VHA views a "system" as a planned arrangement or assemblage of elements that regularly interact to achieve a specified purpose. This aggregation of parts operates according to specified policies and procedures—ie, formal rules—and there is a generally understood

method by which the union of the disparate elements achieves the goal.

The primary reason for creating a system is to produce synergies that are possible only when the individual elements function as an organized whole. This concept of and expectation for a system underlies the VHA's approach to systematizing QM—ie, synergistic improvements in the outcomes of health care should be possible when the experience and data from many individual quality assessment and quality improvement activities, operating at many individual sites of care, are assembled into an organized whole.

Toward this end, in the last 3 years, the VHA has built upon its prior quality improvement efforts, focusing especially on specifying performance goals and operational expectations, increasing the number of awards and other recognitions that encourage competition to achieve better performance, and defining how similarly intended processes relate to each other and to other QM activities. In doing this, the VHA has taken a broad view of QM and has organized more than 100 different structure-, process- and outcome-focused QM activities into a Quality Management Accountability Framework (QMAF) according to 10 overlapping and interrelated dimensions (Table 8). Each of these dimensions utilizes a defined strategy that employs a menu of specific quality assessment and assurance instruments. By organizing these numerous QM functions and methods into a management accountability framework, it should be possible to further develop policies and procedures (i.e, "rules") by which the various dimensions and tactics will operate to support and complement each other over time and distance, as well as to assign principal and collateral responsibility for their operation to various levels of or units within the organization and to better plan their interactions to achieve higher quality.

Space here does not allow for a discussion of the QMAF's 10 dimensions and their strategies, the many individual QM activities ("tactics") in the QMAF, nor the ways in which they relate to each other. Important to note, however, is that the QMAF is not a plan of action or management scheme per se. Instead, it is a way of organizing thinking about many different activities that relate to each other and a way of developing systems processes by which the various strategies and tactics will support and complement each other across time and distance. Further, given the absence of best practices for the deployment of quality improvement across large health care systems, this framework is intended to facilitate network-based innovation in this area.

Conceptually, the VHA's approach to QM is in many

Table 8

The VHA's Quality Management Accountability Framework

Dimension	Strategy	Tactics
Personnel/human resources	To attract and retain the best people possible	Credentialing (board certification, licensure) Privileging/scope of practice Mentoring Academic affiliations Work-friendly environment Performance-based interviewing
Clinical care activities	To maximize utilization of clinical care activities that increase the likelihood of achieving desired health outcomes	Primary care Telephone-linked care Utilization management Community-based services and home care Care/case management Practice guidelines/clinical pathways Shared decisionmaking Palliative care Practice profiling Transplant review boards Contract specifications Programs of excellence
Performance indicators	To measure and monitor progress in achieving desired health outcomes	Prevention Index Chronic Disease Care Index Palliative Care Index Spinal Cord Injury Index Surgical morbidity and mortality rates Medical cohort survival rates Long Term Care Index Functional outcome measures (SF-36, Functional Independence Measure, Addiction Severity Index) Special Program Outcomes Mental health performance indicators Case Registries (eg, cancer, spinal cord injury, immunology/HIV, clozapine, PET, Agent Orange, Gulf War, ionizing radiation) Occupational Safety and Health Index Financial management report cards Performance measures work group
Internal review and improvement	To engage all levels of the organization in both routine and event-triggered cycles of improvement	Clinical pathology conferences Morbidity & mortality conferences Ad hoc review teams Process action teams Pharmacy and Therapeutics Committees Bioethics Committee reviews Patient Safety Sentinel Events Registry Causation analyses (Focused Reviews, Boards of Investigation, Root cause analyses) Programs of Excellence Tort claims analysis Patient Safety Oversight Committee Technical advisory groups (dialysis, other) National Formulary Management/Pharmacy Benefits National Surgical Quality Improvement Program Surgical consultant committees (cardiac, neurosurgery, other) Quality Management Officer reviews VISN quality forums Baldrige assessments Benchmarking Employee feedback Quality councils Quality-related advisory committees (eg, committee on care of severely chronically mentally ill veterans) Office of the Medical Inspector
External review & oversight	To enlist impartial and independent review of care	Accreditation and Certification (Joint Commission on Accreditation of Healthcare Organizations, Rehabilitation Accreditation Commission, National Committee on Quality Assurance, American College of Surgeons, American College of Radiology, College of American Pathologists, American Association of Blood Banks, Nuclear Regulatory Commission, Accreditation Council for Graduate Medical Education, American Psychiatric Association, American College of Nuclear Physicians, Food and Drug Administration (FDA) Division of Mammography Quality and Radiation Programs) Quality Management Advisory Panel

Table 8
Continued

Dimension	Strategy	Tactics
Technology management	To optimize use of technology to achieve desired health outcomes	Quality-related advisory committees (eg, Geriatrics and Gerontology Advisory Committee, Persian Gulf Expert Scientific Committee, Advisory Committee on Prosthetics and Special Disabilities Programs, Expert Advisory Panel and Patient Safety System Design, Advisory Committee on the Readjustment of Veterans, Advisory Committee on Women Veterans, Future of VA Long-Term Care Advisory Committee, Special Medical Advisory Group) External peer review (contracted) Office of the Inspector General (Department of Veterans Affairs) General Accounting Office Veterans' service organizations Academic affiliates Congress Press/media
Patient-reported outcomes (service satisfaction)	To optimize patient and patient family involvement in the design and delivery of health-care services	Decision support aides Quality system survey Electronic medical record Medical record direct patient input Technology Recommendations Panel Focus groups Customer satisfaction surveys (inpatient, outpatient, Gulf War, spinal cord injury) Complaint handling Patient advocates Service Evaluation and Action Teams
Education	To prepare the current and future healthcare work force to deliver high-quality healthcare and to actively participate in improving care	Health professional training (academic environment) Workforce development (360° personnel evaluations, continuing education) Quality scholars and fellowships
Research	To generate new knowledge that facilitates improved health outcomes	Health services research studies Clinical care studies Biomedical studies Technology assessments Quality-related research advisory committees (Research and Development Cooperative Studies Evaluation Committee, Medical Research Service Merit Review Committee, Scientific Review and Evaluation Board for Health Services Research and Development, and Rehabilitation Research and Development Service Scientific Merit Review Board)
Change management	To actively manage change to achieve strategic goals	Executive performance agreements Quality Management Integration Council Resource allocation strategy (VERA) Standardization of language Integrated collaborative planning VA Quality Awards (eg, Robert W. Carey Award, Scissors Award) USH/VHA Quality Improvement Awards (eg, Best Value Award, Strategic Alliance Award, Quality Improvement Award, Superior Customer Service Awards, others) Patient Safety Improvement Awards Quality Achievement Recognition Grant External Awards (eg, Hammer Award, President's Award for Quality, professional organization awards, community awards)

ways analogous to the human nervous system. That is, the VHA has put in place a variety of sensors to monitor different aspects of quality of care. Data, or inputs, from these sensors flow from myriad points of direct patient contact to sequentially higher junctures (eg, the clinics, services, hospitals, and VISNs), where they are aggregated and analyzed along the path to VA Headquarters (VAHQ). Analogous to the brain, the VAHQ further aggregates and integrates, analyzes, interprets, and stores data from throughout the entire system. After being received and processed, the data elicit a response, which is transmitted to various effectors (eg, caregivers). Depending on the stimulus and sensor, a response may be initiated at any of the intermediary points along the path to VAHQ. By storing, collating, and continuously analyzing data from the system's many different parts, all elements of the system should be able to learn more quickly than if each individual element had to amass its own storehouse of data before it could learn from the information.

The VHA's Patient Safety Improvement Initiative

A particularly important new quality improvement effort launched as part of the VHA's reengineering has been its Patient Safety Improvement Initiative (PSII). Despite compelling evidence that errors in medical care are common and that many thousands of patients suffer untoward consequences resulting from such errors every year, this important area of healthcare quality improvement has not heretofore received appropriate attention because of the blame-oriented, fault-finding culture that surrounds medical care errors (102). Fortunately, this situation has started to change, and a number of groups are now beginning to address the problem in various ways. The veterans health care system is in the vanguard of these efforts. Indeed, a combination of factors uniquely position the VA to serve as a national laboratory for finding ways to prevent medical errors and improve patient safety. These include its size and presence in every state and in almost every major metropolitan area in the nation, its fully integrated nature, its openness to scrutiny as a public system, and its data capture mechanisms and information management infrastructure. Similarly, the nature of federal tort claim laws (ie, the government is sued but not the individual practitioner) should create a somewhat more favorable climate for dealing with errors than in the private sector. Likewise, the VHA's unparalleled oversight (eg, by JCAHO and other accrediting bodies, Congress, the General Accounting Office, the Inspector General, and veterans service organiza-

Table 9

Elements of the VHA's Patient Safety Improvement Initiative

Establishment of high-level Office of Patient Safety
Development of a Patient Safety Reporting Analysis and Feedback System (PASRAFS)
Revision and expansion of former Patient Incident Reporting System
Establishment of a Patient Safety Expert Advisory Committee
Implementation of pilot projects of a PASRAFS
Implementation of a National Patient Safety Improvement Oversight Committee at VHA headquarters
Initiation of a Patient Safety Awards Program
Establishment of a Center for Lessons Learned (originally called the Lessons Learned Project)
Imposition of a continuing education requirement in quality improvement and patient safety
Development and/or Implementation of Specific Interventions
Promulgation of a nationwide policy on the presence of concentrated KCl for injection in patient care areas
Blood transfusion bar coding
National medication administration system (bar coding for medication administration)
Computerized drug interaction system
Computerized physician order entry
Year 2000 compliance project
Reengineering the VHA's internal safety alert process
Patient Safety Improvement Research Projects and Centers of Inquiry
Convening of the National Patient Safety Partnership
Provision of support for other programs
Principal funder for the workshop, "Assembling the Scientific Basis for Progress on Patient Safety" in December 1997
Core funder and program organizer for "Annenburg II" national conference, "Enhancing Patient Safety and Reducing Errors in Health Care" (1998)
Core funder for the Harvard University Executive Session on "Preventing Medical Error and Improving Patient Safety" (1997-1999)

tions), its extensive involvement with health care professional training, and its research program provide special opportunities in this regard, as evidenced by the VHA's recently announced Patient Safety Improvement Research Program (103) and the new Patient Safety Centers of Inquiry.

The VHA's Patient Safety Improvement Initiative has included activities in 10 areas to date (Table 9). A key component of this PSII has included an overhaul of the VHA's former Patient Incident Reporting System to make it a centralized Patient Safety Registry and Reporting System. This system includes a patient safety handbook, a field-to-headquarters reporting mechanism for both sentinel events and unplanned clinical occurrences ("near misses"), a requirement to conduct root-cause analyses for both types of incidents, and an interdisciplinary, expert review team that provides feedback to medical treatment facilities and dis-

Table 10

Critical Characteristics of the VHA's Patient Safety Reporting, Analysis, and Feedback System (PASRAFS)

Reduces the likelihood of occurrence of medical errors, adverse events, or care that results in undesired patient outcomes
Encourages and facilitates the complete reporting of patient safety information (including medical errors and adverse events)
Provides data with optimal validity and credibility
Facilitates data acquisition and promotes learning from the broadest possible pool of health care providers and experiences
Supports rapid, widespread dissemination to all health care providers of patient safety information and lessons learned
Can easily be used to inform public policy making
Promotes an environment that enhances the likelihood of desired health care outcomes

seminates information to the rest of the VA system (104). This has been complemented by the establishment of a VHA Center for Lessons Learned, which is now administratively housed in a Center for Patient Safety that reports directly to the Office of the Under Secretary for Health.

Not satisfied that all was being done in this area that could be, in October 1997, the VHA convened an Expert Advisory Panel on Patient Safety System Design that was charged with reviewing the VHA's revised Patient Safety Registry and Reporting System and similarly intended systems used in aviation and other high-risk industries and then recommending a model system for health care that builds upon the experience of these other industries. The committee was further charged with ensuring that the proposed model met the 7 key characteristics listed in Table 10. Implementation of at least 2 pilot projects for a new Patient Safety Reporting, Analysis and Feedback System (PAFRAFS) are planned for the FY 1999. These pilots should provide critically important experiential information for the entire health care industry.

Two other especially important elements of the VHA's PSII have been a new Patient Safety Improvement Awards Program (PSIAP) and the National Patient Safety Partnership (NPSP). The PSIAP was established to encourage health care practitioners, and especially frontline caregivers, to identify adverse events, or potential patient safety problems, and improved processes or practices that reduce the risk of an untoward medical care outcome. Under this program, awards of up to \$25,000 per facility and \$5000 per person are available for improvements that eliminate serious patient safety risks and which have systemwide application (105). Likewise, the public-private NPSP was convened in recognition of the magnitude and

complexity of the medical error problem and the fact that medical errors occur in all types of health care delivery systems, with all forms of healthcare financing, and are committed by all types of healthcare professionals (102). (The founding members of the NPSP were the VHA, the American Medical Association, the American Hospital Association, the American Nurses Association, the American Association of Medical Colleges, the Joint Commission for Accreditation of Healthcare Organizations, the Institute for Healthcare Improvement, and the National Patient Safety Foundation at the AMA. More recently, the Agency for Healthcare Policy and Research of the Food and Drug Administration of the Department of Health and Human Services; the Office of the Assistant Secretary for Health of the Department of Defense; and the National Institute for Occupational Safety and Health have joined the partnership).

The VHA's Blended Strategy for Effecting Quality Improvement

To accomplish the goal of systemwide quality improvement, the VHA has pursued an operational strategy that combines central direction or "regulation" (eg, directives from VAHQ) with competition and rewards and that builds upon the professionalism and passion of health care workers to do what is best for patients. This blended strategy is conceptually similar to the approach used to improve cardiac surgery outcomes in New York State (106–108), although the nature of the regulation and competition in this case are primarily internal to the organization. In essence, this is the proverbial "carrot and stick" approach combined with altruism.

The VHA's "regulatory" efforts consist primarily of defining and setting standards and expectations for quality and other performance, monitoring performance to determine if the standards are being met, and then managing those entities needing improvement. The principal vehicle that has been used to effect these expectations has been executive performance agreements (aka, "performance contracts") between each VISN director and the Under Secretary for Health (the VHA's chief executive officer). The VISN directors, in turn, have effected similar performance agreements with their subordinate managers. At present, this performance management methodology is unique to the VHA in the federal government, and the approach is being studied by investigators from Boston University as part of a project funded by the National Science Foundation to study large organization

Table 11

Awards and Recognitions Used by the VA

Department of Veterans Affairs awards
Robert W. Carey Award for Quality
Secretary's Award for Excellence (various programs)
Secretary's Award for Advancement in Nursing Programs
Scissors Awards (for reducing bureaucracy)
Heart & Hands Awards
Veterans Health Administration awards
Mark Wolcott Award for Clinical Excellence
David M. Worthen Award for Academic Excellence
William S. Middleton Award for Research Excellence
Paul B. Magnuson Award for Rehabilitation Research
Undersecretary for Health's (USH) Awards
Quality Improvement Awards
Best Value Awards
Superior Customer Service Awards
Strategic Alliance Awards
USH Honor Awards
USH Award (for program/specialty) of the Year
USH Achievement Awards
Unsung Heroes & Heroines Awards
Voluntary Service Award for Excellence
Diversity Awards Program
Patient Safety Improvement Awards
\$1,000,000 Quality Achievement Recognition Grant
Clinical Programs of Excellence
External awards
National Performance Review ("Hammer Awards") for reinventing government
President's Award for Quality
Community organization awards (various)
Professional society awards (various)
Foundation awards (various)
Malcolm Baldrige Award

change. The VHA is 1 of only 2 government agencies (NASA being the other) included among the 25 organizations being studied in the project.

The performance measures for which network directors are held accountable are linked to the VHA's strategic goals and are divided among the VHA's 5 specified domains of value—ie, technical quality, access to care, patient-reported outcomes (service satisfaction), patient functional status, and cost (27). Utilizing these multiple domains and multiple measures in each domain provides an intrinsic check-and-balance system. By collating and promulgating quality information achieved by the VISNs, hospitals, and other care delivery elements and by instituting an array of awards and recognitions for high quality (Table 11), the VHA also hopes to stimulate competition towards improvement among the VISNs and facilities, with the patient benefitting from such competition. Many of these awards have been implemented in the last 3 years and VHA continues to seek the right ways to recognize and reward individuals and collective quality improvement.

CONCLUSION

With its focus on matching beneficiaries with the most appropriate modes of care and on systematizing QM, the VHA's reengineering is pioneering new territory. Little data are available about how to accomplish such goals in large health care systems. The VHA's new organizational structure and focus on quality improvement puts it in a unique position to innovate and increase knowledge about how integrated service networks can better serve populations with substantial need for health care services and about how to manage such networks for improved quality of care. The "new VA" has all the elements to serve as a national laboratory for health care QM that can provide important experiential information for health care systems everywhere.

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