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April 1998

# VA HOSPITALS

## Issues and Challenges for the Future



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United States  
General Accounting Office  
Washington, D.C. 20548

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**Health, Education, and  
Human Services Division**

B-277634

April 30, 1998

The Honorable Arlen Specter  
Chairman  
Committee on Veterans' Affairs  
United States Senate

Dear Mr. Chairman:

In response to a request by the former Chairman, this report, VA Hospitals: Issues and Challenges for the Future ([GAO/HEHS-98-32](#), Apr. 30, 1998), discusses major issues and challenges that the Congress and the administration will face in the next few years regarding VA (Department of Veterans Affairs) hospitals. The report examines how VA and community hospitals' care evolved during the 20th century, including changes in supply and demand, factors contributing to the declining demand, the extent of excess capacity, and actions taken to increase efficiency and compete for patients.

We are sending copies of the report to appropriate congressional committees, the Secretary of Veterans Affairs, and other interested parties. We will also make copies available upon request.

If you have any questions concerning the report, please call me at (202) 512-7101. Other major contributors are listed in appendix XI.

Sincerely yours,

A handwritten signature in black ink that reads "Stephen P. Backhus". The signature is written in a cursive, flowing style.

Stephen P. Backhus  
Director, Veterans' Affairs and  
Military Health Care Issues

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# Executive Summary

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## Purpose

Hospitals, which account for over 40 percent of U.S. health care expenditures are changing rapidly and dramatically. Cost-containment efforts, the effects of advancing technology, and the changing health care needs of an aging population are driving these changes. More specifically, use of community hospitals has declined since 1980, with the average number of patients in community hospitals declining by almost 27 percent. Likewise, use of the 173 hospitals operated by the Department of Veterans Affairs (VA) has steadily declined since the 1960s. The average daily workload of VA hospitals has declined about 66 percent from 1963 through 1995.

The Chairman, Senate Committee on Veterans' Affairs, asked GAO to identify major issues and challenges that the Congress and the administration will face in the next few years concerning VA hospitals. In doing so, GAO compared VA and community hospitals regarding

- how hospital care evolved during the 20th century, including changes in supply and demand;
- factors contributing to the declining demand;
- the extent of excess capacity; and
- actions taken to increase efficiency and compete for patients.

GAO also studied changes in teaching hospitals, that is, hospitals involved in training the nation's physicians and conducting medical research. Nearly three-fourths of VA hospitals are involved in medical education or research.

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## Background

About 6,300 hospitals were registered with the American Hospital Association in 1995—about 5,200 community hospitals and 1,100 noncommunity hospitals. Community hospitals include nonfederal, short-term general hospitals such as (1) nonprofit; (2) investor-owned, for-profit; and (3) state- and local government-owned hospitals. Noncommunity hospitals include federal hospitals, long-term care hospitals, psychiatric hospitals, institutions for the mentally retarded, and hospitals providing inpatient treatment for substance abuse.

VA hospitals constitute a large single group of noncommunity hospitals. In fiscal year 1996, VA's system operated an average of 45,798 hospital beds, including both acute medical and psychiatric care beds, and admitted about 802,996 patients. In addition to hospitals, the VA health care system includes 375 outpatient clinics, 130 nursing homes, and 39 domiciliaries.

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For fiscal year 1997, VA obligated about \$17 billion to maintain and operate these facilities, and, on a limited basis, contract for care from non-VA providers.

VA is in the midst of a major reorganization of its health care system. It has replaced its four large health care regions with 22 Veterans Integrated Service Networks (VISN), intended to shift the focus of the health care system from independent medical facilities to groups of facilities collaborating to provide efficient, accessible care to veterans in their service areas.

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## Results in Brief

Both community and VA hospitals are struggling to survive. After years in which hospital beds were filled as fast as they became available, demand for hospital care abruptly reversed and has steadily declined since the 1980s in community hospitals and since the 1960s in VA hospitals.

Although many factors contributed to the reversal, medical advances and changes in health insurance mainly drove changes to community hospitals. VA hospitals, however, were mainly affected by declining numbers of veterans and the improving health care options available to veterans through Medicare and other insurance. VA hospitals have been less affected by payment and other reforms than have community hospitals. As a result, further reductions in use of VA hospitals will likely occur as VA strives to shift more of its care to outpatient and other more cost-effective settings.

Because of the wide variation in both VA and community hospital use in different parts of the country, it is difficult to predict, with any certainty, how many hospital beds will be needed in the future. GAO's work, and studies by others, suggest, however, that if trends continue, 60 percent or more of community hospital beds and over 80 percent of VA hospital beds may not be needed in the next 15 years. If such reductions occur, many hospitals—some say over half—will cease operation.

VA's current strategy for attracting new users—establishing community-based outpatient clinics mainly at sites remote from VA hospitals—may not generate the demand needed to preserve VA hospitals. New users have indicated they are more likely to choose their local hospital rather than a distant VA facility. Other countries, such as Australia, have opened their veterans hospitals to nonveterans to build workload. Allowing VA hospitals to treat more nonveterans could increase use of VA hospitals and broaden

VA's patient base, strengthening VA's medical education mission. Such action could, however, jeopardize the future of nearby community hospitals. Essentially, every new patient entering a VA hospital is a patient not served by a community hospital. If VA decides to directly compete with community hospitals for market share, then it will have to subsequently decide whether to adopt private-sector marketing techniques such as advertising and improving amenities and offering discount prices to managed care plans.

The declining use of community hospitals and VA's vast purchasing power could allow VA, like managed care plans, to negotiate significant discounts from community hospitals. Such contracts could also help improve some community hospitals' financial viability by increasing patient workload.

Although many hospitals will most likely close, others are changing their operations and their relationships with other hospitals and health care providers. Both VA and community hospitals are fundamentally changing the way they operate. Such changes include the hospitals' basic structure and management; reinvention of basic work, procurement, and supply processes; development of new marketing strategies; and methods and procedures for monitoring and delivering patient care. VA has focused attention on such areas as materials management and development of clinical guidelines and outcome measures. VA has not focused attention on other areas such as transforming basic work processes, contracting for patient and nonpatient care services, and marketing.

Teaching hospitals face additional challenges. Such hospitals' use of medical residents as a lower cost labor source is often seen as contributing to the oversupply of physicians. The Congress, through the Balanced Budget Act of 1997, gave non-VA teaching hospitals financial incentives through the Medicare program to reduce residency positions. VA is also reducing its number of residents. Both VA and community hospitals are also increasing efforts to train primary care physicians in response to the increased demand for them. Finally, such hospitals are developing new sources of support for medical research as the availability of funds from their traditional sources becomes more uncertain.

As nonprofit and for-profit hospitals try to reduce costs for paying patients by decreasing the amount of uncompensated care (defined as the sum of charity care and bad debt) furnished, public hospitals, particularly public teaching hospitals, are spending more of their resources on such care. Community hospitals' efforts to reduce the amount of charity care they

provide could increase demand for VA hospital care by veterans who lack health insurance or the resources to pay for care. Both VA's strategic goals and the incentives it is creating through some of its restructuring efforts suggest that VA, like many community hospitals, is focusing its marketing efforts on attracting revenue-generating patients.

Decisions on the future of VA hospitals, whether they mean closing hospitals or opening them to nonveterans, have significant implications for veterans, VA employees, affiliated medical schools, community hospitals, and taxpayers. Therefore, the Congress and the administration must have sufficient information for properly assessing the potential effects of VA's health care system changes on all stakeholders.

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## Principal Findings

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### Role of VA and Community Hospitals Has Evolved

The role of America's hospitals has profoundly changed in this century. In the first three-quarters of the century, advances in medical technology and the development of private and public insurance led to rapid growth in demand for hospital care. Other factors, most notably two world wars and the subsequent expansion of VA's role in treating low-income veterans during the Great Depression, significantly increased demand for VA hospital care during the 1930s and 1940s.

With an apparently insatiable demand for hospital care, federal programs encouraged construction of additional private-sector and VA hospital beds. But, by the 1960s and 1970s, health care spending was growing rapidly, consuming an increasing portion of the gross domestic product. Hospitals accounted for the largest and a growing portion of the increases. In the 15 years after the 1965 creation of the Medicare and Medicaid programs, hospital spending increased from 28 to 44 percent of overall health care spending.

As concern about rising health care costs grew, the role and fortune of America's hospitals again began to change in the early 1980s. The steadily increasing supply of and demand for hospital beds during the first three-quarters of the century turned to steady decreases. By 1995, the number of community hospital beds had fallen to 873,000 after peaking at slightly over 1 million. Community hospitals began to close in increasing numbers; between 1975 and 1995, the number of community hospitals decreased by

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about 12 percent. During the same 20-year period, VA did not close any VA hospitals because of declining utilization.

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### VA Was Slow to Take Full Advantage of Changes in Medical Technology

In the first three-quarters of the century, advancing technology increased demand for hospital care; however, recent innovations have had the opposite effect. Advances, such as laser and other less invasive surgical techniques, allow much care previously provided in hospitals to be provided at home, on an outpatient basis, or in a nursing home. For example, cataract removal, which is performed over 1.3 million times a year, is now done on an outpatient basis. Similarly, developments in psychotherapeutic drugs allow people with mental illnesses who in the past would have had lengthy institutionalizations to obtain treatment on an outpatient basis.

Until the last few years, demand for VA inpatient medical and surgical care was not affected by such medical advances as much as was demand for care in community hospitals. Because its methods for allocating resources to its facilities favored inpatient hospital care, VA was slow in developing outpatient surgery and other such services.

VA has implemented a new resource allocation method that encourages care in outpatient and other cost-effective settings, and VA facilities are now aggressively shifting patients from inpatient to outpatient care. All VA hospitals now have outpatient surgery capability, and the percentage of surgeries performed on an outpatient basis increased from 35 percent in fiscal year 1994 to 52 percent in fiscal year 1996. This, in turn, has dramatically decreased inpatient surgeries: 56 of the 129 VA hospitals that performed inpatient surgeries in fiscal year 1996 had, on average, fewer than 25 beds occupied on any given day.

VA's success in decreasing the number of inpatient surgeries is reducing the financial viability of many of VA's inpatient surgery programs and could threaten their ability to provide quality care. In addition, some of the programs may have become too small to continue to support medical residents.

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### Demand for VA Care Largely Unaffected by Changes in Insurance

The establishment of prospective payment, capitation, and other payment reforms under Medicare, Medicaid, and private health insurance provided community hospitals strong financial incentives to reduce hospital admissions and lengths of stay. Similarly, insurers' increased focus on

medical necessity through such programs as preadmission certification reduced both admissions to, and lengths of stay in, community hospitals.

These payment and utilization control methods, however, had a limited effect on demand for care in VA hospitals because VA hospitals do not financially depend on insurance payments. Studies by GAO, the VA Inspector General, and VA researchers found as recently as 1992 that over 40 percent of the admissions and days of care provided in VA acute medical and surgical beds were non-acute.

VA is implementing several changes in allocating funds to its hospitals and managing patient care to imitate changes in public and private insurance. Although some of the changes hold promise for creating financial incentives at the hospital network level for reducing unnecessary hospital use, we have testified that VA has not adequately studied the reasons for cost variations among hospital networks. Absent the risk of nonpayment for non-acute admissions that exists in the private sector, VA physicians may not change their admission practices. For example, data from both the Washington, D.C., and Martinsburg, West Virginia, VA medical centers indicate that about 45 percent of acute inpatient admissions and about 60 percent of acute days of care in both facilities did not meet standards for acuity or intensity of care.

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### Several Factors Have Reduced Demand for VA Hospital Care

Several factors help explain the reduced use of VA hospitals that started in the 1960s and suggest that the trend will continue. First, the veteran population has been declining since 1980 and, by 2010, is expected to total about 20 million, roughly one-third less than in 1980.

Second, the introduction of Medicare has led to older veterans using VA hospitals less. Even as the veteran population declines, an increasing proportion is reaching age 65 and becoming Medicare eligible. This is important because almost all veterans become eligible for Medicare when they turn 65, even if they were previously employed in jobs that did not provide health insurance. Elderly veterans' use of VA hospitals dropped by 50 percent between 1975 and 1996.

Finally, increased enrollment in health maintenance organizations and other managed care plans affected demand for VA hospital care by reducing the financial incentive of their policyholders who are veterans to use VA hospitals. Managed care plans generally have no or minimal cost sharing for inpatient hospital services.

Recent and proposed changes in the VA system and other health care programs could affect future demand for VA hospital care. For example, the creation of medical savings accounts under the Medicare program might increase demand for VA hospital care by Medicare-eligible veterans. On the other hand, recent changes to make it easier for people to maintain insurance coverage when they change jobs could decrease demand for VA hospital care.

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### Declining Demand for Hospital Care Could Lead to Extensive Closures of VA and Community Hospitals

Because of the declining demand for inpatient hospital care, community hospitals have hundreds of thousands of unused hospital beds. Overall, about 228,000 community hospital beds (about 26 percent) could have been closed in 1995, leaving hospitals to operate at the 85-percent occupancy level (generally considered the optimum). At the other extreme, as many as 572,000 community hospital beds (about 66 percent) may not be needed in the next 15 years.

Occupancy rates for VA hospitals were generally higher than those for community hospitals in 1995, meaning that fewer of VA's operating beds (about 14 percent) exceeded demand. But actions to improve the efficiency of the VA health care system, coupled with other changes in the health care marketplace, are reducing the demand for VA hospital care. As a result, more than 80 percent of VA hospital beds might not be needed in the future if, as a system, VA can achieve the rate of hospital use already achieved by its Northern California Health Care System.

Considerable uncertainty exists, however, about the ability of both VA and community hospitals to achieve such uniformity. Many factors, such as differences in age, health status, medical practice, and insurance coverage, affect the rate of hospital use.

The number and use of both VA and community hospital beds vary widely nationwide. Use of community hospital beds ranged from 1.1 beds per 1,000 population in three states (Alaska, Utah, and Washington) to over 4 beds per 1,000 population in North and South Dakota and the District of Columbia. Similarly, use of VA hospital beds ranged from 6 per 1,000 system users in VISN 18 (Phoenix) to 21 beds per 1,000 users in VISN 3 (Bronx).

Variation in the use of VA hospitals tends to mirror the variation in use of community hospital beds. For example, the census division with the highest community hospital utilization also had the three VISNs with the

highest rate of VA hospital use. The generally lower rates of hospital use in states with higher concentrations of managed care plans suggest that with the right incentives, variation due to differences in medical practice can be reduced.

VA and the private sector have reacted differently to declining inpatient workload. The private sector has closed hundreds of hospitals in the past 20 years. VA, however, has not closed any hospitals because of declining utilization, choosing instead to reduce the number of operating beds or close particular services, such as inpatient surgery. This has frequently left VA operating only a small part of a hospital's physical capacity.

Closing beds clearly saves money by reducing staffing costs. But, with fewer patients to absorb the fixed costs of operating a facility, the cost per patient treated rises. At some point, it becomes more cost-effective to close the hospital and provide care through either another VA hospital or contracts with community hospitals.

With the likelihood that most VA and private-sector hospital beds will exceed needs within the next 15 years, the administration and the Congress face difficult challenges and policy decisions about the future of VA hospitals. Among the challenges VA faces concerning closure of VA hospitals is determining the process to be followed. Where hospital closures are warranted, VA will face additional challenges to ensure that veterans' hospital care needs are met through either community hospitals or other VA hospitals and that the effects on VA employees, VA's academic affiliates, and the community are lessened.

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## Hospital Structure and Management Are Changing

As they struggle to survive, community hospitals are increasingly forming alliances and networks with other hospitals and adding other types of health care services, such as nursing home and home health care; hiring outside management; and improving accounting and information systems to enable managers to better identify and eliminate inefficiencies.

With the exception of hiring outside management, VA is similarly changing its health care system, and it faces many challenges. For example, VA must decide to what extent its networks should include community hospitals to improve the accessibility of VA-supported hospital care. VA also faces difficult challenges in ensuring that the information and financial management systems it is developing and implementing provide complete

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and accurate information that VISNS and individual hospitals need for decision-making.

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### VA Has Focused Less on Transforming Work Processes Than Community Hospitals Have

VA has focused less attention on transforming its work processes than have community hospitals. Community hospitals are trying to contain labor costs, which typically account for over 40 percent of hospital expenditures, by

- contracting for both patient care and nonpatient care services when it is less expensive than providing the care directly,
- using more part-time and temporary nurses and other health care professionals to increase flexibility in meeting changing workloads and patient mix,
- cross-training personnel to perform many jobs to more efficiently use available staff,
- developing nurse extender and other new auxiliary positions to allow nurses to devote more time to direct patient care, and
- restructuring the delivery of care to emphasize patient-centered care to increase efficiency and patient satisfaction.

Until recently, VA's legislative authority did not allow it to contract for patient care services. With this barrier now removed, VA is increasingly exploring options for contracting for both patient and nonpatient care services.

One area in which VA appears to be moving in the opposite direction as the private sector is in use of part-time and intermittent employees. Views on the effectiveness of using such employees vary, however, and VA will have to decide the extent to which it should follow community hospitals' lead. Similarly, because views on the effectiveness of patient-centered care vary in the private sector, VA will have to decide the extent to which such initiatives should be implemented in VA hospitals.

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### VA Is a Leader in Materials Management

Materials management—the systems, functions, and tasks involved in obtaining supplies and moving them to the point of use—affects from 25 to 45 percent of hospitals' operating budgets. Effective materials management can allow nursing staff to spend more time with patients and reduce the staff, inventory, space, and other resources needed to ensure that supplies are available when needed.

The VA health care system is a leader in materials management. For example, VA has operated one of the country's largest purchasing cooperatives, the National Acquisition Center, since 1951. The Center has over \$10 billion in multiyear contracts in place for procuring pharmaceuticals, medical supplies, and medical equipment. By administering federal supply schedules and negotiating national contracts, the Center allows federal hospitals to buy drugs and medical supplies at discount prices. An important issue facing the Congress is determining the extent to which nonfederal hospitals and health care facilities should be allowed to use federal supply schedules.

VA is also pursuing opportunities to increase resource sharing with both government and nongovernment health care providers. GAO previously identified barriers to effective sharing between VA and other federal agencies. Subsequently, the Congress and VA removed most of the barriers.

Another reason VA could not share resources with the private sector was because of limited legislative authority. VA was limited to sale of specialized medical resources to nonfederal hospitals, clinics, and medical schools. The Congress, through the Veterans' Health Care Eligibility Reform Act of 1996, removed most restrictions on VA's ability to buy services from and sell services to the private sector. The strategic plans developed by VA's health care networks discuss efforts to expand sharing among facilities and with other government facilities, the Department of Defense (DOD), and community providers.

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### VA Focuses Less Attention on Marketing Than Community Hospitals Do

As excess capacity grows, community hospitals are increasingly seeking ways to keep current users and attract new ones. Among the actions they are taking to build market share are improving hospital amenities, conducting market research and patient satisfaction surveys, advertising, contracting with HMOs and preferred provider organizations, and establishing service-delivery arrangements with physicians.

VA has generally done less to market its hospital services than the private sector. One reason for this is because VA facilities generally lack the privacy and amenities found in community hospitals. In addition, VA does not use paid advertising to attract new users or enter risk-sharing agreements with either managed care plans or physicians to increase workload. VA is, however, increasing the use of market research and patient satisfaction surveys and expanding efforts to sell its excess resources to DOD and others.

If a decision were made to preserve VA hospitals by having them compete with private-sector hospitals, VA would need to target marketing efforts toward veterans and nonveterans living close to VA hospitals. One approach for increasing demand would be for VA to grant admission privileges to privately practicing physicians. This might increase referrals of veterans who normally obtain health care services from private practitioners.

The potential effectiveness of this and other approaches to increasing market share, however, are questionable. The widely held perception that VA hospitals are outdated, lack the patient amenities of community hospitals, and provide poor customer service will probably affect the decisions of both veterans and nonveterans. Targeting VA services toward patients with limited health care options might help increase VA's market share.

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### Both VA and Community Hospitals Are Changing the Way Patient Care Is Monitored and Delivered

Both VA and community hospitals are more closely monitoring and managing the treatment of individual patients to ensure that they receive cost-effective care. Specifically, hospitals are

- implementing clinical guidelines to help physicians and other caregivers follow cost-effective courses of treatment;
- developing outcome measures that would allow evaluating the hospital's and individual physicians' performance;
- performing outpatient tests and other procedures before or as an alternative to admitting patients; and
- discharging patients sooner to alternative settings, such as nursing home, home health, and hospice care.

Considerable uncertainty exists in the private sector about the extent to which hospitals are following clinical guidelines. Both VA and the private sector are developing and using outcome measures. Thus, the ultimate effect of changes in monitoring and delivering patient care on hospital efficiency remains largely unknown.

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### Hospitals Shift Focus From Uncompensated Care

Some believe that the burden of providing care to the uninsured has increasingly shifted to public, and particularly public teaching, hospitals. Some public hospitals, however, have been changing to nonprofit or for-profit ownership. How these changes will affect the future availability of charity care is unclear. Many community hospitals seek to reduce the

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amount of uncompensated and charity care they provide and focus on attracting paying customers.

On average, VA hospitals serve a higher proportion of uninsured people than any type of community hospital, including public hospitals. Many of VA's restructuring efforts, however, have created incentives for VISNs and VA hospitals to reduce their focus on serving veterans who lack public or private insurance. In addition, VA, like many community hospitals, has created strategic goals that focus on increasing market share rather than meeting the health care needs of uninsured veterans.

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## Recommendations

GAO is not making recommendations in this report.

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## Agency Comments

In a letter dated March 5, 1998, the Assistant Secretary for Policy and Planning said that this report provides an extensive assessment of the VA health care system from its inception to the present and accurately depicts the dynamic reengineering of the Veterans Health Administration (VHA) into the type of organization needed to ensure that VA patients receive needed care. The letter states that VA considers the report a valuable tool for helping the Department as it develops strategic initiatives to provide seamless health care service to veterans.

Although VA agrees with the issues and challenges raised in this report, the letter stated, the Department does not necessarily agree with GAO's conclusions on VA's approach to the issues, the effect of continued reengineering on veterans, and the direction of its health care system. The report is intended to identify and analyze the implications of different approaches to restructuring the veterans health program, not to draw conclusions or recommend a direction for the program. In addition, VA contends that issues GAO cites as not being addressed in VISN plans are addressed in VHA's guidance for the plans submitted in October 1997 and that future versions of the guidance will address these issues and others. GAO recognizes that the plans it reviewed were the networks' first attempt at developing strategic plans, and GAO does not intend this as a criticism of VA's efforts to develop such plans or their contents. GAO agrees that VA guidance on the plans now being submitted has many of the items GAO identified as not being addressed by the initial plans.

In addition, VA wrote that it disagrees with the report's contention that eligibility reform and changes in contracting and resource allocation will

cause the Department to focus less on serving service-connected veterans and on its safety net role regarding low-income or uninsured veterans. The Department stated that 95 percent of VA patients are veterans who meet congressional mandates for care and that the Veterans Equitable Resource Allocation (VERA) system focuses not simply on dollars per user but on dollars per mandatory user. Moreover, VA commented that its strategic goals and performance measures focus on increasing VA's market share of mandatory veterans—not on increasing its share of all veterans or high-income veterans, as GAO's report implies.

The report does not contend that VA will focus less on serving service-connected veterans or its safety net role regarding low-income or uninsured veterans. GAO recognizes that VA's strategic goals and performance measures call for increasing VA's market share of mandatory veterans. VA plans to help do this by increasing collections from third-party insurers for services provided to insured veterans and using those recoveries to enhance services to mandatory veterans. GAO is concerned, however, that VERA and the new medical care cost recovery provisions could inadvertently provide financial incentives for individual facility managers to, at least in the short term, focus on serving revenue-generating veterans. GAO is also concerned about the extent to which VA can recover its costs from treating nonmandatory veterans to permit it to maintain or increase services to mandatory veterans.

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**Abbreviations**

ADC	average daily census
AHA	American Hospital Association
AHCPR	Agency for Health Care Policy and Research
AIDS	acquired immunodeficiency syndrome
AMA	American Medical Association
BDOC	bed-days of care
BPA	blanket purchase agreement
CBOC	community-based outpatient clinic
CEO	chief executive officer
CHAMPUS	Civilian Health and Medical Program of the Uniformed Services
	of Veterans Affairs
CHAMPVA	Civilian Health and Medical Program for the Department of Veterans Affairs
CPR	Criteria for Potential Realignment
CPT	cost per test
CT	computerized tomographic
DEAPP	decentralized equipment assessment and planning program
DOD	Department of Defense
DRG	diagnosis-related group
DSS	decision support system
FACCT	Foundation for Accountability
FDA	Food and Drug Administration
FEHBP	Federal Employees Health Benefits Program
FMS	Financial Management System
FSS	federal supply schedule
FTE	full-time equivalent
GME	graduate medical education
GSA	General Services Administration
HCA	Hospital Corporation of America
HCFA	Health Care Financing Administration
HBHC	Hospital-Based Home Care
HEDIS	Health Plan Employer Data and Information Set
HHS	Department of Health and Human Services
HIAA	Health Insurance Association of America
HMO	health maintenance organization
ICU	intensive care unit

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**Contents**

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IHO	integrated health organization
IOM	Institute of Medicine
IRS	Internal Revenue Service
MRI	magnetic resonance imagers
MSA	medical savings account
MSO	management service organization
NAS	National Academy of Sciences
NAC	National Acquisition Center
NCHCS	Northern California Health Care System
NCQA	National Committee for Quality Assurance
NIH	National Institutes of Health
OBRA	Omnibus Budget Reconciliation Act
OIG	Office of Inspector General
PBM	pharmacy benefit management
PET	positron-emission tomography
PHO	physician hospital organization
PHS	Public Health Service
POS	point of service
PPO	preferred provider organization
PPS	prospective payment system
PRIME	Primary Care Education
PTSD	post-traumatic stress disorder
RAM	Resource Allocation Method
RPM	Resource Planning and Management
RUG	Resource Utilization Group
SSI	Supplemental Security Income
VA	Department of Veterans Affairs
VHA	Veterans Health Administration
VERA	Veterans Equitable Resource Allocation
VISN	Veterans Integrated Service Network

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# Introduction

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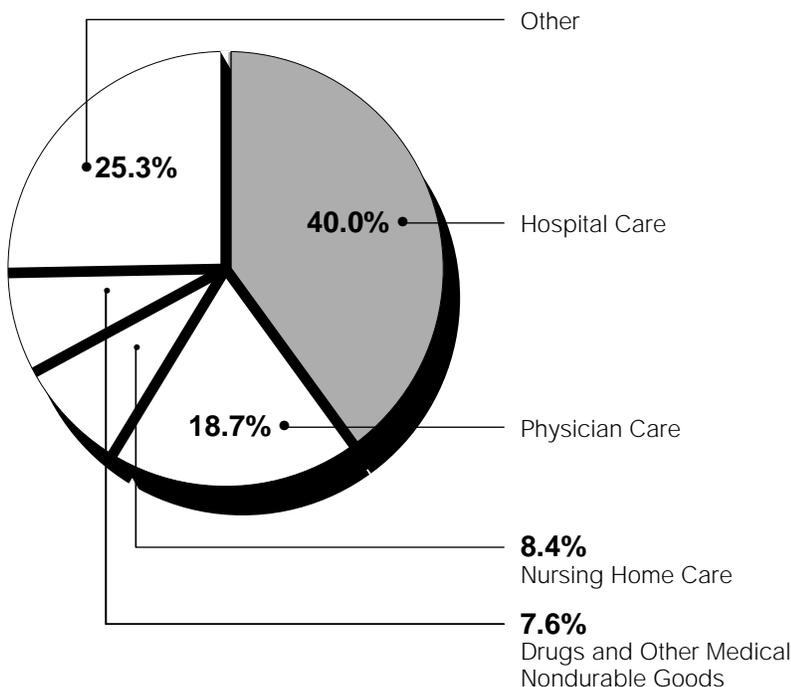
Hospitals, which account for over 40 percent of U.S. health care expenditures, are changing rapidly and dramatically. Growing costs, advancing technology, and an aging population are driving these changes. As health care costs have increased, both public health financing programs, such as Medicare and Medicaid, and private health insurers have fundamentally reformed their methods for paying for and managing hospital-provided health care. Such reforms have not generally been implemented, however, in hospitals operated directly by the federal government, including those operated by VA.

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## Hospital Care Is the Largest Component of Health Care Expenditures

Hospital care accounts for the largest component of national health care expenditures. In 1995, hospitals accounted for 40 percent or about \$441 billion of the nation's estimated \$1.1 trillion in health care expenditures. The next largest component of health care expenditures, physician services, accounted for just about 19 percent. (See fig. 1.1.)

Figure 1.1: Components of National Health Care Expenditures, 1995



Source: Health Insurance Association of America (HIAA), Source Book of Health Insurance Data, 1995. Data for 1995 are estimated.

## Categories of Hospitals

The American Hospital Association (AHA) groups hospitals into two primary categories—community and noncommunity. Community hospitals include all nonfederal, short-term general, and other special hospitals whose facilities and services are available to the public.<sup>1</sup> Noncommunity hospitals include federal hospitals, long-term hospitals, hospital units of institutions, psychiatric hospitals, hospitals for tuberculosis and other respiratory diseases, chronic disease hospitals, institutions for the mentally retarded, and alcoholism and chemical dependency hospitals.

For 1995, AHA reported that it had 6,291 hospitals registered in the United States, including 5,194 community and 1,097 noncommunity hospitals. The community hospitals included

<sup>1</sup>Hospitals are classified as either short-term or long-term, according to the average length of stay. AHA defines a short-term hospital as one in which the average length of stay is less than 30 days.

- 3,092 nongovernment not-for-profit,
- 752 investor-owned for-profit, and
- 1,350 state- and local government-owned hospitals.

This report focuses primarily on community hospitals when discussing non-VA hospitals. Such hospitals accounted for 873,000 of the nation's 1,081,000 beds and almost 31 million of the approximately 33 million hospital admissions in 1995.

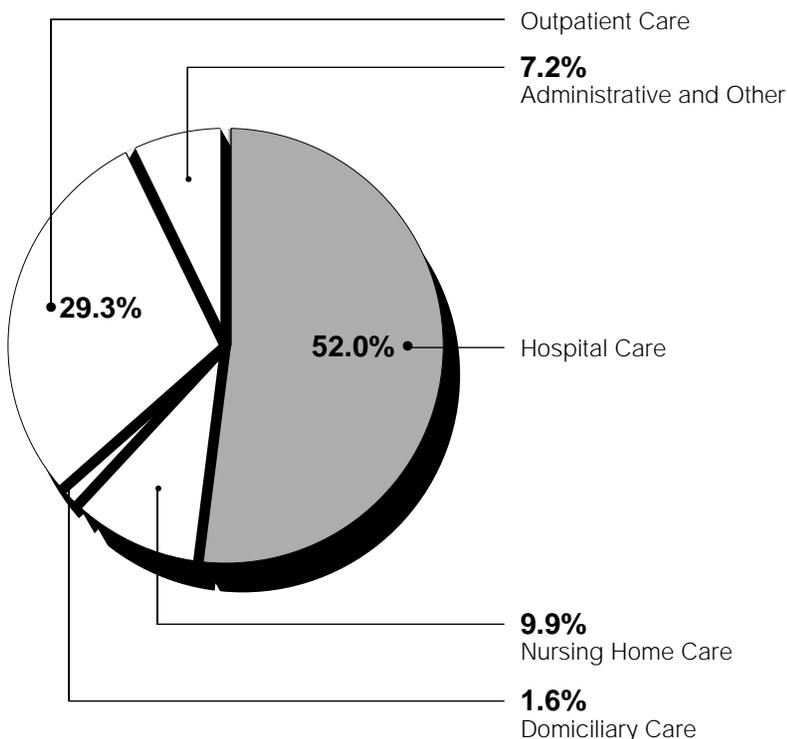
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## **VA Hospitals Are a Large Group of Noncommunity Hospitals**

VA hospitals account for 16 percent of all noncommunity hospitals. In fiscal year 1995, VA operated 173 of the 1,097 noncommunity hospitals, with an average of 50,787 hospital beds and admission of 844,626 patients.

In addition to hospitals, the VA health care system included 375 outpatient clinics, 130 nursing homes, and 39 domiciliaries in 1995. For fiscal year 1995, VA obligated about \$16.5 billion to maintain and operate its facilities and, on a limited basis, contract for care from non-VA providers. Over \$8.4 billion (51 percent) of its obligations were for operating VA hospitals (see fig. 1.2).

Figure 1.2: Components of VA Medical Care Obligations, Fiscal Year 1995



Notes: Other includes VA's Civilian Health and Medical Program, health professions scholarships, medical and prosthetic research, grants for construction, and grants to the Republic of the Philippines.

Source: Annual Report of the Secretary of Veterans Affairs, Fiscal Year 1995.

## Community and VA Hospitals Differ

VA hospitals differ from community hospitals in the following ways:

- **Whom they can and do serve.** Community hospitals generally have no restrictions on whom they can serve. A hospital's target population is limited primarily by the facility's capabilities and business decisions. In contrast, VA hospitals have historically been limited to treating mainly veterans—adult males. Recent eligibility and contracting reform legislation, as discussed below, has broadened the types of patients VA hospitals may treat.

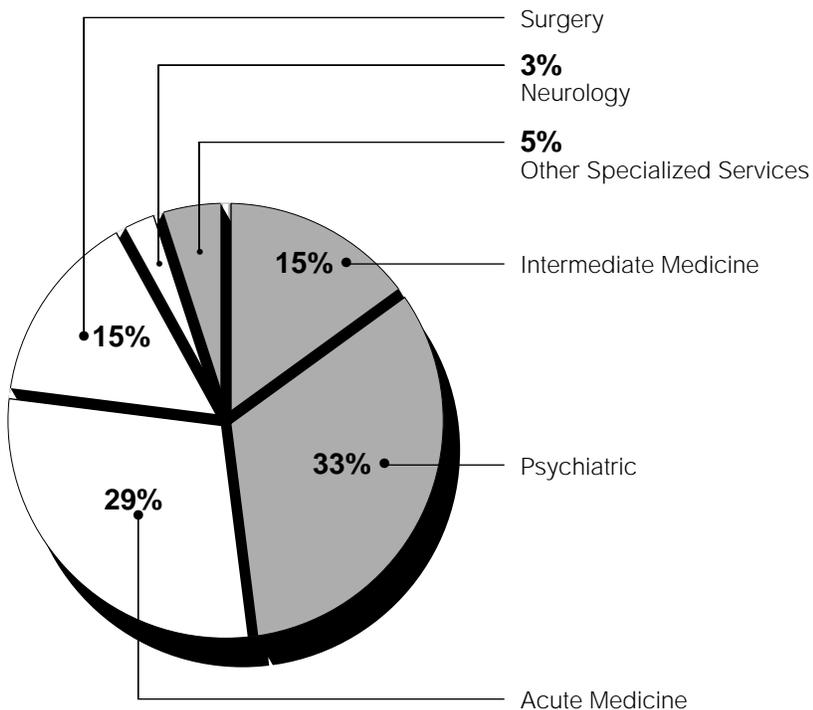
- Whom they can buy care from and sell care to. Community hospitals have few restrictions on their ability to contract to buy or sell patient care or nonpatient care services. Historically, VA facilities have been limited primarily to sharing health care services with other federal hospitals and with their medical school affiliates. Recent legislation has removed most restrictions on VA contracting.
- Who pays for the care provided. Most community hospital revenue comes from payments for patients sponsored by public payers (primarily Medicare and Medicaid) and private health insurers. Small portions also come directly from patients and state and local governments as operating subsidies. VA hospitals receive funding through an annual appropriation process. VA receives virtually no funding through Medicare and Medicaid and before August 1997 returned recoveries from private health insurance (other than a portion needed to cover the cost of operating the recovery program) to the general fund in the Department of the Treasury.<sup>2</sup> Although VA facilities relied almost entirely on appropriated funds, they were allowed to retain certain payments resulting from sale of health care resources to the Department of Defense (DOD), other federal facilities, and certain other providers.

In addition, although most VA hospitals, like their community counterparts, focus on short-term acute care services, other VA hospitals focus more on psychiatric and long-term care services. Under the AHA definitions, hospitals that primarily focus on psychiatric care, long-term care, or specialty services, even if they also provide some short-term care, are considered noncommunity hospitals. Systemwide, over 50 percent of VA's 50,787 operating beds in fiscal year 1995 were devoted to long-term care (intermediate medicine), specialized services (rehabilitation of the blind, treatment of spinal cord injuries, and rehabilitation medicine), or psychiatric care (see fig. 1.3). About 18 percent of VA hospitals provide mainly psychiatric care.

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<sup>2</sup>The Balanced Budget Act of 1997, enacted on Aug. 5, 1997, authorizes VA to use funds recovered or collected after June 30, 1997, from private health insurance, veteran copayments, and certain other functions for furnishing medical care and services and defraying the expenses incurred in collecting the funds. The funds, which are to be deposited in a VA Medical Care Collections Fund in the Treasury, are available to VA without fiscal year limitation.

Figure 1.3: Types of Hospital Beds Operated by VA, Fiscal Year 1995



Note: Other specialized services include blind rehabilitation, spinal cord injury, and rehabilitative medicine.

Source: Annual Report of the Secretary of Veterans Affairs, Fiscal Year 1995.

In administering the veterans' health benefits program authorized under title 38 of the U.S. Code, some of VA's responsibilities are like those of the Health Care Financing Administration (HCFA) in administering Medicare benefits and like those of private health insurance companies in administering health insurance policies. For example, VA is responsible for determining under the statute (1) which benefits veterans are eligible to receive, (2) whether and how much veterans must contribute toward the cost of their care, and (3) where veterans may obtain covered services (in other words, whether they must use VA-operated facilities or may obtain needed services from other providers at VA expense). Similarly, VA, like HCFA and private insurers, is responsible for ensuring that the health care

benefits provided to its beneficiaries—veterans—are (1) medically necessary and (2) provided in the most appropriate care setting whether that is a hospital, nursing home, or outpatient clinic.

In operating a health care delivery program, VA's role is like that of the major private-sector health care delivery networks as operated by Kaiser Permanente. For example, VA strives to ensure that its facilities (1) provide high-quality care, (2) are used to optimum capacity, (3) are located where they are accessible to their target population, (4) provide good customer service, (5) offer potential patients services and amenities comparable with those of competing facilities, and (6) operate effective billing and collection systems.

---

## **Eligibility for Veterans' Health Benefits Historically Focused on Hospital Care**

Historically, VA health benefits were focused on hospital care; outpatient care for most veterans was limited to coverage of services that would prepare the veterans for hospitalization, obviate the need for hospitalization, or provide treatments needed following a hospitalization. The Veterans' Health Care Eligibility Reform Act of 1996, enacted in October 1996 (P.L. 104-262), eliminated the obviate-the-need provision and made all veterans eligible for comprehensive outpatient care.

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## **General Requirements for Receiving VA Health Care**

Any person who served on active duty in the uniformed services for the minimum amount of time specified by law and who was discharged, released, or retired under other than dishonorable conditions is eligible for some VA health care benefits. The amount of required active-duty service varies depending on when the person entered the military and an eligible veteran's health care benefits depend on factors such as the presence and extent of a service-connected disability, income, and period or conditions of military service.<sup>3</sup>

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## **Old Eligibility Rules**

Although all veterans meeting the above basic requirements were eligible for hospital, nursing home, and at least some outpatient care, before October 1996, 38 U.S.C. 1710 established a complex priority system—based on factors such as the presence and extent of any service-connected disability, the incomes of veterans with nonservice-connected disabilities,

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<sup>3</sup>A service-connected disability is one that results from an injury or disease or other physical or mental impairment incurred or aggravated during active military service. VA determines whether veterans have service-connected disabilities and, for those with such disabilities, assigns ratings of from 0 to 100 on the basis of the severity of the disability. These ratings form the basis for determining both the amount of compensation paid to the veterans and the types of health care services for which they are eligible.

and the purpose of care needed—to determine which services were covered and which veterans received care within available resources.

All veterans' health care benefits included medically necessary hospital and nursing home care, but certain veterans, referred to as category A or mandatory-care category veterans, had the highest priority for receiving care. More specifically, the old law required VA to provide hospital care, and, if space and resources were available, allowed VA to provide nursing home care to veterans who

- had service-connected disabilities,
- were discharged from the military for disabilities incurred or aggravated in the line of duty,
- were former prisoners of war,
- were exposed to certain toxic substances or ionizing radiation,
- served during the Mexican Border Period or World War I,
- received disability compensation,
- received nonservice-connected disability pension benefit, or
- had incomes below the means test threshold (as of January 1996, \$21,001 for a single veteran or \$25,204 for a veteran with one dependent plus \$1,404 for each additional dependent).

For higher income veterans who did not qualify under these conditions, VA could provide hospital and nursing home care if space and resources were available. These veterans, however, known as category C or discretionary care category veterans, had to pay a part of the cost of the care they received.

Under the old law, VA provided three basic levels of outpatient care benefits:

- comprehensive care, which included all services needed to treat any medical condition;
- service-connected care, which was limited to treating conditions related to a service-connected disability; and
- hospital-related care, which provided only the outpatient services needed to (1) prepare for a hospital admission, (2) obviate the need for a hospital admission, or (3) complete treatment begun during a hospital stay.

Separate mandatory and discretionary care categories applied to outpatient care. Figure 1.4 summarizes mandatory and discretionary VA health benefits under the old law.



- Removes about 1.2 million veterans with noncompensable service-connected disabilities from the mandatory care category.
- Requires VA to establish an enrollment process for managing demand within available resources. The priorities for enrollment are (1) veterans with service-connected disabilities rated at 50 percent or higher; (2) veterans with service-connected disabilities rated at 30 or 40 percent; (3) former prisoners of war and veterans with service-connected disabilities rated at 10 or 20 percent; (4) catastrophically disabled veterans and veterans receiving increased nonservice-connected disability pensions because they are housebound or need the aid and attendance of another person to accomplish the activities of daily life; (5) veterans unable to defray the cost of medical care; (6) all other veterans in the so-called “core” group, including veterans of World War I and veterans with a priority for care based on presumed environmental exposure; and (7) all other veterans. VA may create additional subdivisions within the enrollment groups.

The enrollment process will be implemented over a 2-year period during which VA facilities may continue to treat veterans regardless of their enrollment status. After September 30, 1998, however, veterans generally will need to be enrolled to receive VA care. Enrollment will be limited to the number of veterans VA can take care of within its available resources.

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## **Eligibility Reform Act Gave VA More Authority to Contract for and Sell Health Care Services**

One of the most significant differences between the VA health care system and the private sector has been the limited ability of VA to purchase health care services from and sell such services to the private sector. The Veterans’ Health Care Eligibility Reform Act of 1996, however, largely eliminated these differences.

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## **Old Contracting Provisions**

Before October 1996, veterans were generally limited to obtaining health care services from VA-operated facilities, with the following three main exceptions:

- VA-operated nursing home and domiciliary care was augmented by contracts with community nursing homes and by per diem payments for veterans in state-operated veterans’ homes.
- VA paid private-sector physicians and other health care providers to extend care to certain veterans when the services needed were unavailable in the VA system or when the veterans lived too far from a VA facility (commonly

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referred to as fee-basis care). VA limited use of fee-basis care mainly to veterans with service-connected disabilities.

- Veterans could obtain emergency hospitalization from any hospital and then be transferred to a VA hospital when their conditions stabilized.

In addition, veterans being treated in VA facilities could be provided specific, scarce medical resources from other public and private providers through sharing agreements and contracts between VA and non-VA providers.

Similarly, VA was generally not permitted to sell hospital and other health care services but could enter sharing agreements to obtain or provide

- health care services to DOD and other federal hospitals and
- specialized medical resources to federal and nonfederal hospitals, clinics, and medical schools.

VA could not, however, sell health care services directly to veterans or others.

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## New Contracting Provisions

The Veterans' Health Care Eligibility Reform Act of 1996 expanded the types of providers as well as the types of services for which VA may contract. In addition, it simplified the procedures for complying with federal procurement processes when contracting with commercial providers. Finally, the act eliminated the ban on VA contracting for patient care (which had been suspended through 1999).

Following are the contracting provisions under the new law:

- VA may sell services to nonveterans but only if veterans will receive priority for care under such an arrangement and the arrangement is needed to maintain an acceptable level and quality of service or will result in improved services for veterans.
- VA may acquire—without regard to laws or regulations requiring use of competitive procedures—resources in instances when such resources are to be obtained from a VA-affiliated institution, including medical practice groups, blood banks, organ banks, or research centers. When the health care resource is to be obtained from commercial sources, it is to be obtained in accordance with simplified VA-developed procurement procedures that would permit all responsible sources to compete for the resource being obtained.

- VA may contract with outside entities for converting VA activities to private activities. Previously, Section 8110(c) of title 38 of the U.S. Code prohibited contracting out of direct patient care activities or activities “incident to” direct care and permitted contracting out other activities, such as laundry and cleaning services, only on the basis of a VA-conducted cost-comparison study. This section was repealed but the VA must still report annually on performance by contractor personnel of work previously performed by VA employees.

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## Unlike Private-Sector Hospitals, VA Hospitals Do Not Depend on Third-Party Payments

Unlike private-sector hospitals, VA hospitals do not depend financially on public and private health insurance. As a result, VA hospitals are not at financial risk for inappropriate admissions, unnecessary days of care, and treatment of ineligible beneficiaries.

Private-sector hospitals generally depend on payments from public and private insurance programs and their patients for their income. Private-sector hospitals are facing increased pressures from both private insurers and public health benefits programs, such as Medicare and Medicaid, to eliminate inappropriate admissions and reduce hospital lengths of stay. For example, private health insurers increasingly use preadmission screening to ensure the medical necessity of hospital admissions and set limits on approved lengths of stay. Although nothing prevents private-sector hospitals from admitting patients without an insurer’s authorization, the hospital and the patient, rather than the insurer, become financially responsible for the care.

Similarly, the Medicare prospective payment system and utilization reviews provide financial incentives for hospitals to provide services in the most appropriate setting and to discharge patients as soon as their medical conditions allow. The financial incentive is particularly strong for hospital care financed under Medicare because the hospital is, in general, not allowed to charge beneficiaries for services determined to be medically unnecessary or inappropriate.

Historically, VA hospitals and veteran patients have not faced these same risks. VA hospitals do not face the same payment limitations and external utilization reviews that private-sector hospitals face. And, although VA hospitals can recover funds from veterans’ private health insurance, failure to comply with private health insurers’ preadmission screening and length-of-stay requirements has little direct financial effect on VA hospitals. This is because (1) before 1994 VA facilities were funded primarily on the

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basis of their inpatient workload and (2) before last year medical care cost recoveries were returned to the Department of the Treasury.<sup>4</sup>

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## Objectives, Scope, and Methodology

During the past 5 years, we completed a series of reviews focusing on the many challenges facing the VA health care system and the potential role of VA in health care reforms. This report, prepared at the request of the Chairman, Senate Committee on Veterans' Affairs, summarizes and expands on that body of work to identify major issues concerning the future of VA hospitals.<sup>5</sup> Specifically, it discusses

- the evolution of hospital care during the 20th century,
- factors contributing to the declining demand for hospital care in community and VA hospitals,
- the extent to which excess capacity exists in community and VA hospitals, and
- actions taken by community and VA hospitals to increase efficiency and compete for patients.

In developing information on the evolution of hospital care, we relied on the legislative history of the veterans' health care provisions of title 38 of the U.S. Code and articles and reports prepared by or for the Brookings Institution (1934);<sup>6</sup> House Committee on Veterans' Affairs (1967);<sup>7</sup> National Academy of Sciences (1977);<sup>8</sup> VA's Commission on the Future Structure of Veterans Health Care;<sup>9</sup> Congressional Research Service;<sup>10</sup> Twentieth

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<sup>4</sup>As of June 30, 1997, VA may use the funds to furnish medical care and services and defray expenses incurred in collecting the funds. With the passage of the Balanced Budget Act, VA must make available to each designated health care region an amount proportional to that collected by the region. VA has not yet determined the extent to which the funds will be returned to the facility that provided the care.

<sup>5</sup>A list of related GAO products appears at the end of this report.

<sup>6</sup>Gustavus A. Weber and Laurence F. Schmeckebier, The Veterans' Administration: Its History, Activities and Organization (Washington, D.C.: The Brookings Institution, 1934).

<sup>7</sup>Medical Care of Veterans, House Committee Print No. 4, 90th Congress, 1st Session (Washington, D.C.: Apr. 17, 1967).

<sup>8</sup>Study of Health Care for American Veterans, pursuant to Section 201(c) of Public Law 93-82, National Academy of Sciences, National Research Council (Washington, D.C.: June 7, 1977).

<sup>9</sup>Report of the Commission on the Future Structure of Veterans Health Care, VA (Washington, D.C.: Nov. 1991).

<sup>10</sup>Memorandum dated July 18, 1995, from Dennis W. Snook, specialist in the Social Legislation, Education and Public Welfare Division, House Committee on Veterans' Affairs.

Century Fund;<sup>11</sup> and VA.<sup>12</sup> Information on the evolution of community hospitals came primarily from our 1985 report, Constraining National Health Care Expenditures: Achieving Quality Care at an Affordable Cost (GAO/HRD-85-105, Sept. 30, 1985); the Source Book of Health Insurance Data, 1995;<sup>13</sup> AHA's Hospital Statistics; and HCFA's Data Compendiums.

To identify factors contributing to the declining demand for care in community and VA hospitals, we

- interviewed policy analysts from associations and think tanks, including the American Medical Association (AMA), AHA, and the CATO Institute;
- obtained the views of representatives from the major veterans service organizations;
- reviewed many studies and reports on hospitals, including those prepared by the Pew Health Professions Commission, Prospective Payment Assessment Commission, Physician Payment Review Commission, HIAA, Hay Group, National Committee for Quality Health Care, Congressional Research Service, the former Office of Technology Assessment, HCFA, and VA;
- reviewed our prior reports and testimonies on VA health care, Medicare, and health care cost containment; and
- reviewed reports and studies on VA health care prepared by the VA Office of Inspector General and others.

To estimate the amount of excess bed capacity in community and VA hospitals, we developed three approaches by adapting methods used in prior studies reviewed by the National Academy of Science's Institute of Medicine. First, we developed a conservative measure of excess capacity based on the number of unused beds, assuming an 85-percent occupancy rate was appropriate. Next, we developed estimates of additional excess capacity under differing assumptions about the amount of medically unnecessary care being provided. Third, we developed estimates of longer term goals for reducing hospital beds based on selected targets of beds per 1,000 population (beds per 1,000 users for VA). Additional details on how we selected our approaches appear in chapter 6.

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<sup>11</sup>Michael K. Taussig, Those Who Served: Report of the Twentieth Century Fund Task Force on Policies Toward Veterans (Millwood, N.Y.: Draus Reprint Co., 1975).

<sup>12</sup>VA History in Brief: What It Is, Was, and Does, VA undated pamphlet (Washington, D.C.: approximately 1986).

<sup>13</sup>HIAA, 1995.

To identify actions of community hospitals to increase efficiency and compete for patients, we used a three-tiered approach. First, we identified, on the basis of our initial review of health care literature and discussions with health policy analysts, several specific actions taken by community hospitals. Second, we refined and expanded this list through discussions with AHA, AMA, VA, and others. Third, we conducted an extensive literature search using Healthstar, Econlit, and other search engines to identify pertinent literature on the list of specific actions. We focused on studies that described the actions being taken, showed how extensively community hospitals were implementing the actions, described the intended benefits of the actions, and evaluated their effectiveness.

We used a similar multitiered approach to determine VA actions. First, we provided the Veterans Health Administration a list of the community hospital actions and asked for information on the extent to which VA had taken or planned to take similar actions. After receiving written responses from VA central office officials, we followed up to obtain additional details. Second, we reviewed VA planning documents and reports, including the Under Secretary for Health's 1995 Vision for Change, 1996 Prescription for Change, and 1997 Journey of Change, which contain the primary action plans for restructuring the VA health care system. In addition, we reviewed the 1996 and 1997 network directors' performance measures; status reports on directors' meeting their performance goals; VA budget submissions for fiscal years 1996, 1997, and 1998; and VA's draft strategic plan prepared under the Government Performance and Results Act. Third, we reviewed each of the 22 Veterans Integrated Service Networks' strategic plans, looking specifically for references to the types of actions being taken by community hospitals. Finally, we obtained additional information on VA actions through interviews with VA officials from VHA, the National Acquisition Center, and the Office of General Counsel.

Our work was conducted between January 1996 and January 1998 in accordance with generally accepted government auditing standards.

# Evolution of Hospital Care

The role of America's hospitals has profoundly changed during this century. During the first three-quarters of the century, advances in medical technology and the development of private and public health insurance led to unprecedented growth in the role of hospitals in the U.S. health care system. Other factors, most notably two world wars and the creation and subsequent expansion of VA's safety net mission during the Great Depression, significantly increased demand for VA hospital care during the 1930s and 1940s. Both private-sector and VA hospitals were transformed from charitable institutions providing mainly custodial care into the preeminent providers of life-saving and -sustaining technologies.

Because the demand for hospital care seemed insatiable, federal programs encouraged construction of additional private-sector and VA hospital beds. But, by the 1960s and 1970s, health care spending was rising rapidly, consuming a growing portion of the gross domestic product. Hospitals accounted for the largest and a growing portion of the increased spending.

As concern about rising health care costs grew in the early 1980s, the role and fortunes of America's hospitals again began to change. The steadily increasing supply of and demand for hospital beds in the first three-quarters of the century began to decline. More and more hospitals began to close. In addition, the role of hospitals in overall health care spending stabilized, and, in the VA system, declined as hospital admissions declined and lengths of stay shortened.

## First Half of the 20th Century Marked by Increased Demand

In the 19th century, hospitals mainly provided a place for people to die; little medical treatment was offered. In addition, hospitals were basically charitable institutions; neither patients nor the government provided extensive financial support. The late 19th century and first half of the 20th century saw the following changes both in the role of hospitals and in the financing of hospital care:

- Scientific developments increased the amount of medical and surgical care provided in hospitals.
- Private health insurance became an important source of payment for hospital care.
- World wars strained the ability of the private sector to treat returning casualties, leading to expanded veterans' facilities.
- Declining use of VA hospitals by veterans with service-connected disabilities following World War I and increased use during the Great Depression led to the creation and expansion of VA's safety net mission.

The increased demand for hospital care prompted by these developments led to a perceived shortage of hospital beds and to federal programs to promote hospital construction.

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**Scientific Developments  
Increased Demand for  
Hospital Care**

Late 19th-century scientific developments increasingly shifted the focus of medical care from physicians' offices and patients' homes to hospitals. For example, the use of antiseptics and other methods to fight disease-causing microorganisms reduced the spread of infection, making surgery safer.

Furthermore, breakthroughs in disease diagnosis and therapeutic intervention expanded the science and art of medicine. As a result, physicians began to depend more on hospital-based equipment and services to provide medical care to their patients.

In addition to the development of antiseptics, the discovery of antibiotics and the introduction of modern surgical techniques and equipment made surgery safer for the patient. Moreover, surgeons' increasing knowledge and the availability of sophisticated medical and surgical equipment made possible surgical procedures not previously considered.

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**Private Health Insurance  
Began Covering Patients'  
Costs**

Private health insurance emerged with the creation of the first Blue Cross and Blue Shield plans in the 1930s. Traditional health insurance in which providers are paid for each covered service delivered (known as fee-for-service coverage) tends to increase demand for hospital care by insulating both the patient and the provider from medical care costs.

Fee-for-service health insurance encourages patients to demand more and better health care because it reduces the patient's cost for care and forces changes in consumer and provider behavior through

- increased use of insured services and
- reduced concern about the relative cost of providers.

Moreover, as fee-for-service health insurance became more comprehensive, physicians had fewer incentives to question the cost-effectiveness of alternative treatments or the prices charged by hospitals. Also, physicians had financial incentives to provide more services to patients because this increased their earnings.

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Increased health insurance coverage, while increasing demand for care in community hospitals, tends to decrease demand for care in VA hospitals. This is because the number of veterans with health insurance is expected to increase, and veterans with health insurance are more likely to seek care from community hospitals than VA hospitals.

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**War Casualties Increased Demand for VA Care**

Before World War I, the government built a number of homes to provide domiciliary care to war veterans. These homes provided only incidental medical and hospital care.

During World War I, veterans received a series of new benefits, including medical and hospital care for those suffering from wounds or diseases incurred in the service. Public Health Service (PHS) hospitals treated returning veterans, and, at the end of the war, several military hospitals were transferred to PHS to enable it to continue serving the growing veteran population. In 1921, PHS hospitals primarily serving veterans were transferred to the newly established Veterans' Bureau.

Casualties from World War I soon overwhelmed the capacity of veterans' hospitals to treat injured soldiers. The Congress responded by increasing the number of veterans' hospitals with an emphasis on treating veterans' disabling conditions.

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**VA's Safety Net Mission Created**

After veterans' immediate, postwar, service-connected medical problems were met, VA hospitals began to have excess beds instead of a shortage of beds. The Congress, in 1924, responded by giving wartime veterans with nonservice-connected conditions access to veterans' hospitals when space was available and the veterans signed an oath indicating that they could not pay for their care.

The Great Depression saw an unprecedented demand for VA hospital care. In 1937, President Roosevelt authorized construction of additional VA hospital beds to (1) meet the increased demand for neuropsychiatric care and treatment of tuberculosis and other respiratory illnesses and (2) provide more equitable geographic access to care.

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**World War II Casualties Led to Further VA Expansion**

Rapidly rising demand for hospital care prompted by U.S. involvement in World War II led to further construction and expansion of VA hospitals.

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Demand for care was so great that in March 1946 VA had a waiting list of over 26,000 veterans seeking care for nonservice-connected conditions.

As had occurred after World War I, however, the initial high demand for medical services for returning casualties soon subsided and VA once again had excess hospital capacity.

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**Hill-Burton Act  
Encouraged Hospital  
Construction**

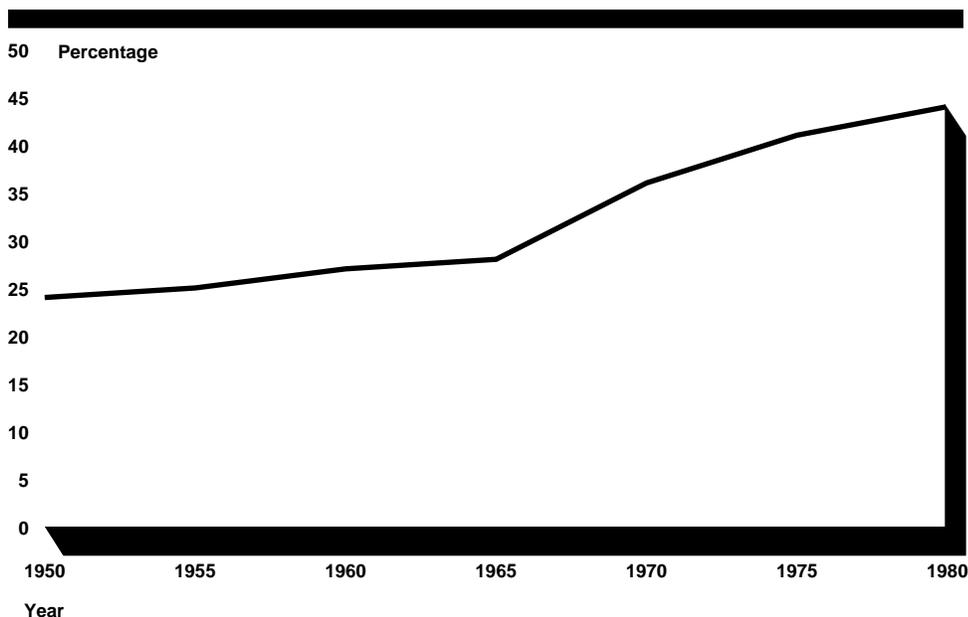
Although VA began to have excess hospital beds after World War II, the supply of community hospital beds was generally considered inadequate to meet increasing demand. To address this problem, the Congress, in 1946, passed the Hill-Burton Act (P.L. 79-725). The act provided federal funds to match those raised by local communities for building new hospitals and modernizing and replacing existing facilities.

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**Hospital Care  
Consumed Increasing  
Portion of Health Care  
Expenditures  
Between 1950 and  
1980**

Between 1950 and 1980, hospital care consumed a steadily increasing percentage of overall health care spending. (See fig. 2.1.) Initially, the increase was slight, from 24 to 28 percent of health care expenditures between 1950 and 1965. In the 15 years following the 1965 creation of the Medicare and Medicaid programs, however, the growth in hospital spending rapidly outpaced growth in other health care spending. By 1980, hospital care accounted for 44 percent of the nation's health care expenditures.

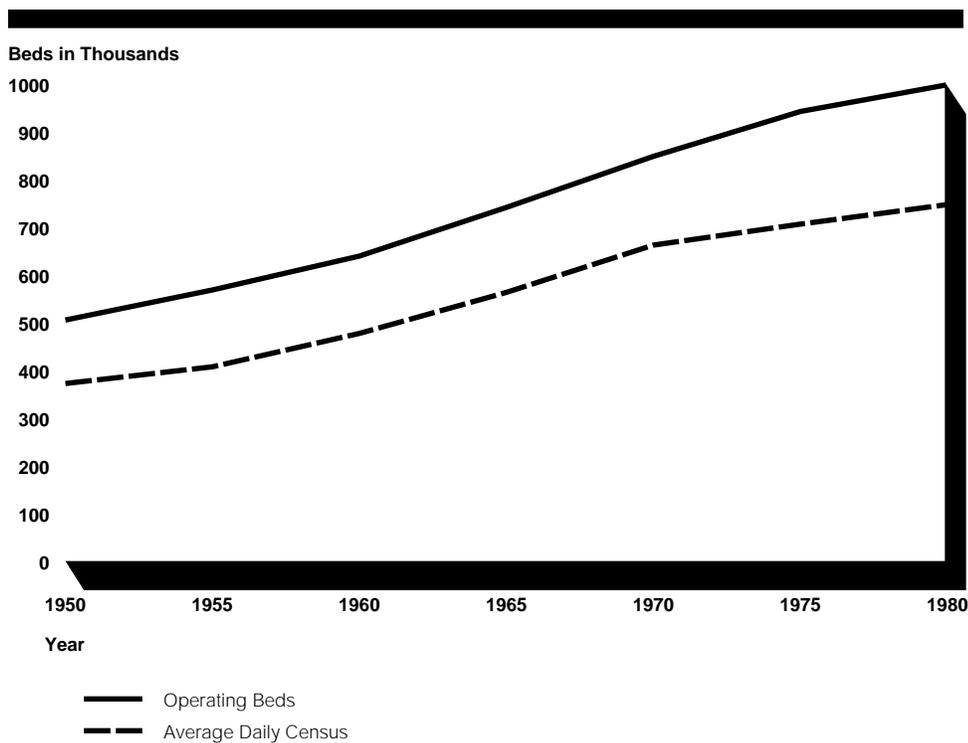
Figure 2.1: Hospital Care as a Percentage of National Health Care Expenditures, Fiscal Years 1950-80



Source: Health Insurance Association of America (HIAA), Source Book of Health Insurance Data, 1995. HIAA derived the data from U.S. Department of Commerce Survey of Current Business.

Two primary factors contributing to rising hospital expenditures were (1) federal programs and tax policies that encouraged hospital construction and (2) growing demand for hospital care. Both the supply of community hospital beds and demand for hospital care increased dramatically between 1950 and 1980. Community hospital beds increased from about 505,000 to about 988,000. (See fig. 2.2.) During this same time period, community hospital admissions per 1,000 population increased from about 111 to about 162.

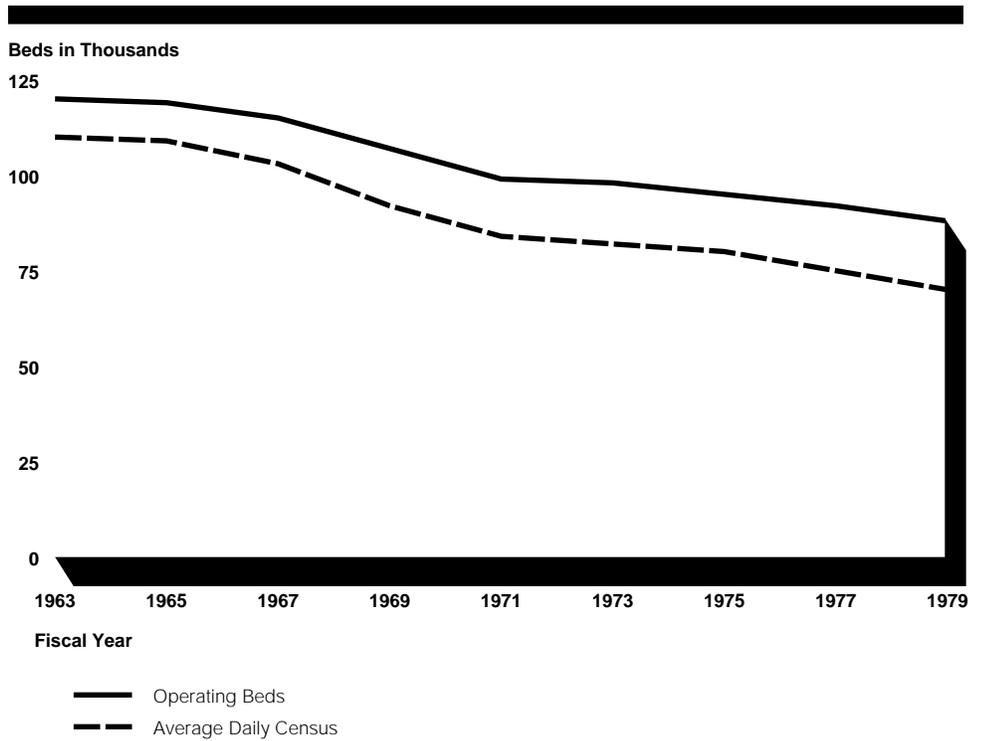
Figure 2.2: Changes in Supply of and Demand for Community Hospital Beds, Fiscal Years 1950-80



Sources: American Hospital Association (AHA), *Hospital Statistics*. Data for 1950 through 1970 are for total nonfederal short-term and other special hospitals. See also *Constraining National Health Care Expenditures: Achieving Quality Care at an Affordable Cost* (GAO/HRD-85-105, Sept. 30, 1985).

While the supply of and demand for hospital beds had been increasing in the private sector, demand for VA hospital beds has been steadily decreasing since 1963. VA operating beds declined by about 33,000 between 1963 and 1979; the average daily census declined by about 40,000. (See fig. 2.3.)

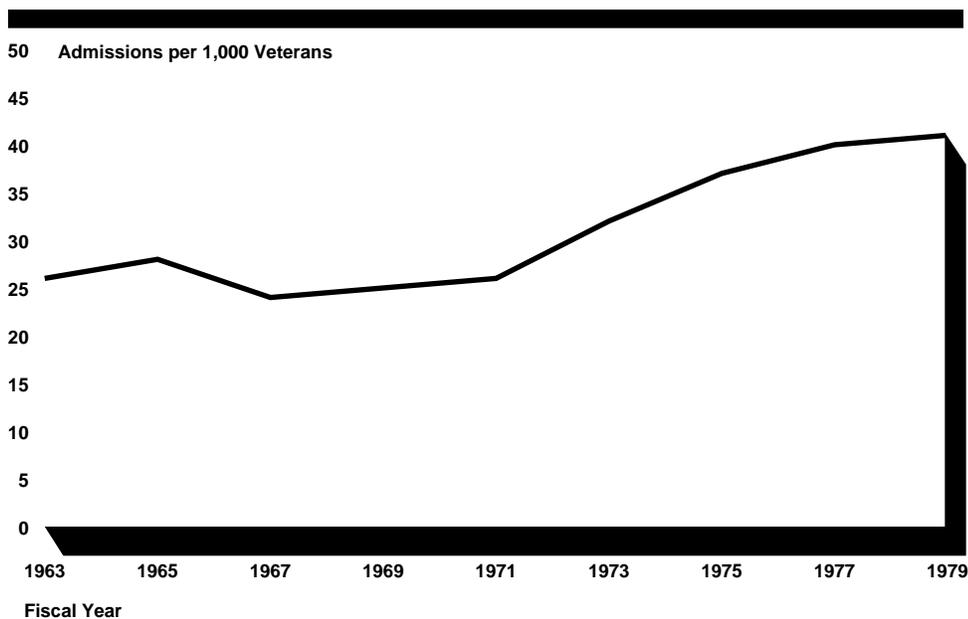
Figure 2.3: Changes in Supply of and Demand for VA Hospital Beds, Fiscal Years 1963-79



Source: VA, National Center for Veteran Analysis and Statistics, Trend Data: Fiscal Years 1963-1987.

Although the average daily census in VA hospitals declined during the period, demand for hospital care, as measured by admissions per 1,000 veterans, increased. (See fig. 2.4.)

Figure 2.4: Admissions to VA Hospitals per 1,000 Veterans, Fiscal Years 1963-79



Source: VA, National Center for Veteran Analysis and Statistics, Trend Data: Fiscal Years 1963-1987.

### Federal Programs and Policies Encouraged Hospital Construction

As previously discussed, the Congress enacted the Hill-Burton Act in 1946 to encourage the construction of community hospital beds. According to an AHA estimate, the Hill-Burton Act played a role in the construction of about 43 percent of the not-for-profit community hospital beds in operation in 1974.<sup>14</sup>

Another federal subsidy that contributed to the increased number of community hospital beds was the use of tax-exempt bonds to finance construction projects. Hospitals, particularly tax-exempt, nonprofit hospitals, obtained low-interest loans for capital projects through the issuance of tax-exempt bonds.

### Many Factors Contributed to Changing Demand for Hospital Care

Many factors contributed to the increased demand for hospital care: (1) population growth, (2) advances in medical technology often requiring elaborate equipment available only in a hospital, (3) a growing elderly population with increasing health care needs, (4) improved insurance

<sup>14</sup>For-profit hospitals were not eligible for Hill-Burton funds.

coverage of hospital expenses with the advent of Medicare and other federal health benefits programs, and (5) expansion of VA hospital benefits.

### Growth in Hospital Admissions Outpaced Population Increase

Although increased hospital admissions between 1950 and 1980 are partly explained by increases in both the general and veteran populations, the growth in hospital admissions generally outpaced population increases. The general population increased from 152 million in 1950 to 228 million in 1980, a 50-percent increase. During this same period, community hospital admissions more than doubled, from 16.7 million to 36.2 million. In other words, hospital admissions per 1,000 population increased from about 111 in 1950 to about 162 in 1980.

The Korean Conflict increased the number of new veterans by about 6 million during the early and mid-1950s. By 1965, the total veteran population dropped to just under 22 million. As the nation geared up for and entered the Vietnam War, the veteran population once again began to grow. It increased steadily for the next 15 years, reaching 28.6 million by 1980. As demands for treatment of returning casualties increased, admissions to VA hospitals more than doubled from 1963 through 1980, from 585,000 to 1,183,000. As was the case with private-sector hospitals, admissions increased at a faster pace than did the number of veterans. Admissions to VA hospitals per 1,000 veterans grew steadily from 1967 through 1980, from 24 to 41.

### Advances in Medical Technology Led to Increased Hospital Demand

The second factor contributing to increased demand for hospital care between 1950 and 1980 was continuing advances in medical technology. The development of intensive care units (ICU) and other technologies, such as computed tomographic scanners, open-heart surgery, and life-sustaining procedures for critically ill patients, for example, renal dialysis, exemplify what hospitals can provide and what the public grew to expect. In addition to increasing demand, these advances contributed to higher hospital care costs in the following ways:

- An ICU is an area of the hospital set aside for the most seriously ill. ICUs have an array of electronic monitoring devices and life-support machinery, such as mechanical ventilators and defibrillators. In addition, ICUs have a high concentration of nursing and support personnel. Although the United States had fewer than 1,000 ICU beds in 1958, by 1976 nearly all community hospitals with 200 or more beds had an ICU, about 90 percent with 100 to 199 beds had such units, and almost 50 percent of hospitals with fewer than 100 beds had an ICU. By 1983, over 80,800 ICU beds were available.

- Renal dialysis filters waste material from the blood through an artificial kidney. The first long-term renal dialysis programs began in the early 1960s. Although about 1,000 patients received renal dialysis in 1967, another estimated 6,000 patients died because of the lack of resources to treat them. The Social Security Amendments of 1972 (42 U.S.C. 426-1) authorized Medicare to pay for dialysis and kidney transplants for patients with end-stage renal disease. By 1980, 50,000 patients were on dialysis and about 4,700 transplants were performed. In 1996, 200,000 patients received dialysis.
- Transplantation is a surgical procedure involving the implantation of healthy organs or tissues obtained from either living donors or cadavers. Kidney transplantation costs less than renal dialysis for treating kidney disease and is preferred for treating end-stage renal disease. Transplantation frees patients from the inconvenience of continuous dialysis treatments, imparts a sense of good health, and improves overall quality of life. The first successful kidney transplant was performed in 1954. Transplantation now includes such organs as the heart, liver, lungs, and pancreas. In 1994, U.S. surgeons performed over 18,000 organ transplants.<sup>15</sup>
- Resuscitation techniques (including reversal of cardiac arrest), the development of respirators, and intravenous feeding enable medicine to do more for critically ill patients than ever before. The nation's health care delivery system can now delay the moment of death for almost any life-threatening condition. For patients suffering a permanent loss of consciousness, doctors can use intensive and aggressive therapies to reverse unconsciousness and overcome other medical conditions.

Establishment of Health  
Financing Programs Further  
Insulated Public From Hospital  
Costs

The third factor contributing to increased demand for community hospital care was the creation and subsequent expansion of public health benefits programs to help selected groups pay for health care services. In 1965, the Congress enacted legislation establishing the two largest public health insurance programs—Medicare, which covers most people aged 65 or older and certain disabled persons under age 65, and Medicaid, which covers many low-income people.<sup>16</sup> The following year, the Congress established the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) to enable military retirees and dependents to obtain

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<sup>15</sup>Source Book of Health Insurance Data, 1995, HIAA (Washington, D.C.: 1996).

<sup>16</sup>The Health Care Financing Administration (HCFA) in the Department of Health and Human Services (HHS) operates Medicare and Medicaid. Medicaid programs are primarily state administered, and benefits covered vary considerably.

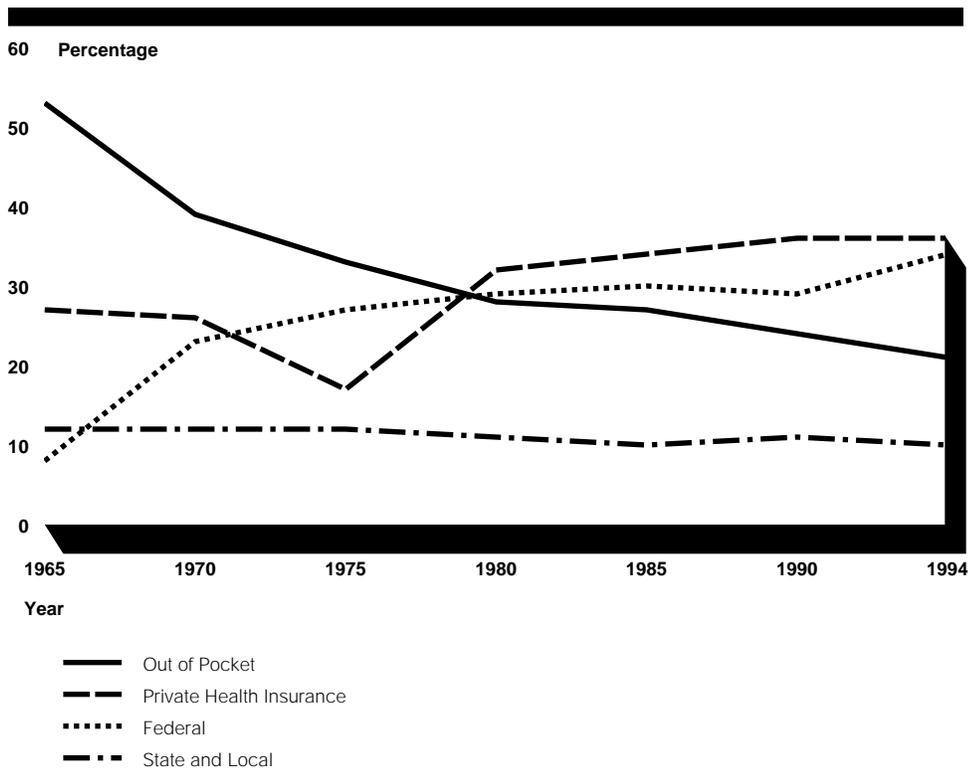
health care in the private sector when services are not available or accessible in DOD facilities.<sup>17</sup>

As the percentage of health expenses paid by third parties increased, the proportion paid directly by consumers dropped. In 1965, when the Medicare and Medicaid programs were established, consumers' out-of-pocket payments accounted for about 53 percent of total personal health care expenditures. By 1970—just 5 years after these programs' implementation—consumers' out-of-pocket payments dropped to about 39 percent of expenditures. Out-of-pocket payments have continued falling, accounting for only about one-fifth of personal health care expenditures in 1994. (See fig. 2.5.)

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<sup>17</sup>The Dependents' Medical Care Act, effective Dec. 7, 1956, previously authorized care from civilian sources for spouses and children of active-duty military members. Coverage was extended to retired members and their dependents and to dependents of deceased service members through the Military Medical Benefits Amendments of 1966, the year in which the program became known as CHAMPUS.

Figure 2.5: Personal Health Care Expenditures by Source of Payment, 1965-94

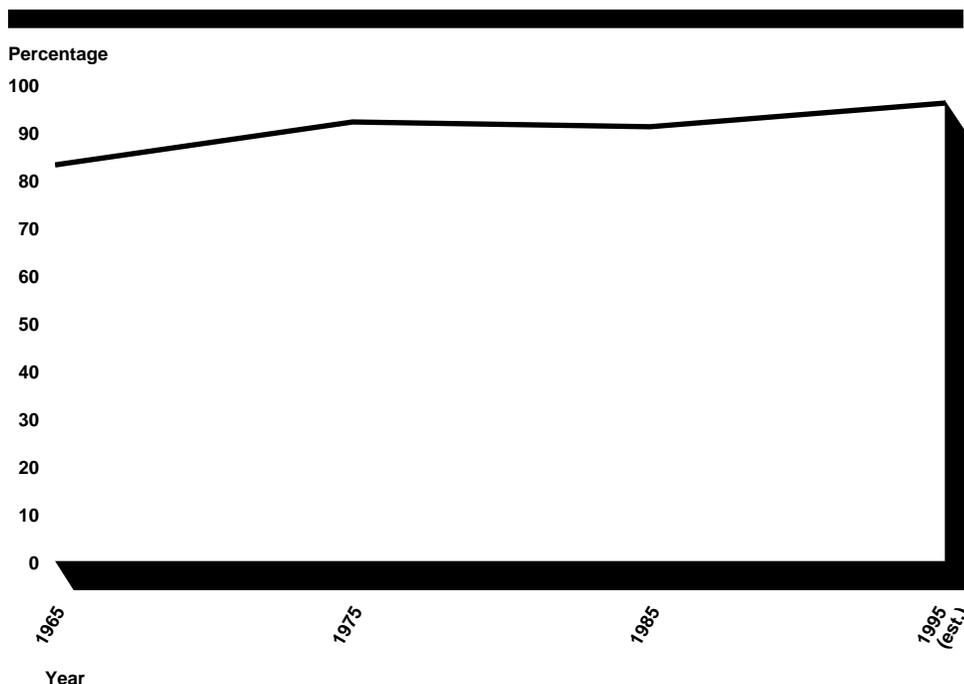


Note: Private health insurance includes all private funds other than out-of-pocket payments. Other private funds accounted for from 2.0 (1965) to 3.7 (1985) percent of personal health care expenditures.

Source: HCFA, 1996 Data Compendium.

More significant is the growth of third-party payments for hospital care. In 1965, third parties accounted for about 83 percent of total expenditures for hospital care, growing to about 92 percent by 1975. In 1995, third parties accounted for an estimated 95 percent or more of total expenditures for hospital care. (See fig. 2.6.)

Figure 2.6: Percentage of Hospital Expenses Paid by Third-Party Insurance, 1965-95



Source: HHS, *Health United States, 1988* and HIAA, *Source Book of Health Insurance Data, 1995*.

While these programs tended to increase the demand for care in community hospitals, they decreased the demand for VA hospital care. For example, studies have shown that many VA hospital users increase their use of community hospitals and decrease their use of VA hospitals when they become Medicare eligible. This is because veterans' financial incentive to use VA hospitals is largely eliminated when they become Medicare eligible and community hospitals are usually closer to their homes.

### Health Care Needs of an Aging Population Increased Demand

A fourth factor contributing to increased demand for hospital care between 1950 and 1980 was the health care needs of an aging population. Older people use medical personnel and facilities more than younger people. For example, older people are hospitalized approximately twice as

often as younger people, have lengths of stay 50 percent longer than younger people, and use twice as many prescription drugs.<sup>18</sup>

From 1950 through 1980, the proportion of the U.S. population 65 years of age or older increased from 8.0 to 11.3 percent, continuing the trend from the first half of the century; in 1900, only 4 percent of the population was 65 years of age or older.

A 1977 study of the health care needs of the aging veteran population anticipated this increase.<sup>19</sup> VA predicted that after 1985, veterans' demand for VA hospital care would accelerate rapidly. VA estimated that it would need to operate about 91,000 beds in 1985, about 115,000 beds by 1995, and about 120,000 beds by the year 2000. VA based its estimates on utilization rates and eligibility provisions in effect in 1977 but factored in assumptions that (1) the need for psychiatric beds would continue decreasing and (2) hospital lengths of stay would continue declining despite the patients' advancing ages.

### Eligibility for VA Hospital Care Expanded

Eligibility expansions also affected demand for VA hospital care. In 1962, the Congress passed legislation that defined as a service-connected disability any condition traceable to a period of military service, regardless of the cause or circumstances of its occurrence. Previously, care for service-connected conditions was not ensured unless such conditions were incurred or aggravated during wartime service.

VA expanded its safety net mission near the end of the Vietnam War. In 1973, VA expanded eligibility for hospital care to treatment of nonservice-connected disabilities of peacetime veterans unable to defray the cost of care. Treatment of nonservice-connected disabilities had previously been limited to wartime veterans.

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### Researchers Began to Question Need for Hospital Beds

By the mid-1970s, researchers began to question whether the nation had too many hospital beds and whether the excess beds were contributing to higher health care costs. For example, the National Academy of Sciences' Institute of Medicine (IOM) recommended in 1976 that the bed-to-population ratio, which by 1975 had reached 4.4 community hospital beds

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<sup>18</sup>Aging America: Trends and Projections, 1987-88 Edition, U.S. Senate Special Committee on Aging in conjunction with the American Association of Retired Persons, the Federal Council on the Aging, and the U.S. Administration on Aging (Washington, D.C.: 1988), p. 111.

<sup>19</sup>The Aging Veteran: Present and Future Medical Needs, Veterans Administration (Washington, D.C.: Oct. 1977).

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per 1,000 population, be reduced by at least 10 percent.<sup>20</sup> Specifically, IOM called for reducing the number of community hospital beds per 1,000 population from 4.4 to approximately 4.0. IOM called for further sizeable reductions to follow after the initial goal had been met.

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## **Supply of and Demand for Hospital Care Have Declined Since 1980**

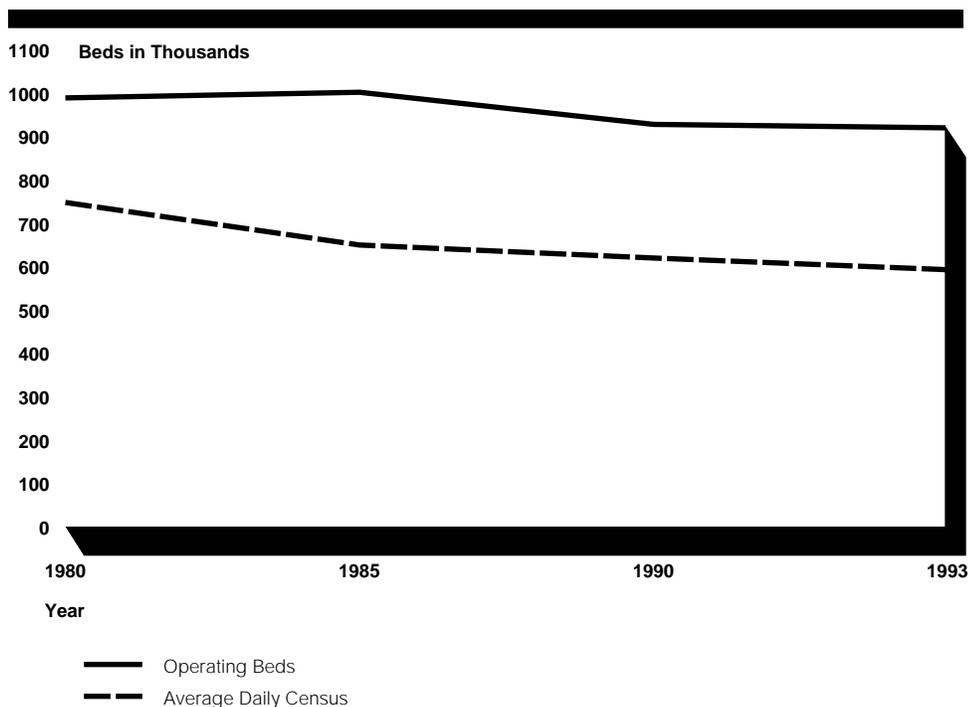
As scientific developments continue and employers and the government focus on ways to contain health care costs, the role of hospitals is once again changing. Just as scientific advances spawned increased demand for hospital care in the first seven decades of this century, technological advances are enabling much of the care previously provided in hospitals to be shifted to outpatient settings (see ch. 3). Similarly, changes in the insurance market—principally the development of prospective payment systems and managed care—have helped decrease hospital use (see ch. 4). Demand for hospital care began to decline in community hospitals and continued to decline in VA hospitals during the 1980s.

As shown in figure 2.7, demand for care in community hospitals declined more rapidly than the supply of hospital beds from 1980 through 1993.

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<sup>20</sup>Controlling the Supply of Hospital Beds, IOM, National Academy of Sciences (Washington, D.C.: Oct. 1976).

Figure 2.7: Changes in Supply of and Demand for Community Hospital Beds, Fiscal Years 1980-93

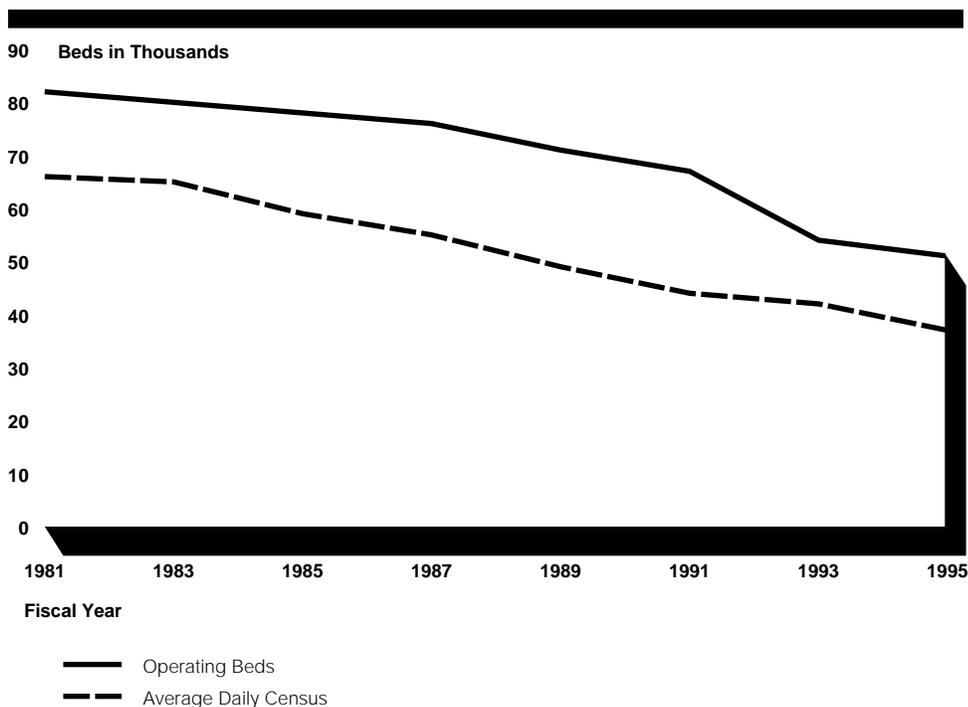


Source: American Hospital Association, Hospital Statistics, the AHA Profile of United States Hospitals 1996/97.

The number of community hospital beds increased slightly between 1980 and 1984 but has steadily declined since then. By 1995, community hospital beds had dropped to 873,000 after peaking at slightly over 1 million. More importantly, the average daily census in community hospitals dropped from 747,000 in 1980 to 548,000 in 1995.

Demand for VA hospital care continued the decline that began in the early 1960s. From fiscal year 1981 through fiscal year 1995, the average daily census in VA hospitals dropped from about 66,000 to about 37,000. During the same period, the number of VA operating beds dropped from about 82,000 to about 51,000. (See fig. 2.8.)

Figure 2.8: Changes in Demand for and Supply of VA Hospital Beds, Fiscal Years 1981-95



Source: VA, National Center for Veteran Analysis and Statistics, Trend Data: Fiscal Years 1970-1995.

From 1980 through 1986, VA hospital admissions continued to increase despite a gradual decline in the number of veterans.<sup>21</sup> Since 1987, however, VA hospital admissions have declined more quickly than the veteran population. Hospital admissions dropped about 18.6 percent from 1988 through 1995, from about 1,038,000 to about 845,000. During approximately the same period, the veteran population declined about 5 percent, from 27.5 million to 26.2 million. As a result, the number of VA hospital admissions per 1,000 veterans dropped from 38 in 1988 to 32 in 1995.

Admissions to community hospitals are also declining. Despite continuing population growth, community hospital admissions, after increasing steadily from 1950 through 1980, dropped by 15 percent from 1981 through

<sup>21</sup>Beginning in 1987, VA counted 1-day dialysis as an outpatient visit.

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1995. Adjusting for population growth, admissions per 1,000 population dropped from 158 to 118.

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## **Closures Reduced Number of Community but Not VA Hospitals**

From 1975 through 1995, more community hospitals have closed than new hospitals have opened, while VA has opened more hospitals than it has closed. Although the U.S. population increased by about 47 million between 1975 and 1995, the number of community hospitals decreased by about 12 percent (from 5,875 to 5,194). During the same period, the number of VA hospitals increased from 171 to 173.

These community hospital statistics understate the actual extent of hospital closures because new hospitals continue to open as other hospitals close. For example, in 1993, 62 hospitals (including 34 community hospitals) closed but 40 new hospitals opened. Of the 40, 5 were psychiatric or substance abuse hospitals, 15 were rehabilitation hospitals, 3 were specialty hospitals, and 17 were general medical and surgical facilities.

Similarly, although the number of VA hospitals saw a net increase over the 20-year period, two VA hospitals—in Martinez and Sepulveda, California—were closed because of actual or potential earthquake damage.

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# Changes in Medical Technology and Practice Have Decreased Demand for Both Community and VA Hospital Care

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Changes in medical technology and practice have contributed to the decreasing demand for both VA and community hospital care since 1980. Advances in medical technology, such as laser and other less invasive surgical techniques, allow much care previously provided in hospitals to be provided at home, on an outpatient basis, or in a nursing home. Such advances also shorten the length of stay for many procedures still performed in the hospital. Similarly, changes in medical practice and the development of psychotherapeutic drugs to treat mental illness have led to fewer and shorter hospital admissions for psychiatric patients and to the deinstitutionalization of many long-term psychiatric patients.

While changes in technology and medical practice contributed to declining demand for both community and VA hospitals, for many years VA lagged behind the private sector in effectively using such changes. VA, however, is now aggressively shifting patients from inpatient to outpatient and other less costly settings. As a result, many issues remain unresolved concerning the future effects of changes in medical technology and practice on demand for VA hospital care. For example, VA's success in reducing inpatient surgeries is diminishing the economic viability of, and threatening the quality of care provided by, many VA hospitals' inpatient programs. Limited data are available on efforts to ensure that vulnerable populations, such as the homeless, do not lose access to VA services through efforts to shift care to outpatient settings.

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## Advances in Medical Technology Have Reduced Admissions and Shortened Hospital Stays

Advances in medical technology continue to be a major force driving change in the health care system. But, unlike the first three-quarters of the century when medical advances fostered increased demand for hospital care, recent advances have reduced this demand. Technology advancements now permit (1) many surgeries to be performed in a doctor's office or hospital outpatient department, (2) shorter lengths of stay following inpatient surgeries, and (3) treatments for many chronically and catastrophically ill patients to be provided at home rather than in a hospital.

Although VA, through its affiliations with medical schools and research programs, played an important role in developing and testing many of these technologies, it lagged behind the private sector for many years in using new technology to shift care from inpatient to outpatient settings. As a result, the full effect of technology on demand for VA hospital care has yet to be felt. During the past few years, VA has aggressively shifted care to outpatient settings.

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**Many Surgical and Other  
Procedures Now Done on  
an Outpatient Basis**

Technological changes and medical innovations are shifting many surgeries and medical treatments from inpatient to less intensive, outpatient settings. The following treatments for ulcers, kidney stones, and cataracts are examples:

- H2 antagonists are drugs with brand names such as Tagamet and Pepcid-AC used to reduce the production of gastric acids. In 1977, before the introduction of H2 antagonists, about 155,000 people had surgery for ulcers. By 1993, surgeries for ulcers had dropped to about 16,000.<sup>22</sup> The recent discovery that most ulcers are caused by bacteria and can be treated with antibiotics will probably result in fewer such surgeries.
- Lithotripsy (in Greek, “stone crusher”) is a process that uses shock waves to fracture kidney stones into pieces small enough to pass through a patient’s urinary tract. Although patients may be able to pass smaller stones on their own, many stones are too large to pass through the ureter, a gradually narrowing tube in the urinary tract. In the past, when patients could not pass a kidney stone, the primary treatment was surgery to remove the stones.<sup>23</sup> Now, however, a specialized piece of equipment—an extracorporeal shock-wave lithotripter—produces shock waves to fracture the kidney stone, allowing the patient to pass the stone without surgery. Lithotripsy requires no lengthy hospital stay, no incision or surgery, and no lengthy recovery period. Up to 95 percent of the approximately 400,000 Americans treated for kidney stones each year can now be treated through lithotripsy rather than surgery. Lithotripsy can generally be performed as an outpatient procedure.
- Phacoemulsification is a method of treating cataracts in which an ultrasonic device disintegrates the cataract, which is then suctioned out. This procedure, which involves only a tiny incision, can be done on an outpatient basis with the patient typically returning home within hours after the cataract is removed and a plastic lens implanted in the eye. In the past, cataract removal generally required an inpatient hospital stay of several days. Cataract surgery is the most often performed therapeutic surgical procedure in the United States on people 65 years of age and older. Medicare pays over \$3.4 billion a year for cataract surgery, paying for about 1 million of the 1.3 million cataract procedures performed annually.<sup>24</sup>

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<sup>22</sup>Rita Shoor, “Anticipating Health Care Reform and Seeking a Marketing Edge Over Competitors, Hospitals Are Forming Alliances With Other Providers,” Business and Health, Special Issue: “The State of Health Care in America, 1994,” Vol. 12 (1994).

<sup>23</sup>Only a few kidney stones can be dissolved with medication.

<sup>24</sup>This cataract surgery information was prepared by the American Academy of Ophthalmology.

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**Chapter 3**  
**Changes in Medical Technology and**  
**Practice Have Decreased Demand for Both**  
**Community and VA Hospital Care**

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The percentage of surgeries performed on an inpatient basis has declined steadily in the private sector since 1989.<sup>25</sup> In 1993, over 55 percent of surgical operations in community hospitals were performed on an outpatient basis.<sup>26</sup>

Until recently, VA was much less successful in shifting care to outpatient settings than were community hospitals. For example, audits by VA's Office of Inspector General (OIG) in 1991 and 1992 identified the unavailability of outpatient surgery or other capabilities as the primary cause of unnecessary admissions and days of care in VA surgical wards. Specifically, the OIG estimated the following:

- The New Orleans VA medical center could have avoided about 32 percent (931 of the 2,921 days) of surgical care had the center established an outpatient surgery program.<sup>27</sup>
- About 32 percent of the Denver VA medical center's 1- to 4-day surgical admissions were for medical care that could have been provided on an outpatient basis without jeopardizing patients' welfare.<sup>28</sup>
- About 45 percent of the 2-day surgical admissions at the Togus, Maine, VA medical center could have been avoided by treating the patients on an outpatient basis. The medical center agreed with the finding and attributed the inappropriate admissions to the perception that VA's resource allocation method did not cover the cost of outpatient surgery.<sup>29</sup>
- The Dallas VA medical center incurred about \$766,000 in unnecessary expenses because physicians admitted patients who did not require hospital care and hospitalized patients longer than medically necessary. The lack of facilities dedicated to outpatient surgery was the sole reason cited for the inappropriate admissions.<sup>30</sup>

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<sup>25</sup>Shoor, "Anticipating Health Care Reform," Business and Health.

<sup>26</sup>Source Book of Health Insurance Data, 1995, Health Insurance Association of America (Washington, D.C.: 1996).

<sup>27</sup>Audit of the VA Medical Center, New Orleans, Louisiana, VA OIG, Report No. 2R6-F03-121 (Washington, D.C.: Apr. 17, 1992).

<sup>28</sup>Audit of the VA Medical Center, Denver, Colorado, VA OIG, Report No. 1R5-F03-050 (Washington, D.C.: Apr. 5, 1991).

<sup>29</sup>Audit of Medical Center Operations at Department of Veterans Affairs Medical and Regional Office Center, Togus, Maine, VA OIG, Report No. 1R1-F03-027 (Washington, D.C.: Jan. 25, 1991).

<sup>30</sup>Audit of VA Medical Center, Dallas, Texas, VA OIG, Report No. 2R6-F03-151 (Washington, D.C.: June 11, 1992).

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**Chapter 3**  
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- About 72 percent of inpatient cataract surgeries and 29 percent of other short-term surgical admissions reviewed at the West Los Angeles VA medical center could have been done on an outpatient basis.<sup>31</sup>

The Veterans Health Administration's (VHA) recently established performance measures for Veterans Integrated Service Network (VISN) directors set expectations for what portion of surgeries should be done on an outpatient basis. For example, under one fiscal year 1996 performance measure, VISN directors were judged to be fully successful if from 50 to 64 percent of surgeries and invasive procedures were done in an outpatient setting; 65 percent or more was considered exceptional performance.

All VA medical centers now have outpatient surgery programs. All but eight VISN directors exceeded the 50-percent minimum for fully successful performance in fiscal year 1996; one VISN director—in VISN 11 (Ann Arbor)—was exceptional. Seven of the eight VISN directors not meeting the minimum made statistically significant improvements in the percentage of outpatient procedures performed. Systemwide improvement has been impressive, from 35 percent in fiscal year 1994 to 52 percent in fiscal year 1996. VHA's goal is to reach at least 65 percent of surgeries and other invasive procedures performed on an outpatient basis in fiscal year 1998; 75 percent or more is considered exceptional performance.

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**Advances Also Shorten**  
**Hospital Stays**

Advances in medical technology have also reduced the length of stay following inpatient procedures. For example, the development of the endoscope allows many procedures to be done through a natural body opening, such as the mouth, or through a small incision. An endoscope is an instrument with an optical system for observing the inside of a hollow organ or cavity. Another comparable instrument, the laparoscope, permits the removal of the gall bladder through surgery involving only minimal incisions. As a result, the length of stay following gall bladder surgery has often been reduced from a 3- to 7-day recuperative period to a 1- to 2-day period. In some cases, gall bladder surgery is now done as an outpatient procedure.

Similarly, the use of balloon angioplasty to open narrowed coronary arteries reduces the need for more invasive bypass surgery. To perform angioplasty, surgeons insert a catheter with a deflated balloon on its tip

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<sup>31</sup>Audit of VA Medical Center, West Los Angeles, California, VA OIG, Report No. 2R7-F02-022 (Washington, D.C.: Oct. 30, 1991).

into an artery narrowed by plaque. Plaque is the fatty material that accumulates inside the walls of the arteries and blocks blood flow. The balloon is inflated to widen the clogged artery. Angioplasty is clearly less invasive than bypass surgery.

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### **Much Care Can Now Be Provided in the Home**

Advances in medical technology also make it possible for many chronically and catastrophically ill patients to receive medical treatment at home. For example, people with chronic respiratory problems who require a ventilator and nursing assistance can often return home if they are provided with a ventilator, visits by a nurse, and associated supplies. Similarly, sophisticated medical care previously available only in a hospital or nursing home can now be provided at home because of the development of medical technology such as ventilator therapy and infusion pumps.

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### **New Approaches to Treating Psychiatric Patients Have Reduced Institutionalization**

The development of new drug therapies and mental illness treatment and care practices has helped reduce acute psychiatric admissions to both community and VA hospitals. Efforts to deinstitutionalize the chronically mentally ill have also helped reduce hospital admissions. Because the chronically mentally ill were typically in state and county hospitals for the mentally ill rather than in community-based facilities, VA hospitals treating veterans for mental illness were more affected by efforts to deinstitutionalize the chronically mentally ill than were community facilities.

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### **Advances in Psychotherapeutic Drugs**

Psychotherapeutic drugs are those that lessen the primary symptoms afflicting mentally disturbed people such as anxiety, depression, and psychosis. Among the psychotherapeutic drugs are

- antianxiety agents such as Librium, Valium, Xanax, and Ativan, all of which are forms of benzodiazepine;
- antidepressants such as Nardil (phenelzine sulfate), Adapin (doxepin HCL), and Etrafon (perphenazine and amitriptyline hydrochloride);
- antipsychotic products such as Clozaril (clozapine), Haldol (haloperidol), and Thorazine (chlorpromazine); and
- psychostimulants such as Ritalin (methylphenidate hydrochloride) and Cylert (pemoline).

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Such drugs often allow people with mental illnesses that in the past would have required lengthy periods of institutionalization to obtain outpatient treatment.

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### Deinstitutionalization of the Chronically Mentally Ill

In the past, many mentally disabled people were institutionalized, typically in state and county mental hospitals. Because of concern over the deplorable conditions in many of these facilities, new treatment methods and philosophies, and the potential for cost savings, however, efforts were made to place institutionalized mentally disabled patients in the community. The Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963, which was repealed by the Omnibus Budget Reconciliation Act of 1981, became the basis for a major part of the federal government's involvement in "deinstitutionalizing" the mentally disabled.

The Congress later amended the Social Security Act to enable more mentally disabled people to return to the community. Deinstitutionalization was intended to allow mentally disabled people to be as independent and self-supporting as possible by (1) preventing unnecessary admission to and retention in institutions; (2) finding and developing appropriate care alternatives in the community, such as day care and foster homes; and (3) improving conditions, care, and treatment for those needing some institutional care.

In a 1977 report, we noted that deinstitutionalization had returned many mentally disabled people to communities.<sup>32</sup> For example, the resident population in public mental hospitals steadily declined nationwide from 505,000 in 1963 to 120,000 in 1983. In 1967, about 193,000 people were in public institutions for the mentally retarded. By 1982, the number had declined to about 118,000.

Although the use of VA psychiatric beds declined significantly, the decline in use of state mental hospitals declined even more. In its 1977 report, The Aging Veteran: Present and Future Needs, VA noted that the number of VA psychiatric beds dropped from 54,345 in 1967 to 28,173 in 1977, despite an increase in annual admissions from 71,076 to 161,969. During the same time period, outpatient psychiatric visits to VA mental hygiene clinics, day treatment centers, and day hospital programs increased from about

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<sup>32</sup>Returning the Mentally Disabled to the Community: Government Needs to Do More (GAO/HRD-76-152, Jan. 7, 1977).

750,000 to over 1.6 million. VA identified the following important developments that modified its approach to psychiatric care:

- improvements in psychiatric therapy,
- development of a wide variety of psychotropic drugs that made it possible for many psychiatric patients to function independently,
- recognition that geographically isolated institutions may not provide the best environment for rehabilitation,
- recognition that psychiatric care is more effectively delivered as a service of a general medical and surgical teaching hospital,
- a change in philosophy that has encouraged returning many psychiatric patients to the community, and
- expansion of outpatient resources and treatment modalities.

Unlike acute medical and surgical hospital use, the need for which increases as people age, VA found that the frequency of major psychiatric hospitalization decreases as people age. In its report, Aging Veteran, VA said that the decline in psychiatric hospitalization would probably continue as the veteran population aged. Specifically, VA noted that the hospitalization rates for schizophrenia, psychoneuroses, personality and behavior disorders, and alcoholism decrease as people age. It concluded in 1977 that “it seems reasonable to assume that the aging veteran population will not create new pressures for psychiatric beds.”

Demand for psychiatric hospital care did, as VA predicted, continue to decline, although admissions over the last 20 years continued to increase slowly. In fiscal year 1996, VA operated 15,690 psychiatric beds, a decline of over 70 percent during the past 30 years.

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## Issues Concerning the Effects of Changing Medical Technology and Practice on Future Hospital Demand

VA was slow to take advantage of new technologies and medical practices and shift patients from hospital beds to outpatient clinics and other care settings. As a result, estimates of nonacute days of medical and surgical care in individual VA hospitals ran as high as 72 percent only 6 years ago. VA has begun addressing these problems during the past several years, and early results are encouraging. For example, VA increased the percentage of surgeries and other invasive procedures performed on an outpatient basis from 35 percent in 1994 to 52 percent in 1996.

VA's success in reducing inpatient surgeries, however, could further diminish the economic viability of the inpatient surgery programs at many VA hospitals and threaten their ability to provide quality care. In fiscal year

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1996, 56 of the 129 VA hospitals with inpatient surgery programs had an average of fewer than 25 surgery beds occupied on any given day (average daily census (ADC)); 28 had an ADC of less than 10, including 6 with an average workload of only one or two patients. In addition to the high cost of maintaining inpatient surgery programs for so few patients, such programs raise concerns about quality of care because surgeons may not perform enough operations to remain proficient.

The VA OIG initially raised questions about continuing to operate surgical programs with limited workload in a 1991 review of 33 VA surgical programs. The OIG recommended that VA consider closing inpatient surgical services at the 33 locations and (1) realign services with other medical centers or (2) provide the services through community hospitals. The OIG estimated that such a realignment would provide opportunities to better use staff resources and avoid the need for some replacement equipment and construction, saving over \$100 million. In addition, the OIG's audit expressed concerns about the quality of care provided at smaller hospitals with minimal workloads that are unaffiliated or minimally affiliated with a medical school.<sup>33</sup>

Five years after the OIG report was issued, however, 4 of the 33 medical centers reviewed by the OIG discontinued their surgical programs. Workloads at the remaining medical centers and others have continued to decline. With such a limited inpatient surgical workload, VA could discontinue the inpatient programs and either refer veterans to other VA facilities or use its new contracting authority to purchase care from community hospitals closer to the veterans' homes. Referring veterans to other VA hospitals could help build workload at those facilities but would probably make health care less accessible for veterans (except in those places where two or more VA medical centers were in close proximity such as in Chicago, Boston, and Pittsburgh). In addition, the cost of transporting veterans to a distant VA medical center would add to the cost of providing the care through another VA facility. Transferring veterans to distant medical centers could also deprive them of the emotional support of family and friends unable to make the trip. Such travel could be particularly difficult for elderly spouses.

Uncertainties also exist about the extent to which VA should shift additional mental health services to outpatient settings. For example, many VISNS plan to discontinue their inpatient substance abuse programs

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<sup>33</sup>Audit of Veterans Health Administration Surgical Program Realignment, VA OIG, Report No. 1R4-A01-066 (Washington, D.C.: June 19, 1991).

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and provide outpatient services instead. Other VISN planning documents do not specifically address this. In 1972, more than 95 percent of veterans discharged from the substance abuse program were classified as poor; in 1995, about 50 percent of veterans in inpatient substance abuse programs were homeless at the time of admission, and 35 percent had both substance abuse and one or more psychiatric disorders.

VA recognized this problem and is developing clinical guidelines and an addiction severity index to evaluate substance abuse patients. In a July 1997 report, the VA OIG reported that substance abuse treatment program officials in the 12 medical centers reviewed had established in-house residential care beds and identified community housing and social support resources for homeless patients before they converted their substance abuse treatment programs to outpatient programs.<sup>34</sup> The OIG also found, however, that the wide variation in reporting of the number of patients treated in substance abuse treatment programs in the VA databases prevents VHA officials from really knowing the impact of these conversions to outpatient treatment on access to care for homeless and other economically disadvantaged veterans.

The OIG also identified needed improvements in (1) methods for identifying homeless veterans seeking treatment in both VA and community-based substance abuse treatment programs; (2) efforts to ensure that halfway house beds are available for veterans needing such aftercare; and (3) medical record documentation to show that VA employees discussed the ability of veterans, particularly homeless or economically disadvantaged veterans, to arrange transportation to outpatient substance abuse treatment.

The OIG found transportation to be a major barrier to outpatient substance abuse treatment, particularly in small urban areas. A third of the patients from small urban areas interviewed by the OIG indicated that inadequate transportation systems limited patients' access to outpatient care. The OIG reviewed the medical records of 71 homeless patients discharged from inpatient substance abuse treatment programs and found that 50 records had no information to show that program officials had discussed transportation issues with the veterans.

In response to the OIG report, VHA identified actions to strengthen the substance abuse program, including establishing a committee to discuss

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<sup>34</sup>The Impact of Downsizing Inpatient Substance Abuse Rehabilitation Programs on Homeless Veterans and Other Frequent Users, VA OIG, Office of Healthcare Inspections, Report No. 7HI-A28-108 (Washington, D.C.: July 8, 1997).

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possible solutions to the transportation problem. Because these actions are in the planning stage, it is not clear what their effect will be on lessening the impact of VA's shift of substance abuse treatment to outpatient settings on access to care for homeless veterans.

Although the OIG has evaluated VA's efforts to shift substance abuse treatment from inpatient to outpatient settings and corrective actions are planned or under way, less is known about the effects of other efforts to shift care to outpatient settings. For example, a large percentage of homeless veterans suffer from serious mental illness, including post-traumatic stress disorder (PTSD). As a result, such veterans may face the same transportation barriers as veterans with substance abuse problems in accessing outpatient mental health care, for example, PTSD treatment. Little is known about the extent to which veterans discharged from VA psychiatric hospitals receive needed outpatient mental health services as well as the full range of other VA benefits to which they may be entitled to enable them to function independently.

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# Changes in the Structure of Health Insurance Have Decreased Demand for Care in Community More Than in VA Hospitals

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Fundamental changes in the structure of public and private health insurance have significantly reduced community hospital use but affected VA hospitals less. The establishment of prospective payment, capitation, and other payment methods under public and private health insurance has provided community hospitals strong financial incentives to reduce hospital admissions and lengths of stay or both. Similarly, insurers' increased focus on medical necessity through such programs as preadmission certification has reduced both admissions to and lengths of stay in community hospitals. Finally, increased third-party coverage of home health and hospice care has made it possible to (1) discharge patients from hospitals sooner and (2) reduce the use of hospital care by the terminally ill.

These changes, however, have had limited effect on demand for care in VA hospitals because these hospitals do not financially depend on insurance payments. VA is implementing changes in allocating funds to its hospitals and managing patient care that seek to simulate changes in public and private insurance. Because these changes are recent and because of differences between VA and private-sector actions, such changes' effect on future demand for VA hospital care is uncertain. For example, it is not clear to what extent VA's new preadmission screening program will change physicians' admitting practices without the financial incentives used in the private sector. Similarly, it is unclear how Veterans Integrated Service Networks (VISN) and individual VA facilities will react to the financial incentives created by VA's new capitation-based resource allocation system without the contractual obligations to provide covered services that private-sector managed care plans have.

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## Changes in Payment Methods Have Provided Incentives to Reduce Hospital Admissions and Lengths of Stay

Prospective payment and other payment reforms initiated by Medicare and other third-party payers have significantly reduced demand for hospital care in community hospitals. These payment reforms were designed to provide community hospitals financial incentives to reduce hospital admissions and lengths of stay or both. Third-party payment reforms, however, have not played a major role in reduced demand for VA hospital care; VA hospitals, unlike community hospitals, do not depend on third-party payments. VA is changing its funding of health care facilities to create financial incentives like those in the private sector.

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## Original Reimbursement Methods Provided Incentives for Overuse

The methods—fee-for-service and cost-based reimbursement—originally used by both public and private health insurers to pay for hospital and other health care services created incentives for physicians and hospitals

to provide unnecessary services. Under fee-for-service reimbursement, physicians receive an amount for every service provided. As a result, physician income depends largely on the volume of services provided. Fee-for-service payments thus create financial incentives to provide unnecessary services.

Similarly, under cost-based reimbursement, hospitals were typically reimbursed retrospectively on the basis of costs incurred. Hospitals were paid their actual costs as long as they were reasonable, related to patient care, and not in excess of maximum allowable amounts established by the program. This method encouraged hospitals to spend more and keep patients in the hospital longer because the more they spent for services, the larger their reimbursement would be. Although the 1970s saw several attempts, particularly under federal programs, to set limits on reimbursement rates, these efforts did not succeed in controlling cost growth.

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### Transitioning From Cost-Based to Prospective Payment Systems (PPS)

For hospitals, the most significant change in payment methods came with the 1983 enactment of PPS for acute care hospitals treating Medicare beneficiaries. Unlike the cost-based system preceding it, PPS has incentives for hospitals to shorten lengths of stay and provide care more efficiently. Hospitals are paid a predetermined amount for each Medicare discharge. Acute care patients are placed in 1 of over 400 diagnosis-related groups, or DRGs, on the basis of their principal diagnoses, the presence of complicating conditions, whether certain procedures were performed, and their age. In determining the payment amount, HHS basically calculates the average cost of treating Medicare patients in each DRG using historical hospital cost data and then adjusts the PPS rates for factors such as differences in area wages, teaching activity, and care to the poor.

Hospitals whose average costs are lower than the PPS rates may keep all of the difference; hospitals whose costs are above these rates must absorb the loss. To reduce the risk to hospitals of costly cases, Medicare pays hospitals additional amounts for high-cost “outliers.”

PPS drastically changed hospitals’ financial incentives. Under the cost-reimbursement system, hospitals had an incentive to keep patients longer and provide more ancillary services because each day of care and service provided was reimbursed separately. Under PPS, hospitals have a financial incentive to limit lengths of stay and the number of ancillary services provided because payment is fixed without regard to these factors. Both

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the average length of hospital stay and the number of admissions to community hospitals declined after PPS was introduced.<sup>35</sup>

Although PPS was initially limited to payment for services provided to Medicare beneficiaries, many other health care programs adopted similar payment methods. For example, the Civilian Health and Medical Program for the Uniformed Services (CHAMPUS) implemented a DRG-based PPS on October 1, 1987, to reduce government costs and provide an incentive for hospitals to reduce operating costs. Similarly, in 1991, 20 states reported using a DRG-based PPS under their Medicaid programs.<sup>36</sup>

Unlike community hospitals, whose revenues come mainly from third-party payments, VA hospitals do not depend on such payments. VA lacks the authority to bill Medicare for services provided to Medicare-eligible veterans.<sup>37</sup> Although VA bills private health insurers for services it provides to their policyholders, recoveries occurring before June 30, 1997, except for the amount spent on the recovery effort, were returned to the Treasury.<sup>38</sup>

VA receives an annual appropriation from the Congress to cover the costs of services it expects to provide to veterans, including those with private health insurance or Medicare coverage. Until 1984, the distribution of appropriated funds to individual VA medical centers had been based mainly on their historic expenditures; that is, each medical center generally received its prior year's allocation adjusted for inflation and certain other factors such as operating new facilities and programs.

VA experimented with a case mix PPS to allocate resources to its hospitals in the mid-1980s but abandoned the system in 1990 when concerns arose about "gaming" and the equity of resource allocations. In 1984, VA introduced a national average cost-based prospective budgeting approach, the Resource Allocation Method (RAM) for distributing globally budgeted

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<sup>35</sup>Although hospitals had financial incentives to increase the number of admissions, this did not occur. Medicare also modified and strengthened its utilization review process, and this may have helped hold down admissions.

<sup>36</sup>Medicaid Source Book: Background Data and Analysis, 1993 Update, Congressional Research Service (Washington, D.C.: Jan. 1993).

<sup>37</sup>VA has proposed legislation to allow it to recover its costs from Medicare for providing Medicare-covered services to higher income Medicare-eligible veterans. Under the proposal, VA would keep the recovered funds. The provision authorizing a test of the proposal was removed, however, from the final version of the Balanced Budget Act of 1997.

<sup>38</sup>The Balanced Budget Act of 1997 gave VA the authority to keep medical care recoveries and collections after June 30, 1997.

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funds to its medical facilities. Like HCFA's PPS, RAM was based on DRGS. Initially, VA planned to use RAM to measure and redistribute acute inpatient care resources, including all general medical, surgical, rehabilitation, neurological, and psychiatric services.

In 1985, RAM was expanded to include outpatient and extended care services. Funds for outpatient care were allocated using an age-adjusted, capitation method with six price groups determined by the type and extent of utilization during a year. Extended care, including intermediate hospital care and nursing home care, was to be funded through a Resource Utilization Group (RUG) system. Similar to hospital DRGS, the RUG system classifies long-term care patients according to the amount of direct nursing that they require.

Unlike Medicare's PPS' effects on community hospitals, however, RAM had little effect on VA hospitals' budgets. RAM showed that VA hospitals incurred differing costs for treating similar patients and provided for shifting significant amounts of resources among facilities to encourage more efficient operations. VA never fully implemented RAM, however, shifting few resources (less than 2 percent of the total dollars budgeted) among facilities.

RAM was abandoned in 1990 because of concerns that medical centers were gaming the system to maximize resource allocations. Gaming involves medical centers performing work beyond their resources to justify additional resources in the future. Although VA cited gaming as the main reason for abandoning RAM, it was not implemented partly because stakeholders lacked confidence in the equity of the resource allocations.

After RAM was abandoned, VA moved toward a new patient-based allocation system known as the Resource Planning and Management (RPM) system. Even after introducing RPM in 1994, however, VA continued to allocate resources mainly on the basis of historical cost. RPM, like RAM, was never fully implemented, and few resources were actually shifted among VA facilities. In April 1997, VA began to implement a new resource allocation system—the Veterans Equitable Resource Allocation (VERA) system based on the capitation funding principles applied by many risk-based managed care plans.

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## Capitation

Capitation was the second major change in how public and private health insurers pay for health care that contributed to declining demand for

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hospital care. Under capitation, a health maintenance organization (HMO) or other risk-basis managed care plan agrees to provide comprehensive health services to enrollees in return for a prepaid, fixed payment for each enrollee regardless of the quantity or types of services provided to any particular enrollee. The loss an HMO suffers from treating enrollees whose health care services cost more than the HMO receives in capitation payments is offset by the profit the HMO makes from enrollees who use services worth less than the capitation amount.

Capitation reverses the financial incentives existing under the traditional fee-for-service reimbursement system. It gives HMOs and other managed care plans incentives to limit the utilization of health care services because their profits increase if they provide fewer services. Because revenue is collectively obtained from the entire enrolled population of the managed care plan, the effect of an individual enrollee's health care use on the HMO's profitability is limited. In other words, capitation tempers the financial incentive of an HMO to deny needed services to an individual patient.

Many HMOs and other managed care plans use capitation or other financial incentives to shift some of the risk to individual providers or groups of providers. Depending on their design, such capitation payments may encourage primary care physicians to limit referrals to specialists and admissions to hospitals and hospitals to limit the lengths of stay and admissions. The financial incentives vary by type of HMO. For example, staff model HMOs provide services through salaried primary care physicians; such physicians do not directly benefit financially by limiting the services they provide. Other types of HMOs and managed care plans, however, provide physicians financial incentives through capitation to control (1) use of primary care services, (2) referrals to specialists, and (3) hospital admissions.<sup>39</sup>

Capitation payment mechanisms require primary care physicians or groups of physicians to accept a monthly designated amount as payment in full for each assigned enrollee, no matter how often during the month the physician or group of physicians provides services or how much the services cost. This shifts a substantial portion of financial risk for medical services from the HMO to the primary care physician; an individual primary

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<sup>39</sup>Another way to furnish funds for incentives involves risk pools composed of funds withheld from payments to physicians. Risk pools may show either a surplus or deficit depending on the use of health services authorized by the primary care physicians. Because surpluses are generally paid to the primary care physicians, risk pools provide an incentive to reduce referrals for specialty care and hospital admissions.

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care physician or group of physicians can gain or lose profits depending on the amount of patient services delivered.

The amount of financial risk transferred from the HMO or managed care plan to the physician or physician group is lowest when the capitation covers only primary care services; the risk increases as the physician or physician group becomes responsible for a wider range of services such as care by specialists and hospital care.

Although much debate continues on the cost-effectiveness of HMOs and their effect on access to and continuity and quality of care, studies have found that HMO enrollees have lower hospital utilization compared with fee-for-service plans, particularly regarding shorter hospital lengths of stay.

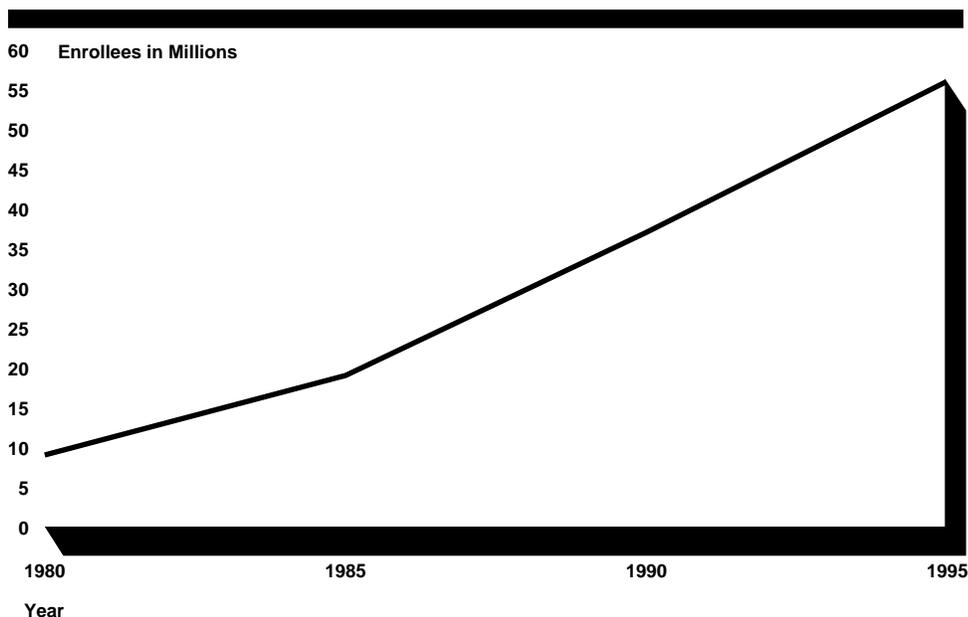
Therefore, the rapid growth of HMOs and other managed care plans has significantly contributed to decreasing demand for hospital care. Enrollment in HMOs increased from 9 million in 1980 to an estimated 56 million in 1995 (see fig. 4.1). HMO enrollment skyrocketed from 3,356 per 100,000 population in 1978 to 17,526 per 100,000 population in 1993, according to a report prepared for the National Committee for Quality Health Care.<sup>40</sup> In addition, many states are enrolling Medicaid recipients in HMOs or other managed care plans.

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<sup>40</sup>Tracking the System: American Health Care 1996, Lewin-VHI, Inc. and the National Committee for Quality Health Care (Washington, D.C.: 1996).

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**Figure 4.1: Growth in HMO Enrollment, 1980-95**



Source: Health Insurance Association of America (HIAA), Source Book of Health Insurance Data, 1995.

Capitation did not, however, contribute significantly to the declining demand for VA health care. Throughout the 15-year period during which VA hospital workload steadily declined, VA hospitals were funded mainly on the basis of their historical workload, creating incentives to increase—not decrease—inpatient workload.

VA began implementing a capitation-based resource allocation system—VERA—in April 1997. Under VERA, facilities' resource allocations are developed on the basis of the number of users rather than on the number of services provided. Users are divided into two groups—those with routine health care needs (called Basic Care) and those with special, typically chronic, and complex health care needs (called Special Care). For fiscal year 1997, VA allocated \$2,596 for each Basic Care user and \$35,707 for each Special Care user. VA adjusted allocations to reflect differences in labor costs in geographic areas.

Because VISNS receive a fixed allocation for each Basic and Special Care user regardless of the types or volume of services provided, the allocation

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system no longer provides a financial incentive to unnecessarily hospitalize patients to increase resource allocations. VERA should ensure that VISNS have a financial incentive for their facilities to treat patients in the most cost-effective setting. Although VERA holds promise for creating financial incentives for VISNS to reduce unnecessary hospital use, we have testified that VA has not adequately studied the reasons for the cost variations among VISNS.<sup>41</sup>

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**Flat-Rate Prospective**  
**Payments**

Flat-rate reimbursement was the third major change in payment methods that affected demand for hospital care. States often use flat-rate payments under their Medicaid programs and managed care plans in negotiating provider agreements.

States have considerable flexibility in determining how they pay for hospital care under their Medicaid programs. Generally, states' methods for reimbursing hospitals may not yield rates that exceed amounts paid under the Medicare program. Before Medicare's PPS implementation, most states, like Medicare, reimbursed hospitals on a retrospective cost basis. Due to increased flexibility given states through the Omnibus Budget Reconciliation Act of 1981, all but four states shifted from retrospective cost-based reimbursement to some PPS by 1991. Fourteen states developed systems that pay a flat rate per day or per case regardless of diagnosis. The rates are generally established for each individual facility but may be subject to overall limits for classes or "peer groups" of facilities depending on number of beds, affiliation with medical schools, and location.

Under flat-rate PPSS, hospitals receive a fixed payment for each day of hospital care provided or each patient treated regardless of the volume or cost of services provided. Hospitals have incentives to limit the amount and types of services provided.

Like the other payment reforms, flat-rate payment methods have not contributed to the declining demand for care in VA hospitals. Private-sector hospitals have a financial incentive to limit the services they provide because their profits depend on the extent to which they can provide care for less than the amount they receive from Medicaid. VA's system, however, does not base hospitals' funding on their per diem costs.

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<sup>41</sup>Department of Veterans Affairs: Programmatic and Management Challenges Facing the Department (GAO/T-HEHS-97-97, Mar. 18, 1997).

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## **Changes in Care Management Have Reduced Admissions and Lengths of Stay**

Under a traditional fee-for-service health plan, enrollees obtained access to all types of care through an independent physician who was reimbursed by the health plan for the specific treatment provided. The fee-for-service payment method encouraged physicians and hospitals to provide unnecessary services. However, two major changes in how insurers manage their enrollees' access to covered health care services—primary care case management and preadmission certification—have been used to control admissions to and lengths of stay in community hospitals. Although these changes have significantly contributed to the declining use of community hospitals, they have had less effect on demand for care in VA hospitals because VA hospitals do not depend financially on payments from third-party insurance and, until recently, VA hospitals did not have comparable programs.

VA, however, began systemwide implementation of its own primary care program in 1994 and established a systemwide preadmission screening program in August 1996. Unlike preadmission screening programs of health insurers, however, the VA program does not financially penalize a physician or hospital if a patient admitted to a hospital is determined to need less care or a patient stays beyond the number of days determined appropriate for the condition(s) being treated.

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## **Primary Care Case Management**

In addition to providing financial incentives for physicians to limit referrals to specialists and admissions to hospitals, HMOs and other managed care plans control use of specialists and hospital care through primary care case management. The objective of case management is to coordinate and organize health care resources to address patients' specific medical problems and to control the cost and volume of the health services delivered. Each insured individual selects or is assigned to a case manager through whom all medical care (including hospital and specialty care) is provided or approved.

Primary care case management may take place either in a risk-based prepaid health care setting, such as an HMO, or in a nonrisk-based fee-for-service system. For example, 17 states participating in Medicaid managed care in 1993 operated primary care case management programs. Under these programs, recipients have a specific primary care doctor or provider who oversees their care. Providers are paid on a fee-for-service rather than a risk basis. Medicaid recipients enrolled in primary care case management plans obtain access to care through a primary care physician

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who controls (acts as a gatekeeper) and coordinates the delivery of health services in a cost-conscious way.

Primary care case management did not significantly contribute to the declining use of VA hospital care. In the past, VA care was episodic, with veterans appearing at the emergency room or outpatient clinic when they were sick. The more traditionally operated general medicine clinics do not always pair the veteran with the same physician, so no single physician may be responsible for the veteran's care.

One of the objectives set forth by VA's Prescription for Change was to establish primary care as the central focus of patient treatment. Though 20 percent of VA users perceived that one provider or primary care team was in charge of their care in 1994, 72 percent of users in 1996 were assigned a primary care provider. VA's goal is to have 80 percent of users enrolled in primary care during fiscal year 1998.

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**Hospital Preadmission**  
**Certification**

While prospective payment gives hospitals incentives to reduce lengths of stay and the number of ancillary services provided, it does not give incentives to control hospital admissions. One way to control unnecessary hospital admissions is through preadmission certification of the medical necessity of acute, inpatient hospital services. Under preadmission certification, the insurer must review and approve of the need for admission (other than in an emergency) beforehand. Hospital preadmission certification can also effectively identify potential candidates for more cost-effective alternatives to inpatient care such as home health care.

Such certification has become common in private health insurance policies and in HMOs. About 75 percent of private-sector employers now purchasing health insurance for their employees, an official of the Health Insurance Association of America (HIAA) estimated, want a hospital preadmission certification program included in their overall health care package. Beneficiaries or their physicians typically have to contact their insurers at the time of the nonemergency admission to the hospital to obtain certification that the insurer will pay the hospital.

Similarly, all fee-for-service health plans participating in the Federal Employees Health Benefits Program (FEHBP) must operate hospital

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preadmission certification programs.<sup>42</sup> For example, the governmentwide Blue Cross and Blue Shield Service Benefit Plan requires that the enrollee or enrollee's doctor check with the local plan before the enrollee is admitted to a hospital (or within 2 business days after the day of a maternity or emergency admission). Precertification allows the plan to evaluate the medical necessity of the proposed hospital admission and to determine the number of days of hospital care authorized for treating the enrollee's condition.

If a policyholder is admitted to the hospital without precertification, the plan reduces benefits by \$500, even if the admission was medically necessary. If the plan determines that the hospitalization was not necessary, it will not pay inpatient hospital benefits. If the plan determines the admission to be medically necessary but part of the stay not to be medically necessary, the plan will not pay inpatient hospital benefits for the portion of the stay that was not medically necessary.

Insurers' preadmission certification requirements did not significantly contribute to the declining demand for VA hospital care between 1980 and 1995. This is because the VA system hardly had any financial incentives to provide care in the most cost-effective setting. Even in those cases in which a private health insurer's preadmission certification requirement applied, failure to obtain such certification or to admit the patient after certification was denied did not affect hospital revenues. A VA hospital that admits a patient who does not need hospital care incurs no penalty. In fact, VA's past resource allocation methods gave medical centers a financial incentive to admit patients whose care could have been provided more efficiently in an outpatient setting and to keep them in the hospital as long as possible. VERA is intended to overcome this problem and provide financial incentives for VISNS to provide care in more cost-effective settings. As noted, however, VERA does not provide financial incentives for individual physicians to use more efficient practices.

We reported in July 1996 that VA, unlike private-sector health care providers, had no systemwide external preadmission screening program or other utilization review program to provide incentives to ensure that only patients who need hospital care are admitted and that patients are discharged as soon as medically possible.<sup>43</sup> In response to our

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<sup>42</sup>FEHBP provides health insurance to about 8.6 million active federal civilian employees, federal retirees, and their dependents.

<sup>43</sup>VA Health Care: Opportunities for Service-Delivery Efficiencies Within Existing Resources (GAO/HEHS-96-121, July 25, 1996).

recommendation that it establish an independent external preadmission certification program, the Veterans Health Administration, in August 1996, issued a directive requiring VISNS to establish utilization management programs to assess, monitor, and evaluate the appropriateness of the level of care provided by their facilities. By September 30, 1996, facilities had substantially implemented

- preadmission review of 100 percent of planned admissions to determine each patient's most appropriate level of care and
- continuing stay reviews to determine the appropriateness of each additional day of acute hospitalization. Each VISN was to determine the design and extent of the continuing stay reviews.

The directive also said that each network was to ensure that facilities establish a process for coordinating referrals and arrange for the inpatient and outpatient alternatives to acute hospitalization for each patient. The outpatient alternatives should, the directive states, include clinic appointments to primary care clinics, preferably, or specialty clinics; urgent care evaluation units; outpatient care evaluation units; temporary lodging; or observation beds.

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## Expanded Home Health Care Coverage Has Reduced Lengths of Stay

Expanded insurance coverage of home health care has helped reduce community hospital admissions and lengths of stay. Both public programs, such as Medicare and CHAMPUS, and private insurance have expanded coverage of home health care, particularly when such care is considered less expensive than continued hospital care or an alternative to hospital care. Although VA also provided home health care during our study period (1980 to 1995), the availability of such care was more limited.

For chronically and catastrophically ill patients, home health care may (1) reduce the number or length of rehospitalizations, (2) benefit the patient, and (3) cost less than hospital care for many patients who would otherwise remain in the hospital if home care were not available.<sup>44</sup> The increased demands for home health care also reflect many Americans' desire for treatment options that allow autonomy, functional independence, quality of life, and dignity, while providing needed support.

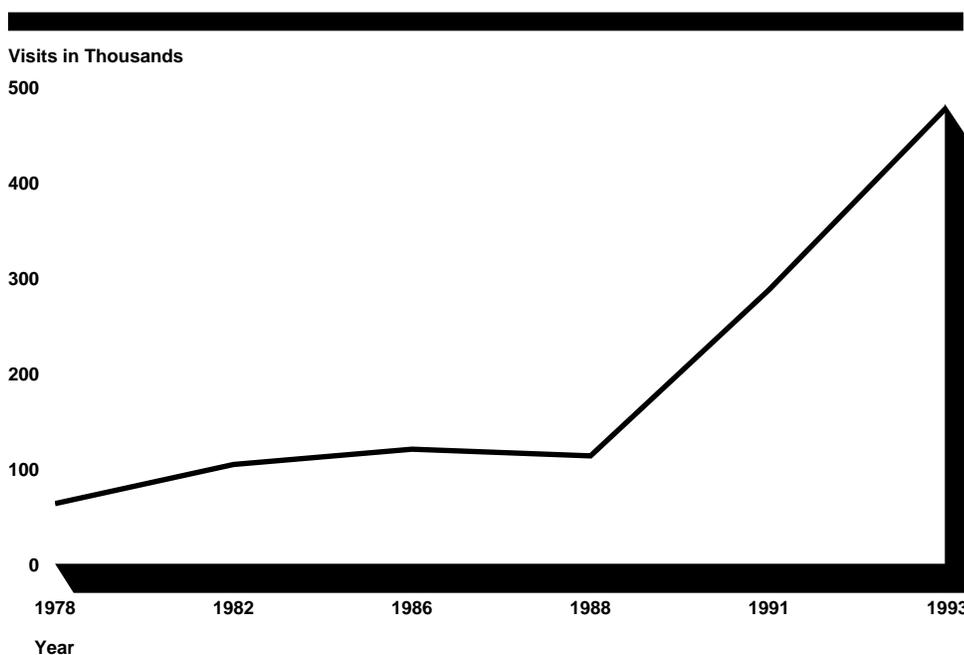
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<sup>44</sup>DOD Health Care: Further Testing and Evaluation of Case-Managed Home Care Is Needed (GAO/HRD-93-59, May 21, 1993).

**Role of Medicare Home Health in Reducing Hospital Lengths of Stay Is Unclear**

With the implementation of the Medicare inpatient PPS in 1983, use of the home health benefit was expected to grow as patients were discharged from the hospital earlier in their recovery periods. Expenditures changed little in the next 5 years, however. Home health expenditures grew significantly after home health coverage was broadened and program controls were reduced in the late 1980s. Figure 4.2 shows the growth in Medicare home health visits per 100,000 beneficiaries between 1978 and 1993.

**Figure 4.2: Changes in Home Health Visits per 100,000 Medicare Beneficiaries, 1978-93**



Source: Lewin VHI, Inc., Tracking the System: American Health Care 1996.

The extent to which home health care has helped decrease hospital lengths of stay has not been quantified. Nevertheless, the availability of home health care has surely enabled decreased lengths of stay.

Although home health care has been a Medicare benefit since the program's inception, changes in the legal and regulatory provisions governing the home health benefit, together with changes in HCFA's

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policies, have played a major role in increased use of the benefit. Initially, Medicare provided a limited posthospital home health care benefit of up to 100 visits per year. Benefits were available only following discharge from a hospital and had to be provided within 1 year after the patient's discharge and for treating the illness that caused the hospitalization. These restrictions were eliminated by the Omnibus Reconciliation Act of 1980.

Other important restrictions, however, remained. For example, under HCFA's interpretation of the law, home health care was available only on a part-time and intermittent basis. After HCFA's interpretation of this and other benefit coverage requirements was struck down in a 1988 lawsuit (Duggan v. Bowen),<sup>45</sup> Medicare coverage was further broadened. As a result of the lawsuit, HCFA revised its home health guidance to cover home health care that is part time or intermittent, enabling home health agencies to increase the frequency of visits. In addition, patients now qualify for skilled observation by a nurse or therapist if a reasonable possibility exists for complications or the need to change treatment. Moreover, the benefit now allows maintenance therapy, that is, therapy services required for the patient to simply maintain function. Previously, patients were eligible for therapy only if expected to show improvement from such services.

These changes made Medicare home health care available to more beneficiaries for less acute conditions and for longer periods of time. For example, in 1992, about one-third of Medicare home health beneficiaries entered the program without a prior hospital stay during the year and, of those who had been hospitalized, only half had been hospitalized within the 30 days before receiving home health care.

Both the number of Medicare beneficiaries receiving home health services and the number of services received by each beneficiary have increased significantly. In 1989, 1.7 million Medicare beneficiaries received home health services; by 1993, this number had grown to 2.8 million. During the same time, the number of visits provided to beneficiaries receiving home health care more than doubled, from an average of 26 visits per year in 1989 to an average of 57 visits per year in 1993.

Linking these increases to decreased use of hospital care is difficult, however. As discussed, the largest increases in home health visits did not occur during the 5 years following implementation of the PPS. During that period, however, the Deficit Reduction Act of 1984 reduced the number of intermediaries processing home health claims, and HCFA intensified

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<sup>45</sup>Duggan v. Bowen, 691 F. Supp. 1487 (D.D.C. 1988).

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education of the home health intermediaries to promote more consistency in claims reviews. These improved controls resulted in an increased claim denial rate of between 1985 and 1987. Thus, reductions in home health use may have offset any increased use of home health care to shorten hospital lengths of stay.

Although controls over home health care improved during the mid- and late 1980s, they have largely deteriorated since then, contributing to the growth in benefit payments.<sup>46</sup>

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**CHAMPUS Benefits**  
**Expanded to Include**  
**Case-Managed Home Care**

The Congress, in October 1992, authorized DOD to establish a program for individual case-managed home care of military beneficiaries with extraordinary medical or psychological disorders. The program grew out of two demonstration projects intended to test whether expanded home care benefits, coupled with case management, could reduce medical costs and improve services to CHAMPUS beneficiaries. The original program focused on serving patients who, in the absence of case-managed home care, would remain hospitalized.

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**Home Health Has Become**  
**the Fastest Growing**  
**Benefit Under Private**  
**Health Insurance**

Although private health insurance plays a comparatively small role in financing home health care, it is the fastest growing benefit. Between 1989 and 1993, private health insurance payments for home health services increased from \$0.4 billion to \$2.5 billion (see fig. 4.3). Home health payments increased 13.6 percent between 1992 and 1993, compared with an increase of 7.9 percent for payments for hospital care, which had the second highest rate of increase.<sup>47</sup>

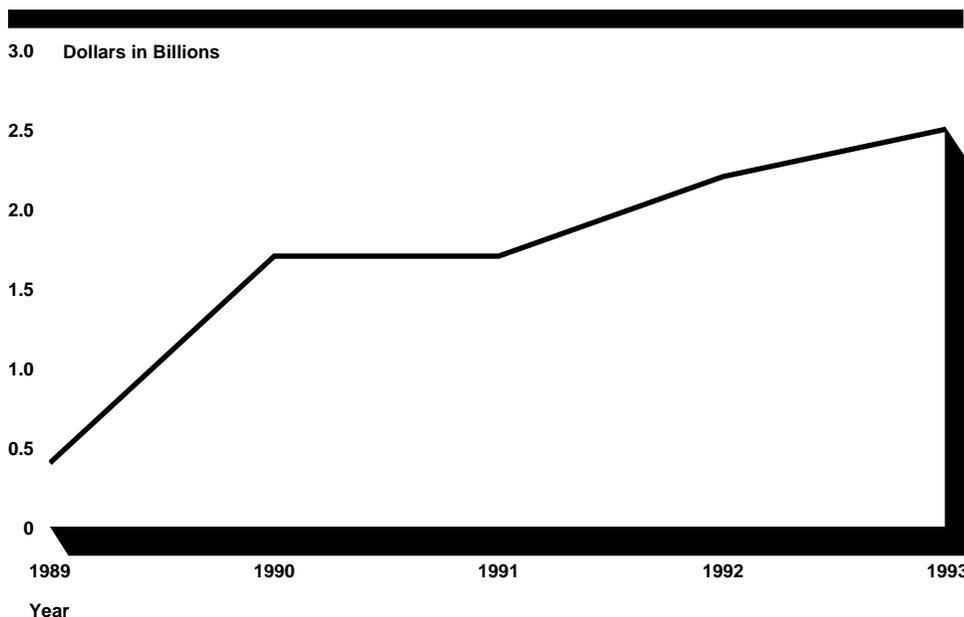
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<sup>46</sup>Medicare: Home Health Utilization Expands While Program Controls Deteriorate (GAO/HEHS-96-16, Mar. 27, 1996).

<sup>47</sup>Source Book of Health Insurance Data, 1995, HIAA (Washington, D.C.: 1996).

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**Figure 4.3: Growth in Home Health Payments Under Private Health Insurance**



Source: HIAA, Source Book of Health Insurance Data, 1995.

**VA Home Care Benefits Have Grown Less Than Such Benefits Under Private Health Insurance**

VA home health care benefits have grown more modestly, though still significantly, than such benefits under private health insurance. VA's efforts to meet veterans' home health care needs focus on providing long-term care services for chronic medical conditions as well as shorter term services for acute medical conditions. VA's Hospital-Based Home Care (HBHC) program most often provides care to those with chronic conditions. Veterans requiring short-term skilled care often following a hospital stay generally receive services from community-based providers. VA either arranges for Medicare to pay for eligible veterans to receive home care from community-based providers or, under its fee-basis program, pays community-based providers to provide care for those not eligible for Medicare.

HBHC is an extended-care program designed to meet the long-term care needs of veterans who have chronic multiple medical and psychosocial problems, a terminal illness, or a need for posthospital rehabilitation or monitoring. The objectives of the program are to provide primary care services to homebound patients; create a therapeutic and safe home environment; support the caregiver—the veteran's spouse, other family

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member, or friend—in caring for the patient; reduce the need for, and provide an alternative to, hospitalization or other institutionalization; promote timely discharge of patients from hospitals or nursing homes; and provide an academic and clinical setting for students of the health professions. VA's HBHC program, begun in 1972, had been implemented in VA's 173 hospitals by fiscal year 1975. In fiscal year 1994, VA served 9,953 veterans under the program.

The fee-basis program, the second method VA uses to provide home health services, involved nearly all VA hospitals in fiscal year 1995. The hospitals use the program to purchase skilled home health services from community-based providers. In fiscal year 1994, VA spent \$27.3 million on fee-basis home health care services for about 12,800 patients. Most veterans in the program receive short-term home health care services for acute medical conditions, such as hip fractures or surgical wounds. Skilled nursing is the predominant service covered under the fee-basis program.

Finally, VA provides homemaker/home health aide services for veterans who otherwise would be placed in a nursing home under a pilot program implemented in April 1993 in response to Public Law 101-366. Although the program was initially limited to services for veterans with service-connected disabilities, Public Law 103-452 expanded eligibility to include all veterans, and the Veterans' Benefits Act of 1997 made the program permanent.

Under the pilot program, a VA facility provides primary health services for veterans receiving homemaker/home health aide services. Community health nurses and social workers select a licensed home health agency to provide the homemaker/home health aide services. The continued need for the services is reassessed every 3 months, and the cost of homemaker/home health aide services on a per patient basis is limited to 65 percent of the average per diem costs of VA nursing home care units. All VA medical centers may participate in the pilot program. In 1996, 118 medical centers operated pilot programs, which had an average daily census of about 1,457.

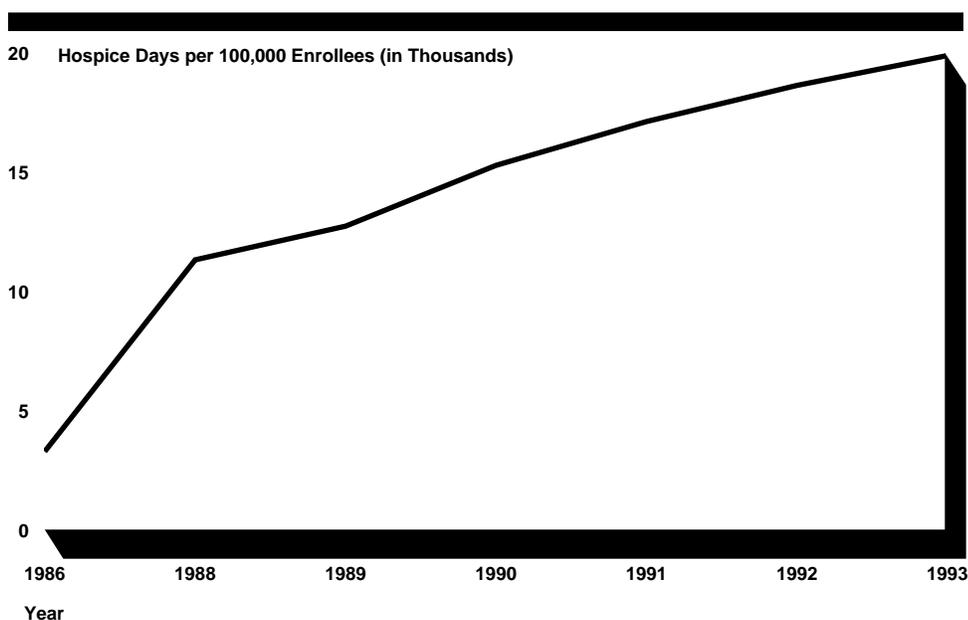
In addition to the veterans receiving hospital- and fee-based care, VA facilities referred about 19,000 Medicare-eligible veterans to Medicare-certified home health agencies in fiscal year 1994. Medicare, rather than VA, paid for the home health services provided to such veterans.

## Expansion of Hospice Care Has Reduced Hospital Use by the Terminally Ill

The rapid expansion of hospice care benefits from 1978 through 1993 has reduced hospital use by the terminally ill. Although VA also offers hospice benefits, its benefits were primarily for inpatients and limited to selected medical centers until 1993. As a result, these benefits did not significantly affect demand for inpatient hospital care between 1980 and 1995.

Hospice care involves a medically supervised program of home or inpatient palliative and supportive care for a terminally ill patient and the patient's family. Specialized care for terminally ill patients began in Europe in the 1800s, but in the United States, the first hospice was not formally organized until 1974. Medicare's 1983 addition of a hospice benefit helped to rapidly expand hospice care: The number of hospices increased from 158 in 1985 to 1,459 in 1994. The number of Medicare-covered hospice days per 100,000 Medicare beneficiaries increased from 3,270 days in 1986 to 19,864 days in 1993.<sup>48</sup> (See fig. 4.4.)

Figure 4.4: Growth in Hospice Days of Care per 100,000 Medicare Beneficiaries, 1986-93



Source: Lewin-VHI, Inc., *Tracking the System: American Health Care 1996*.

<sup>48</sup>Tracking the System, Lewin-VHI, Inc. and the National Committee for Quality Health Care.

Virtually all terminally ill Medicare beneficiaries are now eligible for hospice care. Until recently, coverage was limited to four periods of care—two 90-day periods, one 30-day period, and a final period of unlimited duration.<sup>49</sup> The Medicare hospice benefit also offers financial incentives for hospices to provide care in the patient's home rather than in a facility.

Other health care programs also initiated or expanded hospice benefits. For example, over 30 states had added hospice benefits under their Medicaid programs by 1991 and DOD's direct delivery system and CHAMPUS authorized a hospice benefit in 1991. Similarly, many private health insurers covered hospice benefits by the early 1980s.

Although hospices mainly serve patients with cancer, a broad range of terminally ill patients, such as patients with acquired immunodeficiency syndrome, are also served. Moreover, an estimated 15 percent of the children who die in the United States could potentially benefit from hospice services.<sup>50</sup>

All terminally ill veterans are eligible to receive hospice care from VA with no limits on the length of time covered. VA's Commission on the Future Structure of Veterans Health Care reported in November 1991 that only 45 VA medical centers had hospice programs as of October/November 1990. One year later, however, VA reported that all of its medical centers provided hospice care.

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## Effects of Recent VA Changes on Future Demand for VA Hospital Care Are Uncertain

VA has developed new methods for allocating resources and monitoring the appropriateness of hospital admissions and lengths of stay modeled after private-sector actions. The effects of these changes on future demand for VA hospital care are uncertain, however, because of important differences between VA and private-sector programs and because the changes are recent.

VERA may help VA reduce hospital admissions as the private sector already has through prospective payment and capitation. The ultimate effect of VERA on hospital operations, however, depends on several factors. First, how effective will VERA be in changing practice patterns absent the

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<sup>49</sup>The Balanced Budget Act of 1997 established new coverage limits. The Medicare benefit now allows an unlimited number of 60-day extensions of hospice services following the two initial 90-day periods.

<sup>50</sup>I.M. Martinson, "Hospice Care for Children: Past, Present, and Future," *Journal of Pediatric Oncology Nursing*, Vol. 10, No. 3 (1993).

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financial risk upon which both prospective payment and capitation are based? Unlike private-sector hospitals and health plans, VISNs do not have a contractual obligation to provide their users needed health care services. Theoretically, if a VISN runs out of funds, it may deny care to any veteran, including those with service-connected disabilities. By contrast, private insurers have a contractual obligation to provide their members the full range of health care services covered by the plan.

Because implementation of VERA did not begin until April 1997 and resource shifts are being phased in over several years, little is known about

- how VISNs and individual facilities are reacting to both increased and decreased resource allocations and
- the potential effects, both positive and negative, on veterans' access to health care services.

Determining the effect of VERA on VA hospitals' efficiency will be difficult because VISNs and individual facilities can and do shift costs to other programs such as the Medicare home health and hospice programs and the Medicaid nursing home program. In other words, increased costs in other programs may offset reductions in VA costs per patient served.

Another reason why VERA's effects are uncertain relates to VISNs' decisions on allocating resources. If VISNs use VERA to provide veterans the same opportunity for VA-supported hospital care regardless of veterans' residence, then fewer funds will be available to support existing VA hospitals and more funds will be allocated to purchase care from community hospitals closer to veterans' homes. This is because about 89 percent of veterans live more than 5 miles from a VA hospital providing acute medical and surgical care, and many veterans—given a choice between care in non-VA facilities close to their homes and more distant VA facilities—with no difference in out-of-pocket costs, would most likely choose non-VA care.

Although it is too early to evaluate the effectiveness of VA's new preadmission screening and continuing stay review requirements, data from both the Washington, D.C., and Martinsburg, West Virginia, VA medical centers indicate that about 45 percent of acute inpatient admissions and about 60 percent of acute days of care (in both centers) did not meet standards for acuity or intensity of care. Preliminary data from VISN 5 (Baltimore) suggest that they are having a limited effect on

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reducing unnecessary hospital admissions and excessive lengths of stay in that area. VISN 5 (Baltimore) uses its reviews mainly for data collection, evaluation, and monitoring.

Unlike the preadmission certification and continuing stay review programs run by private health insurers, the VA program has no similar enforcement mechanism. Private-sector community hospitals generally do not get paid if they admit patients without the insurer's prior approval, except in an emergency. Under VA's preadmission certification program, however, neither the hospital nor the physician authorizing the admission incurs any direct financial penalty for admitting a patient whom the screening program determined did not need to be admitted.

Even without giving hospitals and physicians a direct financial stake in admission decisions, preadmission screening and continuing stay reviews should somewhat affect nonacute admissions. Data are not yet available for gauging the extent to which individual physicians are changing their admitting practices because of the review programs. Once such data are available, the need to establish the types of financial disincentives to nonacute admissions that exist in the private sector can be determined.

Finally, expanded home health and hospice benefits under public and private health insurance could affect demand for VA hospital care. The availability of Medicare home health benefits, which require no beneficiary cost sharing, may have contributed to decreased use of VA as well as community hospitals. Similarly, VA's focus on home health and hospice care, both through direct provision of services and referrals to Medicare and other programs, could further reduce VA lengths of stay.

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# Additional Factors Likely to Affect Future Demand for VA Hospital Care

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Although medical advances and changes in the payment and care management methods used by public and private health insurers did not affect demand for VA hospital care as much as demand for community hospitals, several additional factors affected VA but not community hospitals. First, VA hospitals have had a steadily declining target population since 1980, while the general population has been increasing. Second, the Medicare and Medicaid programs gave many veterans the means to obtain care from community hospitals closer to their homes than VA hospitals. As the veteran population declines, an increasing proportion is becoming Medicare eligible and using such coverage to obtain all or a portion of their hospital care from more convenient community hospitals. Finally, the growth of HMOs and preferred provider organizations (PPO) with their relatively low cost-sharing requirements has largely eliminated one of VA's competitive advantages over community hospitals—its ability to offer veterans free care if they use VA hospitals.

Recent and proposed changes in the VA system and other health care programs create considerable uncertainty about future demand for VA hospital care. For example, how will expansions of veterans' eligibility for VA health care services and VA's ability to buy care from and sell care to private-sector hospitals and health plans affect future use of VA hospitals? Similarly, proposals to delay Medicare eligibility and give Medicare beneficiaries the choice of establishing medical savings accounts (MSA) could increase demand for VA hospital care. On the other hand, actions to make it easier for people to maintain insurance coverage when they change jobs could decrease future demand for VA care.

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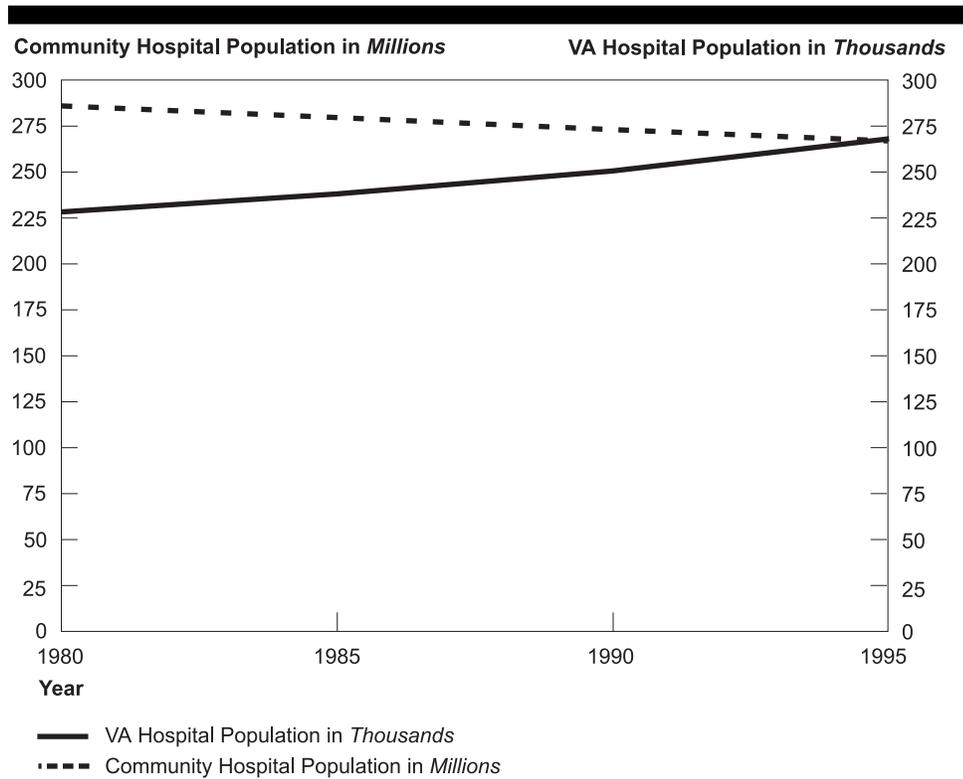
## VA, Unlike Community Hospitals, Has a Declining Target Population

VA hospitals have had a steadily declining target population since 1980. The decline is expected to escalate during the next 12 years, resulting in an overall one-third reduction in the number of veterans between 1980 and 2010. In contrast, the general population has increased steadily since 1980, helping offset the effect on community hospital demand of other efforts to decrease demand.

The veteran population, which numbered slightly more than 30 million in 1980, declined to about 26 million in 1995. In contrast, the general population increased from about 228 million in 1980 to more than 263 million in 1995. (See fig. 5.1.)

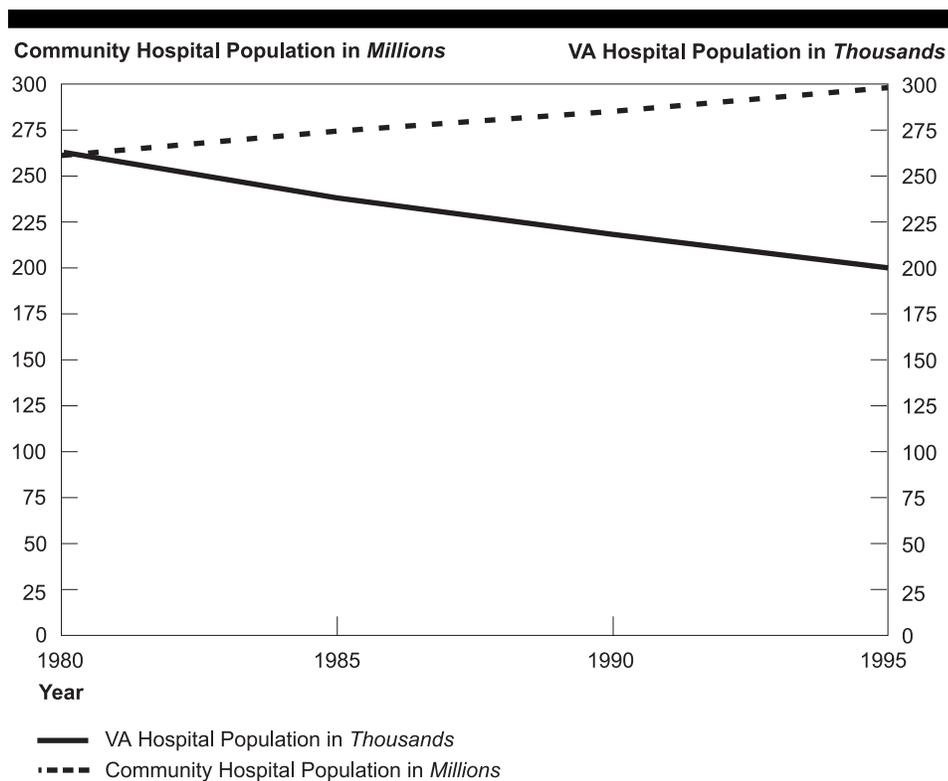
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**Additional Factors Likely to Affect Future**  
**Demand for VA Hospital Care**

**Figure 5.1: Changes in Community and VA Hospitals' Populations, 1980-95**



Projected changes in the veteran population by 2010 indicate that demand for VA hospital care will continue to decline unless VA acts to increase the percentage of veterans using VA hospital care. The veteran population is expected to decline another 23 percent (6.1 million) by 2010. In contrast, the general population is expected to increase by about 13.2 percent (34.7 million) in the same period. (See fig. 5.2.)

**Figure 5.2: Projected Changes in  
Community and VA Hospitals’  
Populations, 1995-2010**



With the downsizing of the military since the end of the Vietnam War and with World War II ending over 50 years ago, the aging of the veteran population has become more pronounced. The proportion of the veteran population under the age of 45 is projected to decline from 31 to 16 percent between 1990 and 2010. In contrast, the proportion of the veteran population that is 75 years old or older will increase from approximately 5 to about 23 percent in the same 20-year period.

Although veterans’ health care needs increase among older veterans, the overall decline in the number of veterans should more than offset the increased hospital use by older veterans and should further reduce the number of days of VA hospital care. If veterans continued to use VA hospital care at the same rate that they did in 1994, the number of days of care provided in VA hospitals should decline about 11 percent, from 15.4 million in 1994 to about 13.7 million by 2010. In other words, even if VA made no other changes in its health care system to reduce the amount of care

unnecessarily provided in its hospitals, the declining numbers of veterans would reduce demand despite the aging of the veteran population.

These estimates may, in fact, overstate demand for VA inpatient hospital care. Between fiscal years 1994 and 1996, VA hospital days of care declined from 576 to 542 per 1,000 veterans. More importantly, days of care per 1,000 veterans aged 85 and older declined 30 percent in the 2-year period. Despite a 26-percent increase in the number of veterans 85 and older, days of care provided to veterans in the age group declined 11 percent.

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## Medicare Gave Older Veterans Improved Health Care Options

One of the main reasons for the declining use of VA services by older veterans is the introduction of Medicare and Medicaid. The rate at which elderly veterans used VA hospitals dropped by 50 percent between 1975 and 1996. The introduction of Medicare and Medicaid in 1965 gave many veterans new health care options. This is important because veterans who have health insurance are much less likely to use VA hospitals than veterans without public or private insurance.

Medicare, which provides hospital insurance to almost all Americans aged 65 and older and some under 65 who are disabled, gave many veterans new or improved access to health insurance. Similarly, the enactment of Medicaid improved access to health care services for some low-income veterans.

Almost immediately after the enactment of the two programs, demand for VA hospital care began to steadily decline as the Medicare and Medicaid programs were increasing demand in community hospitals. Medicare increasingly affected demand for VA hospital care between 1975 and 1996 as the veteran population aged. This is because most veterans become eligible for Medicare when they turn 65 years of age even if they were previously employed in jobs that did not provide health insurance. VA research has confirmed that a significant portion of VA's elderly users leave VA's inpatient care system or reduce their use of VA hospital care as they become Medicare eligible.<sup>51</sup>

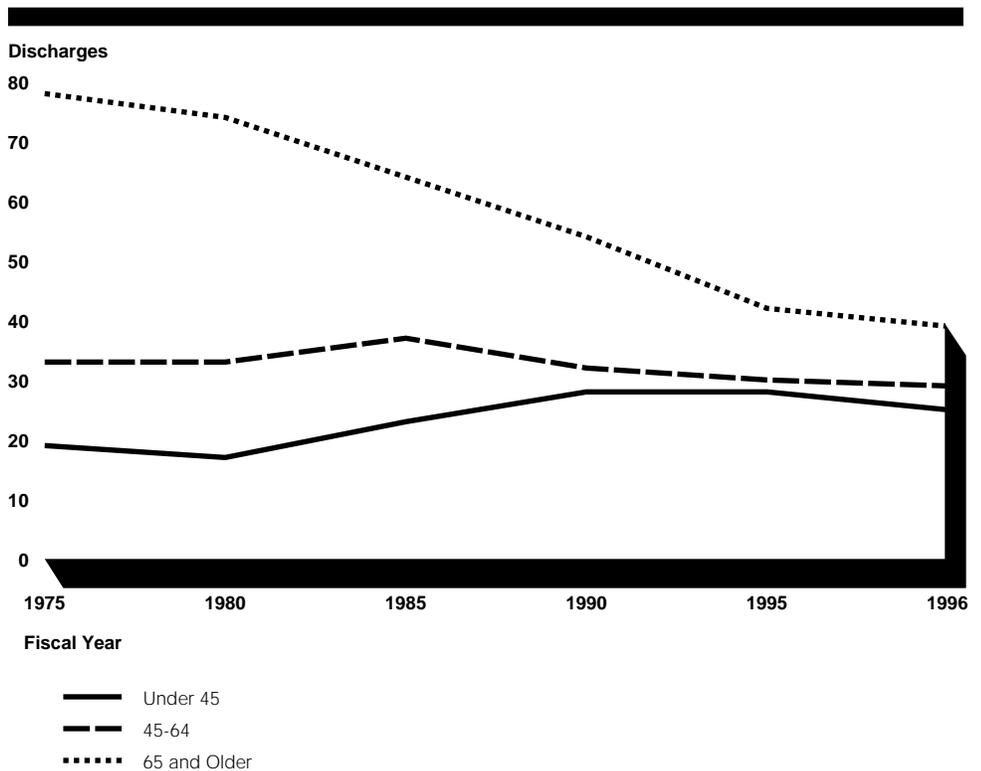
VA hospital discharges per 1,000 veterans aged 65 or older declined from 78 in fiscal year 1975 to 39 in fiscal year 1996. Hospital discharges among veterans between the ages of 45 and 64 decreased, but to a lesser extent, in

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<sup>51</sup>John J. Hisnanick, *The Impact of Medicare on the Hospital Usage Patterns of Elderly and Disabled Veterans: Findings From Linking the HCFA and VA Administrative Databases*, National Center for Veteran Analysis and Statistics, VA, SR-008-94-2 (Washington, D.C.: July 1994).

the 21-year period, from 33 to 29 per 1,000 veterans. Hospital discharges increased from 19 to 25 per 1,000 veterans under age 45. (See fig. 5.3.)

**Figure 5.3: Changes in Hospital Discharges per 1,000 Veterans by Age Group, Fiscal Years 1975-96**



Source: Based on VA Annual Reports for fiscal years 1975, 1980, 1985, 1995, and 1996.

The data show that the peaks in use by veterans in the two younger age groups roughly correspond to the aging of the large numbers of Vietnam-era and Korean Conflict veterans. For example, the 1985 peak in hospital use by veterans aged 45 to 64 corresponds to the period in which most Korean Conflict veterans were in this age group. Hospital use by this group of veterans subsequently began to decline as more Korean Conflict veterans reached 65 years of age. Similarly, VA hospital discharges per 1,000 veterans under age 35 have declined steadily since 1985 as most Vietnam-era veterans continue aging; discharges per 1,000 veterans aged 35 to 44 generally increased during the same time period.

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## Increasing HMO and PPO Enrollment Reduced Veterans' Financial Incentives to Use VA Hospitals

Increasing enrollment in HMOs, PPOs, and point of service (POS) plans also affected demand for VA hospital care by reducing or eliminating the financial incentive for veterans to use VA hospitals. Unlike traditional fee-for-service health insurance that typically requires policyholders to pay a significant portion of their hospital costs through deductibles and copayments, HMOs, PPOs, and POS plans generally require no or small cost sharing when policyholders obtain care from designated hospitals.

In 1985, both public and private health insurance plans were still predominantly fee for service and had significant out-of-pocket costs. Although most fee-for-service insurance provided first-dollar coverage of hospital room and board, patients often paid sizable deductibles and coinsurance for physician and ancillary services. Specifically, about 66 percent of private health insurance policies provided first-dollar coverage of hospital room and board, but 95 percent required policyholders to pay from 10 to 20 percent of hospital charges for physician and ancillary services; the remaining 5 percent required policyholders to pay 25 percent of charges. In addition, fee-for-service insurance often required policyholders to pay a specified amount of covered charges before insurance paid any benefits. Such deductibles were generally applied annually. In 1985, between 80 and 90 percent of fee-for-service health plans had deductibles for major medical benefits.

The significant cost sharing associated with fee-for-service health insurance costs veterans with such insurance out-of-pocket expenses when they obtain care from community hospitals. Although veterans with higher incomes are less likely to use VA facilities, it provides a financial incentive for veterans with limited incomes to use VA rather than community hospitals. This is because VA does not require these veterans to pay applicable copayments and deductibles under their public or private insurance.

Fee-for-service payment methods have declined in both public and private insurance as enrollment in HMOs and other managed care plans has increased. Enrollment in HMOs increased from 9 million in 1982 to 50 million in 1994. In 1993, however, 49 percent of American workers with health insurance still had a conventional fee-for-service plan. By 1995 that percentage had dropped to 27.<sup>52</sup>

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<sup>52</sup>Gail A. Jensen and others, "The New Dominance of Managed Care: Insurance Trends in the 1990s," *Health Affairs*, Vol. 16, No. 1 (1997), pp. 125-36.

The nearly three-fourths of workers with employer-provided health insurance now covered under a managed care plan have largely eliminated the financial incentive for employed veterans to use VA hospitals. A slower shift is occurring among Medicare enrollees. Between 1987 and 1996, enrollment in Medicare risk-contract HMOs increased from 2.6 percent of beneficiaries to 10 percent of beneficiaries. By 2002, however, enrollment is projected to be 22.9 percent of total beneficiaries.<sup>53</sup> Like enrollees under other HMOs, Medicare beneficiaries enrolled in risk-based HMOs usually have minimal out-of-pocket expenses. In addition, HMOs often add additional benefits, such as prescription drugs, not otherwise covered under Medicare.

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## **Many Factors Make Future Demand for VA Hospital Care Uncertain**

Recent and proposed changes in the VA system and other health care programs create considerable uncertainty about future demand for VA hospital care. First, VA expects last year's expansion of eligibility for VA health care to enable it to increase VA system users by 20 percent. It is not clear, however, to what extent new users attracted to VA outpatient care through community-based outpatient clinics (CBOC) will use VA for hospital care.

VA's 1998 budget proposed reinvesting all efficiency savings and using additional resources to expand its system users by 20 percent. VA expected to add a total of \$5.8 billion in new resources in the next 5 years (from public and private insurers and others), starting with \$737 million in 1998 and increasing to \$1.7 billion in 2002.<sup>54</sup> VA expected these additional resources to allow it to increase the number of veterans served by 587,000, which would increase its patient base from 2.9 million to 3.5 million in 2002.

If VA attains the targeted resource levels, it could attract 587,000 new users by 2002. The recent expansions of VA's contracting authority and veterans' eligibility for care should facilitate creation of new CBOCs, which, along with VA's efforts to improve accessibility of hospital-based clinics, will probably attract new users.

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<sup>53</sup>Jo Ann Lamphere and others, "The Surge in Medicare Managed Care: An Update," *Health Affairs*, Vol. 16, No. 3 (1997), pp. 127-33.

<sup>54</sup>The Balanced Budget Act of 1997 authorized VA to retain recoveries from private health insurance and collections resulting from veteran copayments. It did not, however, authorize VA recoveries from Medicare.

It is unclear, however, whether the new users will use VA for hospital care. To the extent that CBOCs are far from their sponsoring VA hospitals, the likelihood of veterans using a VA hospital drops off rather significantly at distances of more than 5 miles from the VA hospital.<sup>55</sup>

The second factor that could affect future demand for VA hospital care is VA's expanded authority to buy hospital care from and sell hospital care to the private sector. This authority could increase the use of VA hospitals if VA uses it to serve more nonveterans or decrease the use of VA hospitals if VA uses it to allow veterans, such as the new users attracted to the system through CBOCs, to use community hospitals closer to their homes.

A third factor that could affect future demand for VA hospital care is delaying Medicare eligibility. As discussed, veterans tend to stop using or reduce their use of VA hospitals after they become eligible for Medicare. Thus, delaying eligibility for Medicare benefits could delay veterans' leaving the VA system. More importantly, VA could serve as an increasingly important source of health care coverage for veterans retiring before they qualified for Medicare. Many such veterans might not be able to continue coverage under their employer-provided health insurance, or such coverage might be prohibitively expensive.

MSAs, authorized under the Balanced Budget Act of 1997, are the fourth factor that could increase future demand for VA hospital care. Medicare-eligible veterans may have financial incentives to establish such accounts, enroll in the VA health care system, obtain essentially free care from VA, and then pocket the excess funds in the account. MSAs could, however, be structured to prevent people with such accounts from using other federal health benefits. The Balanced Budget Act permits the Secretary of HHS to apply rules that will ensure that such dual enrollment will not result in increased expenditures for the federal government. Veterans enrolling in MSAs would no longer be able to use both VA and Medicare services. About half of the Medicare-eligible veterans using VA services use both VA and Medicare services.<sup>56</sup>

Further changes in the private health insurance market could also affect future demand for VA hospital care. First, recently enacted legislation could make it easier for people to maintain their private health insurance

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<sup>55</sup>VA Health Care: How Distance From VA Facilities Affects Veterans' Use of VA Services (GAO/HEHS-96-31, Dec. 20, 1995).

<sup>56</sup>Veterans' Health Care: Use of VA Services by Medicare-Eligible Veterans (GAO/HEHS-95-13, Oct. 24, 1994).

when they lose or change jobs. The Health Insurance Portability and Accountability Act of 1996 (P.L. 104-191) limits to 12 months plans' ability to restrict coverage of employees' preexisting health care conditions. Before this law, plans could permanently exclude coverage of preexisting conditions. The law also made it easier for veterans to change jobs without losing health insurance coverage; this, in turn, could reduce some veterans' incentives to use VA facilities. For example, in 1994 we reported that veterans participating in focus groups told us that they use VA health care when they lack health insurance.<sup>57</sup>

Although, as discussed, a continued growth in managed care plan enrollment could further reduce use of VA health care, growing dissatisfaction with HMOs and other managed care plans could result in increased use of VA hospitals. For example, physicians from VA medical centers in California, Florida, New Mexico, and other states have noted an increase in the number of elderly veteran patients who seek care at VA facilities while enrolled in HMOs.<sup>58</sup> Two studies at individual VA facilities found that HMO enrollment ranged from 10 percent among veterans of all ages to about 25 percent among elderly veterans.<sup>59</sup>

Finally, the recent trend toward increased beneficiary cost sharing in managed care plans could provide financial incentives for veterans to obtain care from VA hospitals. One found that copayments for hospital stays rose from \$4.50 a day in 1987 to \$24.90 a day in 1993; for inpatient mental health care services, copayments increased from \$3.39 to \$14.51 per day. The study also found that the higher copayments decreased demand for services from the HMOs. For example, researchers in Washington found that adding a \$5 copayment reduced visits to primary care physicians by 5 percent. It is unclear, however, to what extent increased use of VA-provided services would offset reduced use of HMO-provided services.<sup>60</sup>

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<sup>57</sup>Veterans' Health Care: Veterans' Perceptions of VA Services and VA's Role in Health Care Reform (GAO/HEHS-95-14, Dec. 23, 1994).

<sup>58</sup>E. Yano and others, *Survey of Health and Medical Care for Veterans in Ambulatory Care*, VA Medical Center, Evaluation and Design Support Service (VA-S#94301), (Sepulveda, Ca.: 1994).

<sup>59</sup>R. Morgan, B. Virnig, and C. Devito, *Medicare HMO Membership and Use of VAMC Medical Care*, poster presentation at the 14th annual meeting, VA Health Services Research and Development Service (Washington, D.C.: Feb. 28-Mar. 1, 1996).

<sup>60</sup>Jon Gabel, "Ten Ways HMOs Have Changed During the 1990s," *Health Affairs*, Vol. 16, No. 3 (1997), pp. 134-45.

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# Supply of Hospital Beds Significantly Exceeds Demand in Both the Private Sector and VA

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Because of the declining demand for inpatient hospital care, community hospitals have hundreds of thousands of unused hospital beds. Overall, about 26 percent of community hospital beds exceeded demand in 1995, and over 65 percent may exceed demand within the next 15 years. Although fewer—about 14 percent—of VA’s operating beds exceeded demand in 1995, actions to improve the VA health care system’s efficiency, coupled with other changes in the health care marketplace, could result in 80 percent of VA’s hospital beds exceeding demand within the next 5 to 10 years.

With the likelihood that most hospital beds in both VA and the private sector will exceed demand within the next 5 to 15 years, the administration and the Congress will face difficult challenges and policy decisions about the future of VA hospitals. Among the challenges VA faces concerning the closure of VA hospitals are determining the number of hospital beds it needs, their locations, and the extent to which VA should buy rather than provide hospital care. Where hospital closures are warranted, VA will face added challenges to ensure that community hospitals or other VA hospitals meet veterans’ hospital care needs and to minimize the effect of the closures on VA employees and the community.

With the expanded authority to sell VA’s excess capacity to private-sector health plans, facilities, and providers, the administration also faces difficult decisions about the extent to which VA should increase demand for care as an alternative to closing hospitals. Because decisions to either increase demand to preserve VA hospitals or close underused hospitals would significantly affect veterans, VA employees, community hospitals, medical schools, and individual communities, the administration and the Congress face difficult challenges in determining the future of VA hospitals.

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## Use of VA and Community Hospitals Varies Widely by Region and State

Use of both community and VA hospitals varies widely in different parts of the country. Among the possible causes of such variation are differences in health status, demographics of the veteran and general population, market penetration of managed care plans, and differences in efficiency.

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## Use of Community Hospital Beds Varies Significantly

The number and use of community hospital beds vary significantly by census division and, even within census division, by state. Nationally, community hospital beds numbered about 3.3 per 1,000 population in 1995, ranging from 2.3 in the Pacific states to 4.3 in the West North Central

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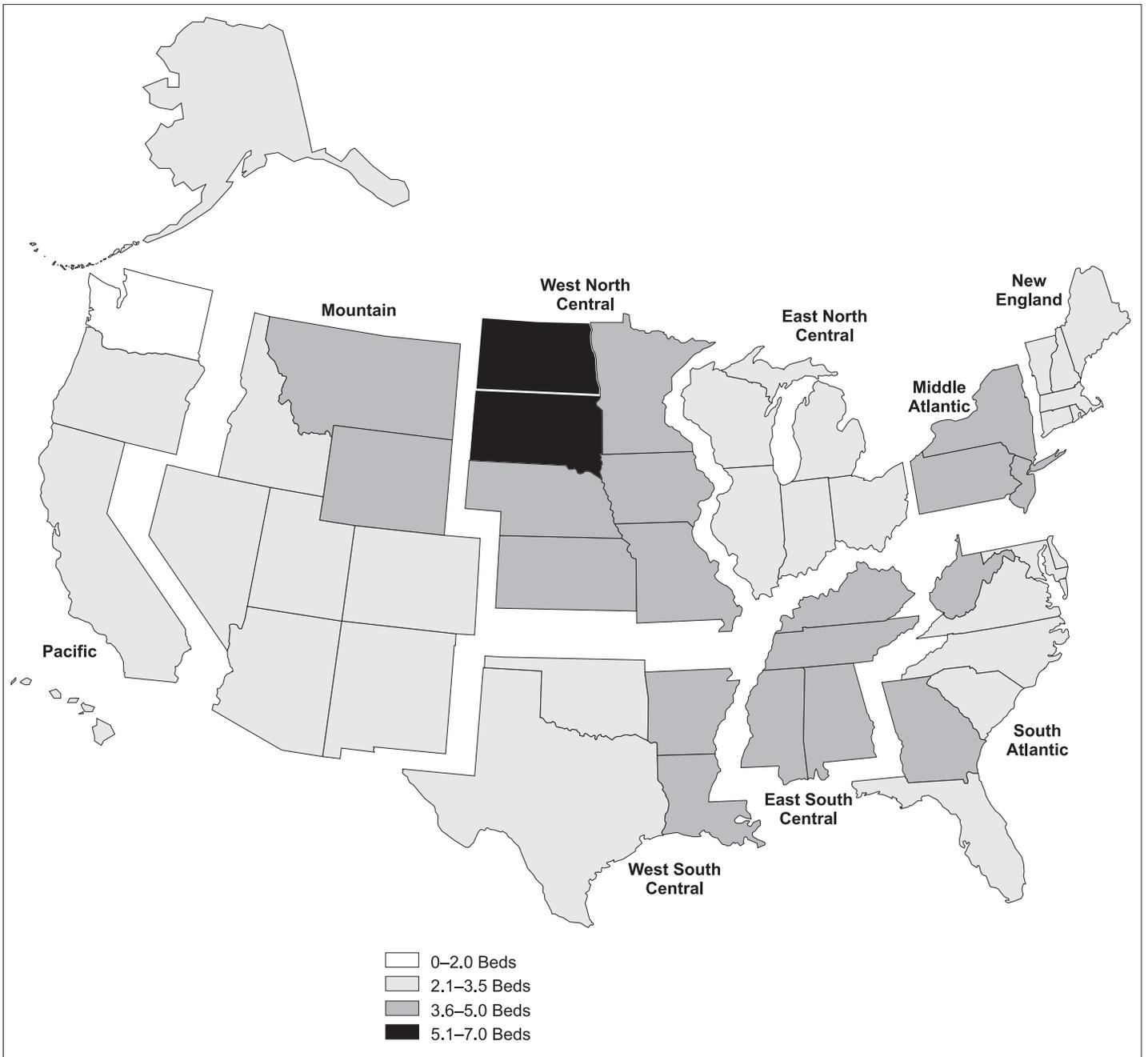
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states. Other census divisions with significantly higher-than-average operating beds and average daily censuses (ADC) were the East South Central and Middle Atlantic states; the Mountain division was well below the national averages. (See figs. 6.1 and 6.2.)

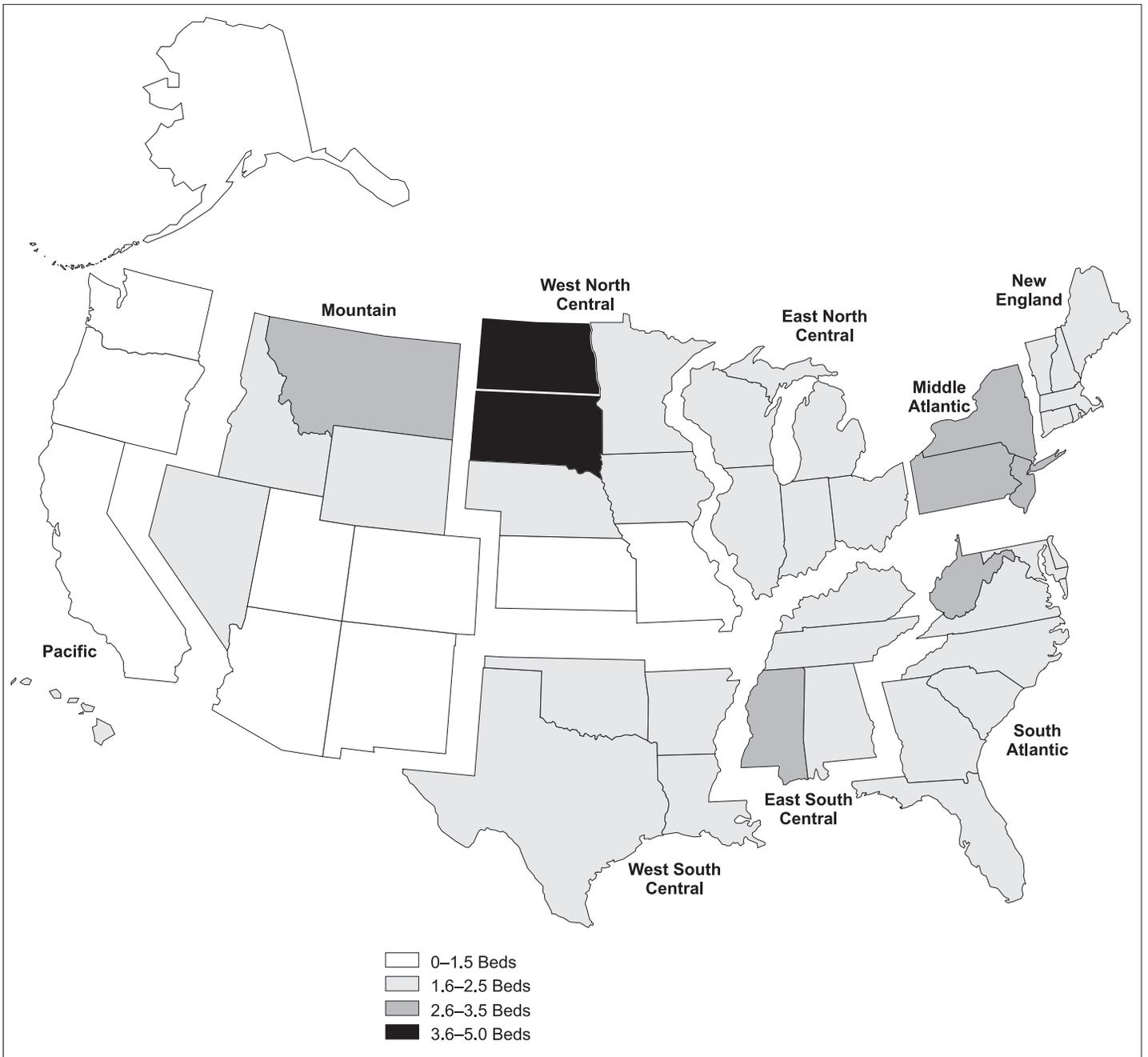
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**Figure 6.1: Community Hospital Beds per 1,000 Population by Census Division, 1995**



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**Figure 6.2: Average Daily Census in Community Hospitals by Census Division, 1995**



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Within some census divisions, hospital use also varied significantly. For example, among South Atlantic states, Maryland and Virginia had an ADC of 1.7 per 1,000 population; the District of Columbia and West Virginia had 4.9 and 2.7, respectively. Similarly, among Mountain states, Utah's ADC was 1.1 per 1,000 population but Montana's was 3.2. Appendix I contains additional information on the number of operating beds and ADCs per 1,000 population by census division and state.

Many factors, such as differences in age, health status, and insurance coverage, could affect hospital use. For example, states with more elderly people may have greater hospital use. Similarly, regional variation in the incidence of certain diseases could result in higher use of hospital care in some areas. For example, the higher incidence of cancer in the Middle Atlantic states could cause greater hospital use there than in other areas.

Medical practice in different parts of the country may also account for variation in hospital use. For example, patients in the Northeast tend to have longer lengths of stay than similar patients in the western states. (See table 6.1.)

**Table 6.1: Regional Variation in Average Length of Stay for Short-Term Hospitalizations, 1991**

Region	Age group			
	Under 15	15-44	45-64	65 and older
Northeast	5.0	5.2	7.2	10.1
Midwest	4.8	4.9	6.5	8.4
South	4.5	4.5	6.4	8.3
West	5.0	4.0	5.8	7.3
<b>Total</b>	<b>4.8</b>	<b>4.6</b>	<b>6.5</b>	<b>8.6</b>

Source: HIAA, Source Book of Health Insurance Data, 1995.

Finally, the market penetration of managed care may affect hospital use. States in which HMOs and preferred provider organizations have significantly penetrated the market tend to have less hospital use. Of the nine states with hospital usage of 1.5 beds per 1,000 population or less, managed care accounted for 40 percent or more of the insurance market; in only two states (Alaska and New Mexico) did managed care account for less than 20 percent of the insurance market. In contrast, of the 10 states with hospital usage of 2.7 beds per 1,000 population or higher, in only 1 state (Nebraska) did managed care account for 40 percent of the market; in 4 states, managed care had captured 5 percent or less of the insurance

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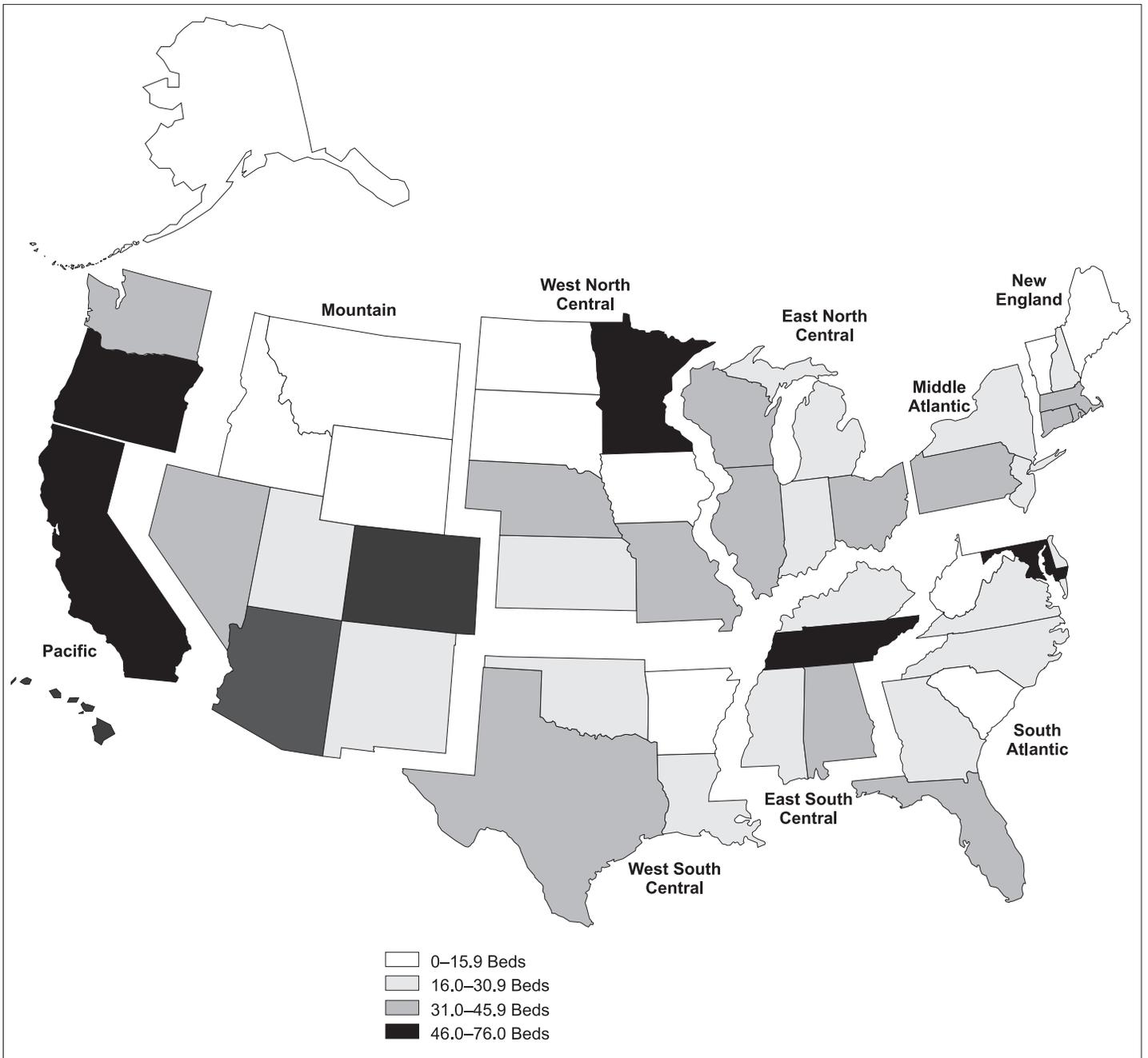
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market. Appendix II contains additional information on managed care's market penetration by state and census division. (See fig. 6.3.)

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**Figure 6.3: Managed Care Market Penetration by Census Division, 1994**



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**Use of VA Hospitals Varies**  
**by Veterans Integrated**  
**Service Network (VISN)**

The number and use of VA hospital beds also vary widely by VISN. Differences in the rate of use of VA hospitals correlate to regional differences in use of community hospitals, suggesting that differences in health status or medical practice may at least partially explain the variation. VA data, however, provide conflicting views of the reasons for the variation.

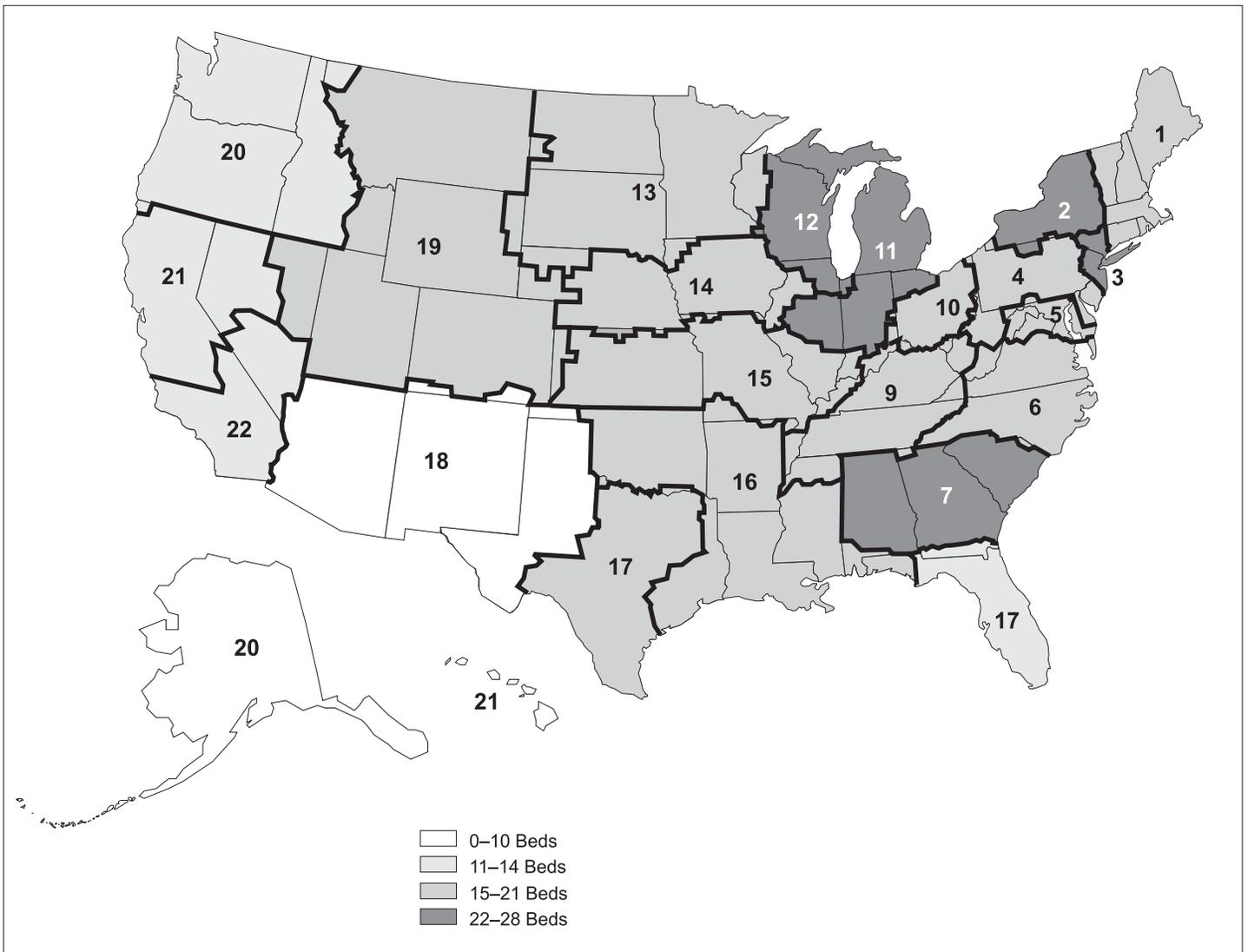
In fiscal year 1995, the VA system operated an average of 50,785 beds and had an ADC of 37,003. With about 2.9 million unduplicated users,<sup>61</sup> the VA system operated about 18 beds per 1,000 users and had an ADC of 13 per 1,000 users. The number of operating beds per 1,000 users ranged from 10 per 1,000 users in VISN 18 (Phoenix) to 26 in VISN 3 (Bronx). Similarly, the ADC ranged from 6 per 1,000 users in VISN 18 (Phoenix) to 21 per 1,000 users in VISN 3 (Bronx). (See figs. 6.4 and 6.5.)

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<sup>61</sup>Veterans accounted for about 2.6 million of the 2.9 million users.

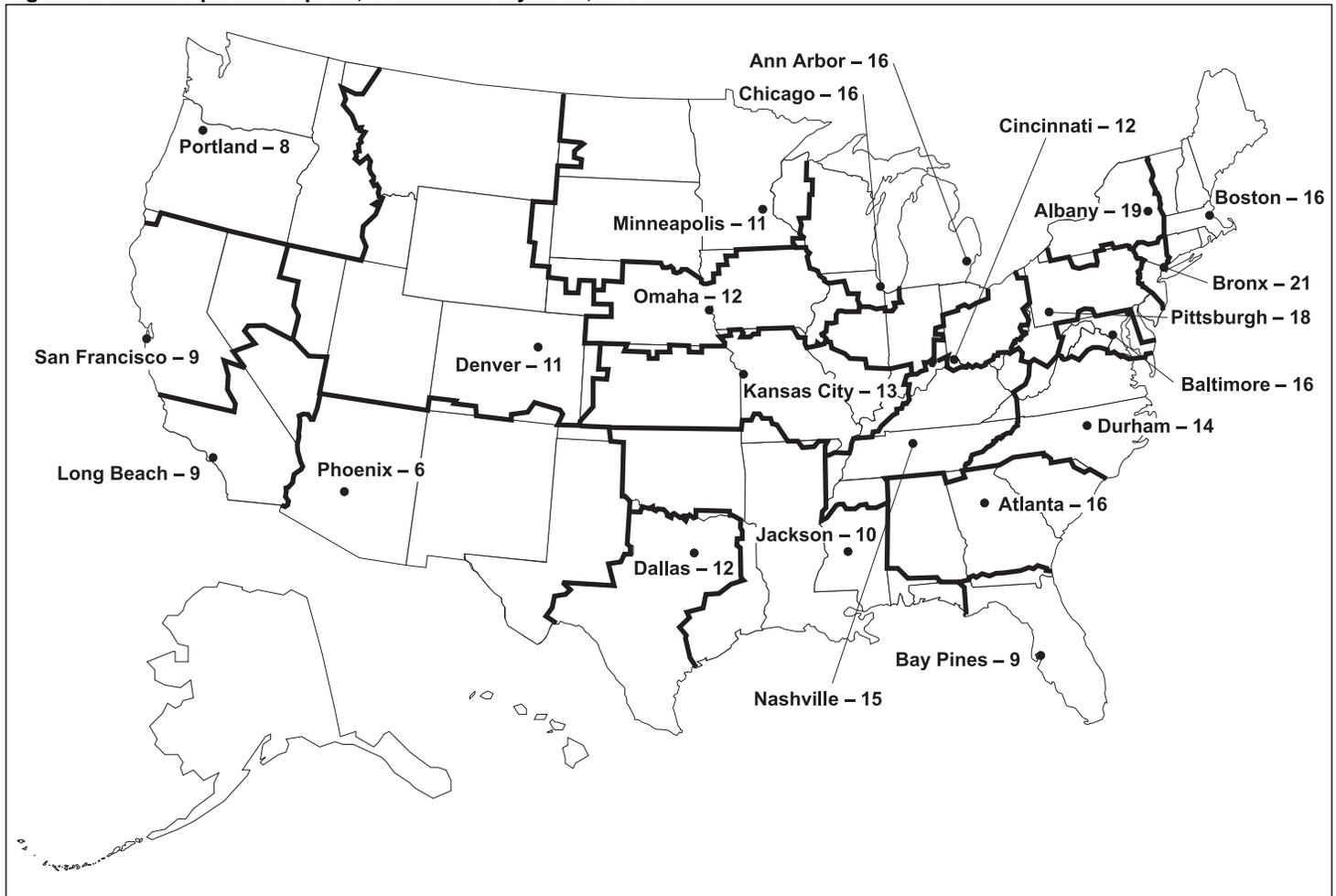
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**Figure 6.4: VA Hospital Beds per 1,000 Veteran Users by VISN, 1995**



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**Figure 6.5: VA Hospital ADC per 1,000 Veterans by VISN, 1995**



Although the use of surgical beds varied somewhat by VISN, the use of medicine and psychiatric beds varied most. The ADC in medicine beds ranged from 3 to 11 per 1,000 users; the ADC in psychiatric beds ranged from 3 to 8 per 1,000 users. Appendix VI provides additional details.

Variation in the use of VA hospitals tends to mirror the variation in use of community hospital beds. The two census divisions with the lowest community hospital use per 1,000 population—Mountain and Pacific—contained four of the five VISNs with the lowest VA hospital use. Similarly, the census division with the highest community hospital use—Middle

Atlantic—contained the three VISNS with the highest rate of VA hospital use. Appendix VII compares operating beds and ADCS for VISNS with their corresponding census divisions.

Several possible reasons explain veterans' varying use of VA hospitals. First, the variation may reflect differences in efficiency among VISNS and individual facilities. VA's resource allocation models have consistently attributed much of the variation in VA costs to inefficiency. The Resource Allocation Method, Resource Planning and Management system, and new Veterans Equitable Resource Allocation (VERA) method all found that VA's costs varied widely by facility and VISN for treating similar patients and concluded that inefficiency caused most of the variation.

Differences in health status could also help explain the variation in hospital use. To the extent that veteran users in some VISNS have poorer health than those in other VISNS, then higher hospital use can be expected, and it may not be reasonable to expect such VISNS to decrease utilization rates. Similarly, differences in the age of the veteran population can affect hospital use. Hospital use generally increases with population age; therefore, VISNS serving elderly veterans could be expected to have higher rates of hospital use. VA, however, in developing VERA, concluded that the higher hospital use in some VISNS could not be explained by differences in veterans' ages.

Insurance use could also affect the extent of VA hospital use. Veterans with public or private insurance are much less likely to use VA hospital care than are the uninsured. Thus, variation in the rate of insurance coverage among VISNS could help explain variation in hospital usage. Similarly, the market penetration of managed care plans could help explain the lower hospital use in some VISNS. This is because veterans enrolled in managed care plans can generally obtain hospital care closer to their homes with low cost sharing through managed care plans.

Finally, differences in medical practice may explain variation in hospital use. As previously discussed, hospital lengths of stay for short-term hospitalizations are generally longer in the Northeast than in the West. This could help explain the higher rate of hospital use in VISNS in the Middle Atlantic states.

VERA and the Veterans Health Administration's 1997 performance measures for VISN directors, however, give conflicting views of the extent to which such variation is due to differences in efficiency rather than medical

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practice or health status. Under the performance measures, VA compared the VA acute bed-days of care per 1,000 users in each VISN with Medicare beds-days of care per 1,000 beneficiaries in the comparable census division. VA defined as fully successful performance reduced VA bed-days of care that matched local Medicare performance.

Of the seven VISNS required to reduce acute bed-days of care by 20 percent or more to achieve fully successful performance, VERA designated four to receive additional resources. The VISN required to reduce acute bed-days of care the most—37 percent—was VISN 19 (Denver), which VERA identified as needing a 6.6-percent increase in funding. Similarly, VISN 2 (Albany) and VISN 4 (Pittsburgh)—whose acute care rates were already below the Medicare rate—were found under VERA to be among the less efficient VISNS. Under VERA, VISN 2 (Albany) would absorb the second largest decrease in funding. Under the performance measures, however, it would be expected to absorb the funding decrease without reducing acute bed-days of care.

Another performance measure that provides a conflicting view of VISN efficiency is reduced operating beds. Under this performance goal, fully successful performance is judged to be reduced operating beds to match the assigned targets. As was the case with days of care, however, the VISNS with the largest targeted reductions in operating beds are among those qualifying for the largest resource increases under VERA. Ten of the 11 VISNS expected to close 300 or more operating beds in fiscal year 1997 should, under VERA, receive increased resource allocations of up to 15 percent. In contrast, of the 11 VISNS expected to close fewer than 300 beds, 6 should, under VERA, receive fewer resources. For example, VISN 2 (Albany) is not expected to close any operating beds but should receive a 7.5-percent decrease in funding.

Table 6.2 compares the change in resource allocation under VERA with the 1997 network directors' hospital performance measures. Because VA is phasing in VERA's implementation, the actual shifts in resource allocations are less than the projected shifts had VERA been fully implemented in 1997.

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**Table 6.2: Comparison of Projected Changes in VERA Resource Allocations With Hospital Performance Goals by VISN, Fiscal Year 1997**

VISN	VERA percentage increase/decrease in resources	Performance measure	
		Percent reduction in acute bed-days of care	Reduction in number of operating beds
1 (Boston)	-6.36	21	502
2 (Albany)	-7.51	0	0
3 (Bronx)	-14.94	11	185
4 (Pittsburgh)	-1.99	0	246
5 (Baltimore)	4.10	21	330
6 (Durham)	4.36	25	333
7 (Atlanta)	11.13	11	749
8 (Bay Pines)	10.03	0	489
9 (Nashville)	0.60	14	497
10 (Cincinnati)	4.51	18	156
11 (Ann Arbor)	-2.51	9	32
12 (Chicago)	-7.12	32	251
13 (Minneapolis)	0.01	16	170
14 (Omaha)	-4.07	30	54
15 (Kansas City)	7.76	28	679
16 (Jackson)	11.95	7	706
17 (Dallas)	11.99	8	62
18 (Phoenix)	16.02	1	216
19 (Denver)	6.60	37	287
20 (Portland)	15.01	3	362
21 (San Francisco)	6.21	0	469
22 (Long Beach)	1.28	0	591

**Selecting Approaches for Estimating Excess Beds**

The health care literature identifies many different approaches for estimating excess hospital beds. Each approach has certain limitations. For example, some approaches estimate current excess capacity; others focus on future needs. To provide a range of estimates of current and future excess capacity, we developed estimates using three approaches:

- **Target occupancy rates.** Under this approach, excess capacity is defined as the number of beds that would need to be eliminated to raise actual occupancy rates up to a prescribed efficient level. For example, if average occupancy were 60 percent and the target rate were 85 percent, 25 percent of beds would be excess. In fact, an 85-percent occupancy level is generally considered optimum. In other words, a hospital is not

considered to have excess capacity until its average occupancy drops below 85 percent.

- Estimates of medically unnecessary days of care. Under this approach, a percentage of the days of care provided is assumed, on the basis of studies, to be medically unnecessary. A 1970s study used this approach and estimated that 264,000 community hospital beds were in excess. The study assumed that one-third of the days of care provided by community hospitals were medically unnecessary.<sup>62</sup> Between 1980 and 1995, community hospital beds declined by about 115,000 beds mainly in response to actions taken to reduce medically unnecessary days of care. Estimates derived from this approach are often added to estimates of excess capacity derived through the first approach.
- Target beds per 1,000 population. Under this approach, excess capacity is the difference between operating beds and some target number of beds per 1,000 population. For example, the Institute of Medicine set a target to reduce the beds per 1,000 population from 4.4 to 4.0 beds in a 1976 report.<sup>63</sup> Unlike the target occupancy rate approach, this approach can be used to predict future bed needs by basing the estimates on projected population.

The use of target occupancy rates is the most conservative approach for estimating excess beds because it basically counts empty beds at the time of the study. It does not consider changes that could affect either the future supply of or demand for hospital beds. In addition, it assumes that current hospital utilization rates are appropriate, that is, that all admissions and lengths of stay are appropriate.

Just as the use of target occupancy rates may understate the extent of excess beds, the other two approaches may overstate realistic reductions in excess beds. This is because reaching such targets would necessitate a level of uniformity in medical practice that has so far been out of reach.

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## Number of Community Hospital Beds Greatly Exceeds Demand

Community hospitals have far too many beds than needed. Overall, community hospitals had 873,000 beds, and 228,000 (26 percent) of these were unused in 1995 and could have been closed without increasing hospital occupancy rates above the 85-percent rate generally considered optimal. Although the number of hospital beds per 1,000 population varies

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<sup>62</sup>Task Force Report on the Department of Health and Human Services, Public Health Service, Health Care Financing Administration, President's Private Sector Survey on Cost Control (Washington, D.C.: May 2, 1983).

<sup>63</sup>Controlling the Supply of Hospital Beds, Institute of Medicine, National Academy of Sciences (Washington, D.C.: Oct. 1976).

significantly by state and census division, all areas of the country have far too many hospital beds. To the extent such variation is reduced or eliminated, excess beds will probably increase in the next 10 to 15 years. For example, if hospitals nationwide reduce usage to the levels already reached in California and several other western states, as many as 610,000 (65 percent) community hospital beds could become excess even with projected population growth. The Pew Health Professions Commission estimated in 1996 that over 60 percent of hospital beds may be excess and that as many as half of the nation's hospitals may close.<sup>64</sup>

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## Target Occupancy Rate

Defining excess capacity as the difference between operating beds and the number of beds that would be needed to meet demand at the 85-percent occupancy level indicates that 26 percent (228,000) of the approximately 873,000 community hospital beds were excess in 1995. This is nearly double the excess capacity estimated in 1975 using this method. During the 20-year period, the number of operating beds in community hospitals dropped by 69,000, but the ADC dropped by 158,000. By 1995, community hospitals' occupancy rate had declined to under 63 percent. All but three states (Delaware, New York, and Hawaii) in 1995 had more than 10 percent of excess beds. Seven states (Alaska, Kansas, Oklahoma, Oregon, Texas, Utah, and Wyoming) had more than 35 percent of excess beds.

On the basis of an 85-percent target occupancy rate, excess capacity ranged from 12 percent in the Middle Atlantic states to about 35 percent in the West South Central states and 32 percent in the Mountain states. As previously discussed, people in the Middle Atlantic states use roughly twice as much hospital care as do those in the Mountain states. Appendix III contains additional information on excess capacity by census division and state under the target occupancy rate approach.

Estimating excess capacity using the target occupancy rate approach has become increasingly problematic because of inconsistencies in hospitals reporting a number of beds they have. Specifically, some hospitals report how many beds they are licensed to operate; others report staffed and operating beds. This can significantly affect estimates of excess capacity. Consider the following illustration: Hospital A is licensed to operate 100 beds but is normally staffed to operate only 50 beds. The hospital has an ADC of 45 patients. If it provides American Hospital Association (AHA) data

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<sup>64</sup>Critical Challenges: Revitalizing the Health Professions for the Twenty-First Century, Pew Health Foundations Commission, University of California at San Francisco Center for the Health Professions (San Francisco: Dec. 1995).

on the number of licensed beds it has, then it has an occupancy rate of 45 percent and 40 excess beds. If, however, the hospital reports the average number of staffed and operating beds, then it has an occupancy rate of 90 percent and no excess capacity. Because of inconsistencies in hospitals' reporting the number of beds, AHA discontinued reporting occupancy rates in 1995.

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**Adjustment for Medically Unnecessary Days of Care**

Implementation of prospective payment systems, use of preadmission certification requirements, and expansion of HMOs and other managed care organizations have reduced the amount of medically unnecessary care provided by community hospitals. On the other hand, as previously discussed, states in which HMOs and PPOs have significantly penetrated the market tend to have lower rates of hospital use, suggesting that further reductions are possible. Assuming that 10 percent of the days of care provided by community hospitals nationally are medically unnecessary, an additional 65,000 beds beyond the 228,000 excess beds estimated using the target occupancy rate approach would be considered excess. Moreover, assuming that 20 percent of community hospital days of care are medically unnecessary, 357,000 hospital beds would be estimated to be excess.

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**Target Beds per 1,000 Population**

By 1990, the Institute of Medicine's 1976 goal for reducing the number of community hospital beds to four beds per 1,000 population had been met, and, by 1995, the number of community beds had fallen to 3.3 per 1,000 population. Hospital demand, however, averaged only about 2.1 beds per 1,000 population that same year.

As occupancy rates continue to fall, researchers are once again considering what the appropriate target should be. For example, one market forecaster from California indicated that hospital use in California is below 45 percent of licensed capacity and that hospital demand currently averages only 1.1 beds per 1,000 population. The forecaster estimated that, in California, demand for hospital beds will drop to 0.8 bed per 1,000 population from 2000 to 2005.<sup>65</sup>

Recognizing the continued shift of care from hospitals to outpatient and other more cost-effective settings and the development of new technologies and medical practices that preclude or shorten hospital stays, we chose two targets—two beds per 1,000 population and one bed per

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<sup>65</sup>Testimony of Russell C. Coile, Jr., President, Health Forecasting Group, before the U.S. House of Representatives, Committee on Veterans' Affairs, Washington, D.C., June 2, 1996.

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1,000 population—to estimate future bed needs. The two beds per 1,000 population target assumes that further reductions in hospital admissions and lengths of stay will be minimal—current hospital demand averages 2.1 beds per 1,000 population. The one bed per 1,000 population target assumes more significant reductions in future demand such that demand nationally would be slightly lower than current demand in Alaska, Utah, and Washington—1.1 beds per 1,000 population—but higher than the projected future demand in California mentioned above—0.8 bed per 1,000 population.

At a target of two beds per 1,000 population, about 347,000 community hospital beds could be considered in excess of need using 1995 population data. Because the number of operating beds as well as hospital usage differ widely by state, to reduce excess beds to the target of two beds per 1,000 population (using 1995 population data) would necessitate closing about half the hospital beds in the Middle Atlantic, East South Central, and West South Central states. In contrast, Pacific states could reach this target by closing only about 14 percent of their community hospital beds.

Hospital use in 18 states, primarily in the Mountain and Pacific census divisions, is already below the level needed to support two hospital beds per 1,000 population. Assuming that hospital use in those states does not increase to the national average, we substituted the estimate of current excess capacity derived from the target occupancy rate approach for the lower estimate of excess capacity derived from applying the two beds per 1,000 population target. This adjustment increases the overall estimate of excess beds to about 370,000 or about 42 percent of the operating beds in 1995.

Population growth—assuming no new hospital beds are added—will reduce the excess capacity from 370,000 beds to about 272,000 beds by 2010. Adding projected population growth lowers the estimates of excess capacity in all census divisions but most affects the South Atlantic, Mountain, and Pacific states. In other areas, such as the Middle Atlantic and New England states, population growth is not expected to significantly reduce excess capacity.

We estimated that at a target of one bed per 1,000 population (using 1995 population data), about 610,000 community hospital beds would be excess. Population growth—again assuming no added capacity—would reduce excess beds to about 572,000 by 2010. Appendix IV contains

detailed estimates by census division and state based on 1995 population; appendix V contains estimates based on projected 2010 population.

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### Studies Have Predicted Rapid Decline in Private-Sector Hospital Beds

A number of previous studies have also predicted dramatic declines in community hospital beds in the next 5 to 10 years. For example, a 1995 survey of hospital executives suggested that the number of community hospital beds will probably decline in the next decade at an average rate of 5 percent per year.<sup>66</sup> Similarly, the Pew Health Professions Commission, in a 1995 study, predicted that health care will continue to shift from a supply orientation to a demand-driven system, resulting in as many as half of the nation's hospitals closing and the loss of perhaps 60 percent of hospital beds. Finally, the health research organization, Interstudy, predicted that 40 percent of all U.S. hospitals could be closed, merged, or converted to other uses by the year 2000.<sup>67</sup>

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### More Than 80 Percent of VA Hospital Beds Could Become Excess

As in the private sector, VA hospitals also have excess beds. About 14 percent of VA hospital beds exceeded demand in fiscal year 1995, but more than 80 percent could exceed demand if VA can reduce hospital use systemwide to the level already achieved by its Northern California Health Care System (NCHCS). This system closed over 5,000 beds in fiscal year 1996, bringing the total beds closed to over 38,000 since 1980. Veterans' use of VA hospitals varies significantly by VISN just as use of community hospitals varies by census division and state.

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### Target Occupancy Rate

Defining excess capacity as the difference between operating beds and the number of beds that would be needed to serve the ADC at an 85-percent occupancy level indicates that VA had only about 7,300 excess hospital beds in fiscal year 1995, half as many excess beds as it had 5 years earlier. (See table 6.3.)

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<sup>66</sup>On the Critical List: Hospital Strategies for Survival and Change, A Survey of Executives at 508 U.S. Hospitals 1995, Watson Wyatt Worldwide (Denver: 1995). Eighty-nine percent of the 508 hospital executives surveyed predicted that hospital supply would decline by 5 percent per year in the next decade.

<sup>67</sup>Rita Shoor, "Anticipating Health Care Reform and Seeking a Marketing Edge Over Competitors, Hospitals Are Forming Alliances With other Providers," *Business and Health*, Vol. 12, Special Issue: The State of Health Care in America, 1994.

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**Table 6.3: Estimates of Excess Beds in VA Hospitals Using the Target Occupancy Rate Approach**

Year	Operating beds	Occupancy rate	Beds needed at 85% occupancy	Excess beds
1975	94,081	84.4	94,085	716
1980	84,145	80.9	80,128	4,017
1985	78,357	75.7	69,776	8,581
1990	69,746	67.0	54,974	14,772
1995	50,785	72.9	43,533	7,252

Applying this approach to VISNS suggests that among those VISNS with the most excess beds are many that already operate the fewest hospital beds per 1,000 users in the VA system. For example, VISN 18 (Phoenix) and VISN 4 (Pittsburgh) have the same number of excess beds—304—although VISN 18 (Phoenix) operated fewer than half as many beds per 1,000 users. Under this approach, the VISN with the most excess beds is VISN 16 (Jackson) with 844 excess beds; the VISN with the least excess beds is VISN 10 (Cincinnati) with only 105 excess beds. (See app. VIII.)

**Adjustments for Medically Unnecessary Days of Care**

Unlike community hospitals that have felt the effects of prospective payments, preadmission screening, and managed care on the extent of medically unnecessary care for over 10 years, the VA system has only recently focused on reducing medically unnecessary days of care (see ch. 4). As a result, estimates of excess VA hospital beds need to consider the likely effect of efficiency improvements on future bed needs. In 1985, we reported that 43 percent of the medical and surgical days of care in VA hospitals could have been avoided.<sup>68</sup> Since then, a number of studies by VA researchers and VA’s Office of Inspector General (OIG) have found similar problems. For example, a January 1996 VA study reported that about 40 percent of the admissions to acute medical and surgical services were nonacute. The study also reported that about 30 percent of the days of care in the acute medical and surgical services of the VA hospitals reviewed were nonacute.<sup>69</sup>

In the study, reviewers from 24 randomly selected VA hospitals assessed the appropriateness of 2,432 fiscal year 1992 admissions to acute medical, surgical, and psychiatry services. The study found similar rates of

<sup>68</sup>Better Patient Care Management Practices Could Reduce Length of Stay in VA Hospitals (GAO/HRD-85-92, Aug. 8, 1995).

<sup>69</sup>Charles B. Smith, Ronald L. Goldman, Donald C. Martin, and others, “Overutilization of Acute Care Beds in Veterans Affairs Hospitals,” *Medical Care*, Vol. 34, No. 1 (1996), pp. 85-96.

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nonacute admissions and days of care in all 24 hospitals. Many factors accounted for the nonacute admissions, including lack of outpatient care alternatives, conservative physician practices, delays in discharge planning, and social factors such as homelessness and long travel distances.

Conservatively assuming that 10 percent of the days of care provided by VA hospitals in fiscal year 1995 were medically unnecessary, 4,353 beds in addition to the 7,252 estimated using the target occupancy rate approach would be considered excess. If, as suggested by VA studies, 40 percent of the days of care were assumed to be medically unnecessary, total excess beds would increase to 24,667, roughly half of VA's operating beds. (See table 6.4.)

**Table 6.4: Potential Effect of Efficiency Improvements on Excess Beds in VA Hospitals, 1995**

Percentage reduction in days of care	Number of operating beds	Average occupied beds	Reduction in occupied beds	Beds needed at 85% occupancy	Excess beds
10	50,785	37,003	3,700	39,175	11,610
20	50,785	37,003	7,401	34,825	15,960
30	50,785	37,003	11,101	30,472	20,313
40	50,785	37,003	14,801	26,118	24,667

Because hospital use varies significantly by hospital and VISN, the same level of medically inappropriate care may not apply in each hospital and VISN. The studies, however, have generally found significant levels of medically unnecessary care at every VA hospital reviewed. Appendix VIII has estimates by VISN of excess beds based on different assumptions about the level of medically unnecessary care.

**Target Beds per 1,000 Population**

Because the veteran population differs from the general population, the target beds per 1,000 population used to estimate community hospitals' bed needs does not apply to VA hospitals. For example,

- private-sector hospitals have cribs and bassinets that VA hospitals do not have;
- the veteran population excludes children and is predominantly male;
- VA hospitals include long-term medical and psychiatric beds not generally found in community hospitals; and

- estimates of community hospital beds already include veterans' hospital care needs, and most veterans rely on community hospitals for care.

As a result, we developed three alternative population-based targets:

- actual hospital usage generated in VA's NCHCS,
- actual hospital usage in VA's VISN 18 (Phoenix, including Arizona, New Mexico, and parts of Texas), and
- VA's national average hospital usage.

### NCHCS Provides a Model for the Future of VA

NCHCS most closely resembles the outpatient-based health care system envisioned for VA's future. When VA closed its hospital in Martinez, California, in 1991 because of concerns about its safety during a possible earthquake, veterans in NCHCS' catchment area were left with limited access to hospital and outpatient care. Before its closing, the Martinez hospital had an ADC of 235 patients.

A replacement outpatient clinic—which became a prototype for the VA system—opened in November 1992. The clinic included modern outpatient surgery capabilities, sophisticated imaging technology, and attractive surroundings. As a result, much of the care that previously required a hospital admission could now be done on an outpatient basis.

VA also reached an agreement with the Air Force that allowed VA to operate 55 beds at the David Grant Air Force Medical Center at Travis Air Force Base, with another 18 “swing” beds available when needed. In addition to the hospital beds at Travis, NCHCS clinics place veterans needing hospital care at other VA hospitals—primarily those at Palo Alto and San Francisco—and, in the case of medical emergencies, in community hospitals.

In 1995, the four NCHCS clinics served over 33,000 veterans, providing a total of 338,000 outpatient visits. Veterans served by the four clinics were admitted to hospitals about 2,800 times, primarily for general medicine services but also for surgical, neurological, and psychiatric services. This admission rate, about 85 admissions per 1,000 veterans served, supported an ADC of about 75 beds or about 2 beds per 1,000 veterans served. Assuming an 80-percent occupancy rate, NCHCS needed to operate about 2.5 beds per 1,000 users. This is a conservative estimate of the number of beds VA needed to operate because it (1) assumes an 80-percent rather than an 85-percent occupancy rate and (2) includes use of community hospital beds for emergency care in estimating the need for VA beds.

Applying the target of 2.5 beds per 1,000 users to the VA system yields a systemwide need for only about 7,230 hospital beds. Even if VA's users increase by 20 percent as VA predicts and they generate hospital demand at the same rate as current users, VA would need only 8,676 hospital beds. However, new users attracted through community-based clinics are unlikely to generate as much hospital demand as current users because new users have indicated they are more likely to choose their local hospital rather than a distant VA facility. Reaching this target would require closing about 85 percent of VA's current operating beds.

### VISN 18 (Phoenix) Has the Least Hospital Use in the VA System

VA's VISN 18 (Phoenix) has the least VISN-wide hospital use in the VA system, supporting an ADC of 6 per 1,000 unduplicated veteran users in fiscal year 1995. Assuming an 85-percent occupancy rate, VISN 18 (Phoenix) needs to maintain about seven beds per 1,000 users to support its hospital demand. Applying a target of seven beds per 1,000 users nationally yields a systemwide need for only 20,230 hospital beds to support VA's 1995 user population.

### Bringing High-Use VISNs Down to the National Average

Systemwide, VA had an ADC of 13 beds per 1,000 veteran users in fiscal year 1995. At an average occupancy rate of 85 percent, VA would need to maintain 15 beds per 1,000 veteran users to support this workload. If the VISNS that operated more than 15 beds per 1,000 users reduced their usage to the national average, then 9,445 beds would be considered excess in those VISNS, but no excess beds would be assumed in other VISNS. This is a very conservative approach; each of the VISNS with usage below the national average closed additional hospital beds in fiscal year 1996. In fact, the 11 VISNS with an ADC below the national average closed almost 2,000 beds in fiscal year 1996, about 40 percent of the beds closed in the VA system.

VA's Under Secretary for Health has noted that the traditional general acute care hospital, as an institution, will eventually become a large intensive care unit, taking care of only the sickest and most complicated patients. The Under Secretary has stated that all other medical care will be provided in outpatient care settings, at home, in hospices, or at various types of extended-care facilities.

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## Multiple Challenges Face VA Concerning Hospital Closures

Most of the hospital beds in both VA and the private sector will likely exceed demand within the next 15 years, leading to more closing of both VA and community hospitals. Among the challenges VA faces concerning closing VA hospitals are

- determining the number of hospital beds it needs and their locations,
- determining when closing hospitals would be more cost-efficient rather than reducing operating beds,
- ensuring that community hospitals or other VA hospitals meet veterans' hospital care needs following closures,
- minimizing the impact of such decisions on VA employees and the community, and
- identifying alternative uses for closed facilities.

With its expanded authority to sell excess capacity to private-sector health plans, facilities, and providers, the administration also faces difficult decisions about the extent to which demand for care should be expanded before closing a facility. Just as decisions to close VA hospitals affect multiple stakeholders, so too would decisions to more directly compete with community hospitals. Whether the administration proposes to close a VA hospital or expand its market share, developing a process for making changes that adequately considers the needs and concerns of all major stakeholders, including veterans, VA employees, community hospitals, affiliated medical schools, and the community will be a major challenge.

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### **Determining the Number of Hospital Beds Needed and Their Locations Poses Many Challenges**

To meet current and future demand, VA faces many challenges in determining the number of hospital beds it needs and their locations. VA's past methods for estimating its bed needs, however, tended not only to build in but expand excess beds by using national rather than local hospital usage. As previously discussed, VA data provide conflicting explanations for the widely varying hospital use among VISNS. Baseline data on the amount of medically necessary hospital care provided by each of its hospitals could enable VA to more effectively plan for the future.

### **VA Overestimates Bed Needs**

Historically, VA has overestimated its hospital bed needs. For example, in its 1984 report, *Caring for the Older Veteran*, VA developed estimates of what it termed "real need." In criticizing a more conservative estimate of bed needs developed by the Congressional Budget Office, VA suggested that real need should be measured by applying the use rates from areas of the country with the highest VA hospital use rates to rates in other parts of the country. Using this approach, VA recommended construction of 85,000 additional hospital beds by 1990, even while use of hospital beds was declining. VA estimated that it would need between 134,000 and 246,000 hospital beds by the year 2000.

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VA used similar approaches in planning specific construction projects, often adding to the number of beds determined through its hospital sizing model. For example, VA tried to add 117 beds to a construction project at the Atlanta medical center on the basis of anticipated workload increases. The Office of Management and Budget, however, determined that the VA hospital sizing model had already accounted for the factors VA was using to justify the additional beds and directed that the project be scaled back.<sup>70</sup>

VA used the concept of “suppressed demand” to justify hospital projects in Hawaii, Northern California, and East Central Florida that would have exceeded demand. For example, VA decided that it needed to build a new hospital in East Central Florida largely on the basis of an analysis that showed that the number of VA hospital beds available for Florida veterans was below the national average—about 1.40 beds per 1,000 Florida veterans compared with 2.02 beds per 1,000 veterans nationwide. Our analysis, however, suggested that Florida veterans’ lower use of VA hospitals was likely caused, at least in part, by differences in Florida veterans’ health and economic status and insurance coverage and those of veterans nationwide.<sup>71</sup> VA has subsequently developed plans to meet central Florida veterans’ needs without building a new hospital.

VA also added beds to a proposed joint venture construction project at Tripler Army Medical Center in Hawaii on the basis of perceived suppressed demand. VA compared Hawaii veterans’ rate of VA hospital use with that of mainland veterans and found that veterans were hospitalized in Hawaii at only 43 percent of the national rate. VA added 27 beds to the proposed 105-bed facility on the basis of suppressed demand. As in Florida, VA did not adequately evaluate other possible explanations for the lower-than-average use of VA health care services by Hawaii veterans. For example, it did not consider the extent to which military retirees dually eligible for VA and DOD benefits were using their DOD benefits. More importantly, it did not consider the extent to which veterans in Hawaii had other health care options and therefore did not seek VA care. Hawaii has one of the highest percentages of residents in the country with health insurance. Veterans without health insurance are eight times more likely to use VA hospitals than are veterans with insurance.<sup>72</sup> VA subsequently

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<sup>70</sup>VA Health Care: Actions Needed to Control Major Construction Costs (GAO/HRD-93-75, Feb. 26, 1993).

<sup>71</sup>VA Health Care: Need for Brevard Hospital Not Justified (GAO/HEHS-95-192, Aug. 29, 1995).

<sup>72</sup>VA Health Care: VA Plans Will Delay Establishment of Hawaii Medical Center (GAO/HRD-92-41, Feb. 25, 1992).

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**VA Uses Most Conservative**  
**Approach for Measuring Excess**  
**Beds**

determined that the Tripler Army Medical Center would not need the additional 27 beds to meet demand for beds.

VA's performance measures for fiscal year 1997 essentially take the most conservative approach for measuring excess VA hospital beds—target occupancy rates. VISNs are expected to close only beds that exceed the need for meeting current demand at an 85-percent occupancy level. In other words, they do not assess the medical appropriateness of the care provided in occupied beds to determine the number of additional beds to be closed and patients shifted to other care settings.

Because VA's performance measures and VERA data give conflicting views of the role such factors as health status, medical practice, and HMO market penetration play in the varying use of VA hospital beds, an assessment of the medically necessary care provided by each facility could serve as a baseline for decision-making.

Although researchers have studied the nonacute admissions and days of care at selected VA hospitals, their studies have not reported results for individual hospitals or reviewed all of the hospital beds at a facility. The studies, however, reported wide variation in the numbers of nonacute admissions and days of care provided by the hospitals reviewed. For example, one study reported nonacute admissions in 50 randomly selected VA hospitals ranging from 25 to 72 percent.

Basing decisions on current utilization data without determining the appropriateness of the data overstates the beds VA needs to operate an efficient health care system. Baseline data on the numbers of medically necessary admissions and days of care are important because they both establish targets for efficiency improvements and provide the essential workload data for decisions about hospital closures and service consolidations. Similarly, assessments of the potential to deinstitutionalize psychiatric patients could provide baseline data for determining the future need for psychiatric beds. Such baseline data would essentially determine the extent to which differences in health status or medical practice contribute to higher hospital use rates in some VISNs.

The apparent correlation between the rates of VA and community hospital use by census division/VISN suggests that factors other than differences in efficiency contribute to varying hospital use rates. The extent to which variation caused by factors such as differences in medical practice can be reduced is not clear, but the wide variation that still exists in hospital use

rates in the private sector suggests that conforming medical practice will be difficult. On the other hand, the generally lower rates of hospital use in areas with high concentrations of managed care enrollment suggest that, given the right incentives, physicians will change their practice patterns.

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**Choosing Between Closing  
Wards and Closing  
Hospitals Will Challenge  
VA**

VA and the private sector have reacted very differently to declining inpatient workload. In the private sector, hundreds of hospitals have been closed in the last 10 years. VA, however, has not closed any hospitals because of declining use, choosing instead to reduce the number of operating beds or close particular services such as inpatient surgery. This process, however, often leaves VA operating only a small part of a hospital's capacity.

Closing beds clearly results in some savings by reducing staffing costs. But, with fewer patients over whom to distribute the fixed costs of operating a facility, the cost per patient treated rises. At some point, it becomes more cost-effective to close a hospital and provide care either through another VA hospital or through contracts with community hospitals.

VA demonstrated the feasibility of closing underused hospitals when it closed the Sepulveda, California, VA medical center in 1995 after it suffered earthquake damage. The workload from the Sepulveda hospital was transferred to the West Los Angeles medical center. VA's OIG had found that the reported numbers of inpatients treated at both Sepulveda and West Los Angeles had declined significantly in the prior 4-year period and that the workload may have been even less than VA reported because VA had overstated it. VA does not plan to rebuild the Sepulveda hospital but plans to establish an expanded outpatient clinic there. The OIG concluded that the West Los Angeles medical center had sufficient resources to care for the hospital needs of veterans formerly using the Sepulveda hospital.

The only other hospital VA has closed in the last 25 years is the Martinez, California, medical center. Like Sepulveda, it was closed because of seismic deficiencies and its workload transferred to other VA medical centers. Before closing, the Martinez hospital had an ADC of about 240 patients. VA developed plans to replace the hospital as a joint venture with DOD at the David Grant Medical Center at Travis Air Force Base. VA planned to operate 243 beds in the new hospital.

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Last year, we reported that this construction project was not needed because existing VA and community hospitals could meet VA's current and future need for hospital beds. A congressionally mandated evaluation of veterans' health care in northern California reached the same conclusion. As a result, VA ceased plans to construct new beds at Travis and instead developed plans to use existing VA and community beds and has 55 beds at a former DOD medical facility in Sacramento.

Nonetheless, closing hospitals and contracting for care entail some risk. Allowing veterans to obtain free hospital care in community hospitals closer to their homes could increase demand for VA-supported hospital care, offsetting any savings from contracting. To the extent that new demand is generated by veterans who lack other health care options, contracting could improve the health status of veterans. On the other hand, if the demand is generated mainly by insured veterans seeking a health care option with lower out-of-pocket payments, contracting could increase costs without significantly improving veterans' health status.

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**Alternative Arrangements  
for Hospital Care Would  
Need to Be Made**

VA wants to ensure that closing a VA hospital does not result in veterans losing accessibility to care either through other VA facilities or through community hospitals. Studies performed at VA and public hospitals indicate, however, that when facilities are closed or access is restricted, patients do not always seek alternative sources of care. Researchers have reported that reduced access to care adversely affects some patients' health. For example, one study found that patients previously served by a public hospital "had difficulty finding new health care providers, waited longer for routine medical care, and felt that the availability of hospital services had decreased."<sup>73</sup> A second study reported that among the veterans examined, "the general health perceptions and functional status of discharged patients had worsened when compared with non-discharged patients . . . . Among previously hypertensive patients who were discharged [the study] found statistically and clinically significant elevations in blood pressure."<sup>74</sup> A third study found that, "[a]mong those who stop using the VA [because they were found ineligible for VA outpatient

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<sup>73</sup>A.B. Bindman, D. Keane, and N. Lurie, "A Public Hospital Closes," *Journal of the American Medical Association*, Vol. 264 (1990), pp. 2899-2904.

<sup>74</sup>S.D. Fihn and J.B. Wicher, "Withholding Routine Outpatient Medical Services: Effects on Access and Health," *Journal of General Internal Medicine*, Vol. 3 (1998), pp. 356-62.

care], many do not receive any medical care or obtain a regular provider within the first 9 months after their release from the VA system.<sup>75</sup>

In addition, our 1992 study of the closure of the Martinez VA medical center found that VA had not developed plans or procedures for referring VA patients to other VA hospitals before it announced the emergency closing of the center.<sup>76</sup> The problems VA encountered after the Martinez hospital closure—while understandable because the hospital closed due to an emergency—highlight the need for planning to ensure that patients affected by future hospital closures can obtain needed hospital services through community or VA hospitals.

In some rural communities, VA may need to maintain a small VA hospital because no community hospitals are nearby. In such cases, VA might improve health care services not only to veterans but to the general community by opening its doors to nonveterans. The expanded workload might lower per patient costs by better using excess capacity and improve quality of care by broadening the type of patients served.

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## Identifying Options for Future Use of Closed Facilities

The administration and the Congress will also have to decide what to do with any hospitals that are closed. One option is to convert VA hospitals to provide nursing home or other types of care. Although converting space to provide nursing home care is often cheaper than building a new facility, converting hospital beds to other uses would increase costs. Construction funds would be needed for the conversions, and medical care funds would be needed for the new nursing home residents in formerly empty beds. Nursing home care is a discretionary benefit for all veterans, including those with service-connected disabilities. Such care is, however, one of the main health care needs of the growing elderly population.

Another option would be to convert part of a hospital to another use while leaving the rest of the building as a hospital. Such use—whether patient care or nonpatient care related—would reduce the costs for providing hospital care by distributing the building's fixed costs over a larger user base. In addition to converting unused wards to provide nursing home care, space could be leased to public or private health care organizations, veterans service organizations, or others to generate revenues to help

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<sup>75</sup>J. Meuleman and M. Mounts, "Health Status of Veterans Found Ineligible for Ongoing Outpatient Care," *Journal of Community Health*, Vol. 2 (1985), pp. 108-14.

<sup>76</sup>VA Hospital Care: Closure and Replacement of the Medical Center in Martinez, California (GAO/HRD-93-15, Dec. 1, 1992).

offset the high costs of maintaining a small inpatient unit in a large building.

A third option would be to sell or otherwise dispose of the property. Some properties have strong potential for commercial development. Sale of such properties might raise enough revenue to make it profitable for VA to relocate nonhospital services. Other properties, particularly those in rural areas, may not be commercially valuable, and it might be cost-effective to retain such properties for outpatient clinics and other nonhospital services. Still other properties might be made available to state and local governments for use as nursing homes, homeless shelters, or other purposes.

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### Determining the Extent to Which VA Should Increase Demand for Hospital Care

One way to avoid closing VA hospitals would be to increase demand for VA hospital care, which involves two basic approaches. First, VA could compete to increase its market share of the veteran population. Second, VA could use its excess hospital capacity to serve veterans' dependents or other nonveterans. Either approach has significant implications for the communities in which VA hospitals operate. For example, increasing demand for VA hospital care would probably decrease demand for community hospital care unless VA targeted only those users with unmet hospital care needs. By competing with nearby community hospitals for a larger market share, VA could cause the closure of community hospitals. The effect on community hospitals would be greatest if VA would increase workload by competing to treat nonveterans.

On the other hand, treating nonveterans in VA hospitals could strengthen VA's teaching and research missions by broadening the type of patients treated. This was one of the main reasons Australia opened its veterans hospitals to nonveterans.<sup>77</sup>

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### VA Needs to Develop a Closure Process

Because decisions either to close VA hospitals or directly compete with private-sector hospitals for a larger market share of the declining inpatient demand would significantly affect veterans, VA employees, community hospitals, and the community in general, it is important to involve all affected parties in the decision-making. Neither VA's Prescription for Change nor individual VISN strategic plans establish a process to be followed for closing a VA hospital or the extent to which VA should involve

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<sup>77</sup>Veterans' Health Care: Implications of Other Countries' Reforms for the United States (GAO/HEHS-94-210BR, Sept. 27, 1994).

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the community. Nor do they establish a process for assessing the possible effects of decisions to compete for increased market share.

VA hospitals are often one of the main employers in the communities in which they operate. Consequently, closing a VA hospital could significantly affect the community's economic health and employment rate. For example, an underused community hospital might be able to handle the VA workload if a nearby VA hospital closed. In this case, closing the VA hospital would reduce VA's costs, provide continued care for veterans in the community, and improve the financial viability of the community hospital. Unfortunately, VISN strategic plans have little or no information on the availability or financial status of the community hospitals located near VA hospitals that could illuminate decisions about closing VA hospitals.

The Congress established a process that was used for closing military bases in 1991, 1993, and 1994. An eight-person commission was established to review closure recommendations that were to be made, in part, on the basis of published criteria. Some of these criteria addressed cost implications to the government, economic and environmental impacts on communities, and the ability of communities' infrastructure to support the proposed changes.

Members of the Congress from districts affected by base closures and realignments had an opportunity to play an active part in the commission's fact-finding and public hearing process. Ultimately, however, the Congress committed to accepting all of the recommendations as a package.

Just as decisions to either close a VA hospital or compete with community hospitals for patients would affect nearby community hospitals, so too could changes in community hospitals affect the future of VA hospitals. For example, closure of a community hospital could increase demand for VA hospital care. The effect on VA would be greatest if the hospital had a large charity care workload, were the only other hospital in the community, or were located near the VA hospital. Conversely, opening a new community hospital near a VA hospital could decrease demand for VA hospital care. Similarly, new programs or the procurement of new high-tech equipment by community hospitals could lure patients from VA hospitals. VISN strategic plans have little information about the status and plans of community hospitals located near VA hospitals and the possible effects of their actions on VA.

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# Changes in How Hospitals Are Managed and in Their Relationships With Other Health Care Providers

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Among the most important changes in response to payment reforms and declining demand for hospital care are changes in how hospitals are managed and in their relationships with other hospitals, other types of health care providers, and health care systems. Specifically, community hospitals are increasingly

- joining forces with other hospitals to form alliances and networks (horizontally integrating) either locally or nationally;
- expanding their product lines to include other types of health care services, such as nursing home and home health care, to help generate hospital demand (vertically integrating);
- hiring outside management to evaluate hospital efficiency and effect needed changes; and
- improving accounting and information systems to enable managers to identify and eliminate inefficiencies and unprofitable lines of business.

Except for hiring outside management, VA is making the same types of changes as community hospitals. In fact, the VA system was both horizontally and vertically integrated long before the concepts gained favor in the private sector. VA is, however, increasingly integrating its hospitals regionally and expanding the range of services provided in part by establishing community-based outpatient clinics (CBOC). In addition, VA, like community hospitals, is implementing new accounting and information systems.

VA faces many important issues and challenges in changing the management of its hospitals. For example, in forming alliances as networks, VA faces choices between limiting networks to VA hospitals or having VA hospitals network with DOD and community hospitals to improve accessibility of VA-supported care. Similarly, considerable uncertainty exists about the effectiveness of VA's strategy for increasing demand for hospital care by establishing CBOCs far from VA hospitals. Such actions can improve accessibility of VA outpatient care but are unlikely to help increase demand for VA hospital care. VA also faces a difficult challenge in ensuring that its management information systems can generate the complete and accurate data Veterans Integrated Service Network (VISN) and hospital managers need both to identify efficiency savings and prevent actions that could compromise the quality of or access to VA hospital care. Finally, VA must decide to what extent it should follow the lead of some community hospitals and test the possibility of contracting for management of one or more of its hospitals.

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## Hospitals Have Increasingly Joined Networks and Alliances

Many community hospitals are forming networks and alliances either locally or nationally. Such horizontal integration includes the merger, consolidation, or other informal pooling of resources by two or more hospitals to meet common objectives. Although VA hospitals have been horizontally integrated under common central office management from the inception of the VA health care system, the hospitals have largely functioned independently. As VA restructures its health care system, however, it is increasingly integrating and consolidating management and both patient and nonpatient care services at nearby hospitals.

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## What Is Horizontal Integration?

The term “horizontal integration” includes (1) legal mergers that join hospitals under common ownership, (2) hospitals maintaining separate ownership but forming networks and alliances to lessen duplication of services, and (3) hospitals collaborating to enhance their buying power and lower costs by forming a purchasing cooperative. Although alliances and networks are often formed locally or regionally, legal mergers often involve the formation of national hospital chains such as Columbia/HCA.<sup>78</sup>

Horizontal integration is intended to allow hospitals to

- gain control over markets by working with potential competitors;
- lessen duplication of services by sharing such services as information systems and laboratory facilities with other nearby hospitals;
- reduce administrative costs;
- reduce procurement costs by obtaining volume discounts; and
- better market their services to employers, managed care plans, and other purchasers.

Horizontal integration is expected to allow hospitals to contain overhead costs, provide more efficient patient care, and increase opportunities for managed care contracting.<sup>79</sup>

Networks and alliances may also help hospitals market their services by offering employers and insurers “one-stop shopping,” minimizing purchasers’ transaction costs. In addition, hospital networks offer purchasers stability: they can expect access to the same providers each

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<sup>78</sup>Howard S. Zuckerman, Thomas E. Vaughn, and Thomas A. D’Aunno, “The Strategies and Autonomy of University Hospitals in Competitive Environments,” *Hospital and Health Services Administration*, Vol. 35, No. 1 (1990), pp. 103-20.

<sup>79</sup>Paul Kenkel, “The State of Health Care in America,” *Business and Health Magazine*, Vol. 13, No. 3, Supplement C (1995), pp. 19-23.

year. Horizontal integration can help hospitals' marketing efforts by reducing purchasers' uncertainties about hospitals' quality of care, the accessibility of hospital care for their beneficiaries, and the availability of a wide range of medical technology.<sup>80</sup>

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### Horizontal Integration of Community Hospitals Has Increased Since 1990

Horizontal integration has increased significantly since 1990, when about 45 percent of community hospitals belonged to some kind of multihospital system.<sup>81</sup> Between 1990 and 1993, 71 hospital mergers took place. In 1994 alone, however, more than 650 hospitals were involved in mergers or acquisitions.<sup>82</sup> This trend continued in 1995, when 447 or about 1 out of every 12 (8.5 percent) of the approximately 5,200 community hospitals nationwide were involved in mergers or acquisitions. In addition, four large corporate deals increased the total number of hospitals involved in mergers to over 900 or about 1 in 6 community hospitals.<sup>83</sup>

Eighty-one percent of 1,200 acute-care hospital executives surveyed by Deloitte & Touche in 1994 predicted that their hospitals would join a network within 5 years. To remain competitive and reduce costs, their hospitals would join a network to share such services as information systems and laboratory facilities, according to these executives.<sup>84</sup>

Horizontal integration has involved hospitals with different religious affiliations and profit statuses. For example, such mergers have taken place in Denver. Similarly, many community not-for-profit hospitals nationwide are converting to for-profit status as they join or are acquired by chains.

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<sup>80</sup>David Dranove, Amy Durkac, and Mark Shanley, "Are Multihospital Systems More Efficient?" *Health Affairs*, Vol. 15, No. 1 (1996), pp. 100-04.

<sup>81</sup>Zuckerman, Vaughn, and D'Aunno, "The Strategies and Autonomy of University Hospitals," *Hospital and Health Services Administration*, pp. 103-20.

<sup>82</sup>Kenkel, "The State of Health Care in America," *Business and Health Magazine*, pp. 19-23.

<sup>83</sup>Mary Gabay and Sidney M. Wolfe, *Who Controls the Local Hospital? The Current Hospital Merger and Acquisition Craze and the Disturbing Trend of Not-for-Profit Hospital Conversions to For-Profit Status*, Public Citizen's Health Research Group (Washington, D.C.: June 1996).

<sup>84</sup>Kenkel, "The State of Health Care in America," *Business and Health Magazine*, pp. 19-23.

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**VA Has Increasingly  
Integrated and  
Consolidated Management  
and Services**

VA has been a horizontally integrated hospital system from its inception. Most of its hospitals, however, have operated independently, often competing with other VA hospitals to add new services and equipment, disregarding overall need either within the VA system or the community. By establishing VISNS, however, VA is decentralizing system management. VA is both integrating the administrative management and operations of nearby medical centers to increase efficiency and consolidating services at fewer locations. In addition, some VISNS are beginning to review more closely their role in the community.

In March 1995, VA submitted to the Congress a plan, its Vision for Change, to restructure its health care system from a centralized system with four regional offices to a decentralized system with 22 VISNS. The Congress approved the plan on September 5, 1995.

According to Vision for Change, a VISN is designed to be the basic budgetary and planning unit of the veteran health care system. It is intended to reflect the Veterans Health Administration's (VHA) natural patient referral patterns, numbers of beneficiaries and facilities needed to support and provide primary, secondary, and tertiary care, and, to a lesser extent, political jurisdictional boundaries such as state borders. Under the VISN model, health care is intended to be provided through strategic alliances among VA medical centers and other government providers and other such relationships.

Facility integrations are a critical part of VA's nationwide strategy to restructure field operations. By mid-1997, VA had approved the management integration of VA facilities in 18 geographic areas. A task force VA had established in 1994 to examine ways to achieve efficiencies in the VA health care system had identified about 30 potential management consolidations of geographically close medical centers that have complementary missions.

The Under Secretary for Health's March 1996 Prescription for Change identified a series of actions to restructure VA facilities or their management to reduce administrative costs and increase resources devoted to direct patient care. In addition to completing the ongoing facility integrations, the Prescription outlined actions to

- support additional facility management mergers and clinical or support service consolidations;

- promulgate screening criteria for potentially realigning facilities and programs;
- seek opportunities to restructure processes to best align resources;
- change personnel policies to give VISNS the authority to tailor their workforce to need;
- develop a network business plan, including a 1-year tactical plan, a 2- to 3-year strategic plan, and 5-year strategic targets; and
- develop a systemwide business plan based on input from the VISN plans.

VA has implemented or is implementing many actions outlined in the Prescription. For example, since the 8 initial management integrations, central office has approved 11 additional integrations. Similarly, in September 1995, VA established the “Criteria for Potential Realignment [CPR] of VHA Facilities and Programs,” also referred to as the “CPR List.”

Other actions VA has completed include delegating to field managers authority to conduct (1) reductions-in-force for title 5 personnel and (2) staffing adjustments for title 38 personnel. Finally, VISNS submitted their initial strategic plans to VA’s central office in fall 1996, and they were included in the VHA section of the overall strategic plan.

Many of the VISN strategic plans address consolidating specific services:

- VISN 3 (Bronx) plans to consolidate many of the laboratory services now provided separately by the Lyons and East Orange medical centers. It plans to similarly consolidate services at the Bronx and Castle Point medical centers.
- VISN 5 (Baltimore) consolidated all cardiac surgery at the Washington, D.C., VA medical center and all neurosurgery at the Baltimore medical center.
- VISN 7 (Atlanta) plans to consolidate surgical services now provided at both the Montgomery and Tuskegee medical centers at Montgomery. We are now reviewing VA’s efforts to integrate the two facilities.
- VISN 8 (Bay Pines) contracted for a study of the feasibility of integrating clinical programs, support services, and the management of its Lake City and Gainesville medical centers. In addition, VISN 8 (Bay Pines) consolidated laundry services for the Miami and West Palm Beach medical centers at West Palm Beach to provide additional outpatient care space at the Miami medical center. Similarly, the VISN consolidated warehousing for the Tampa and Bay Pines medical centers at Bay Pines to make additional outpatient care space available at the Tampa medical center. The network may also consolidate food service operations for the two medical centers.

- VISN 10 (Cincinnati) is considering consolidating five laboratories into one or two to attain economies of scale.
- VISN 12 (Chicago) plans to integrate and consolidate clinical and support services where such actions will yield savings and improve patient care. For example, it has task groups exploring the feasibility of consolidating cardiac surgery and neurosurgery programs.

Two VISNS' business plans indicated that they have no plans to consolidate facilities because of the distances between their facilities. For example, the VISN 6 (Durham) plan indicated that all of its medical centers are separated by distances requiring from 1 to 5 hours of driving time. Similarly, the VISN 9 (Nashville) plan indicated that the network is considering no facility consolidations because of the geographic dispersion and clinical mix of the network's facilities.

In addition to focusing on integrating and consolidating VA facilities, VA's Prescription for Change calls for establishing strategic partnerships with other government health care providers and the private sector through the use of sharing agreements. Among other things, the CPR List provides guidance on contracting for services from community hospitals rather than providing them directly. Neither the CPR List nor the Prescription, however, specifically addresses the possible integration of VA facilities with local networks or alliances with non-VA hospitals.

Eleven VISN strategic plans mention efforts to integrate VA facilities with community providers or contract for community hospital care:

- Several alliances of community hospitals have approached VISN 3 (Bronx) about joining them to form a single provider network for veterans and their families. The VISN's plan, however, does not indicate whether the network expects to pursue such an alliance.
- VISN 13's (Minneapolis) plan indicated that its four Minnesota medical centers hope to create a Minnesota VA Health Plan that will contract with local community health care providers to offer primary and emergency care for eligible enrolled veterans.
- VISN 14 (Omaha) is considering closing the inpatient hospital medical care and intermediate care units at Grand Island and Lincoln and pursuing contracts with community hospitals to provide acute inpatient care to VA users requiring such care.
- VISN 19's (Denver) Cheyenne medical center plans to close its surgical unit because of low utilization and contract for surgical care from a community hospital.

- VISN 20's (Portland) plan discussed its goal of making the network a health care organization providing services either in the network's own facilities or in contract facilities.

Other VISN strategic plans, however, mentioned little or nothing about integrating VA facilities with non-VA hospitals in their community. Thirteen VISN plans mentioned sharing agreements with other government facilities and medical school affiliates.

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## Effects of Horizontal Integration on Efficiency Are Unclear

Although horizontal integration is expected to allow hospitals to achieve service efficiencies, little systematic evidence exists to support this view. Studies of California's local hospital systems in the late 1980s and early 1990s challenged the view that horizontally integrated hospitals produce efficiencies. In a cross-sectional analysis examining high-technology services, cost per admission, administrative costs, and price and cost margins, researchers concluded that hospitals' benefits from integration derive from marketing efficiencies rather than from production efficiencies. Specifically, researchers found that

- multihospital systems do not consistently reduce the number of high-tech services offered,
- hospitals in multihospital systems do not generally have lower patient care costs than their unintegrated counterparts,
- integrated systems are more likely than their unintegrated counterparts to have unusually high administrative costs, and
- hospital systems still may be profitable if they can generate marketing benefits.

Hospitals, these researchers concluded, may also prosper if associated with a teaching hospital, religion, or national chain.<sup>85</sup>

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## Hospitals Are Expanding Product Lines

Many community hospitals are adding product lines by establishing home health care and expanding outpatient care to increase hospital workload and efficiency and improve marketing. Although such vertical integration is a more recent development in the private sector, most VA hospitals have been part of vertically integrated medical centers for years. VA is further expanding, however, the availability of some services, such as outpatient care, to improve access and increase hospital demand.

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<sup>85</sup>Dranove, Durkac, and Shanley, "Are Multihospital Systems More Efficient?" *Health Affairs*, pp. 100-04.

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## What Is Vertical Integration?

Under a vertically integrated system, patients may typically be treated as outpatients (prehospital care), admitted to an acute inpatient facility for services that cannot be provided on an outpatient basis, and then transferred to a nursing home or home health care agency (posthospital care). Operating an outpatient clinic allows hospitals to provide services in a lower cost setting and respond to potential demand for inpatient services. Similarly, operating a nursing home or home health agency can make it easier for hospitals to discharge patients from high-cost acute beds by providing them postacute beds that they control. Such strategies can be particularly important under hospital prospective payment systems. This is because the hospital may bill separately for outpatient services and home health and nursing home care that would have been included in the fixed payment if provided in the hospital.<sup>86</sup>

Vertical integration may involve a single hospital setting up an outpatient clinic. It may also involve a single hospital converting to a health care system as Detroit's Henry Ford Hospital did. In 1971, 210 physicians and one outpatient care clinic were affiliated with the Henry Ford Hospital. Supported by a grant from the Ford Foundation, by 1980, the system had grown to include a 350-physician group practice, five medical centers, and an education and research center.

After implementing a 10-year strategic plan, the Henry Ford Health Care System grew to include

- 35 outpatient care centers,
- an 800-member multispecialty physician group,
- a 450,000-member HMO,
- a 903-bed tertiary care hospital,
- two community hospitals,
- a 100-bed psychiatric facility,
- a chemical dependency program,
- two nursing homes, and
- home health services.<sup>87</sup>

By providing a continuum of care, hospitals expect to increase profits, control patient flow, and achieve maximum market penetration. Providing

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<sup>86</sup>Marisue Cody, "Vertical Integration Strategies: Revenue Effects in Hospital and Medicare Markets," *Hospital and Health Services Administration*, Vol. 41, No. 3 (1996), pp. 343-55.

<sup>87</sup>Critical Challenges: Revitalizing the Health Professions for the Twenty-First Century, Pew Health Professions Commission, University of California at San Francisco Center for Health Professions (San Francisco: Dec. 1995).

a continuum of care allows hospitals to compete for inpatient referrals through the primary sources of admissions to community hospitals: community-based physicians, provider networks, and managed care systems. Moreover, by offering more services, hospitals expect to more effectively compete for contracts with physician networks and managed care systems.

A 1995 survey of over 500 hospital executives found that most viewed vertical integration as offering the best chance for survival over the next decade. About 63 percent of the executives said that expanding external services (such as home health care and community outreach programs) offered the most hope for hospital survival—compared with just 30 percent of executives in 1990. Meanwhile, the executives were less likely to view expanding hospital-based outpatient services as important to hospital survival (44 percent in 1990 compared with 28 percent in 1995). Executives' views of the benefits of offering specialized services as a survival strategy dramatically changed from 1990 to 1995. Of the hospital executives surveyed in 1990, 20 percent viewed such specialization as vital to survival. In 1995, however, only 8 percent viewed offering specialized services as an important survival strategy.<sup>88</sup>

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### Community Hospitals Have Increased Vertical Integration

Vertical integration has greatly increased since the early 1970s. According to the American Hospital Association, between 1972 and 1990, the percentage of acute care hospitals

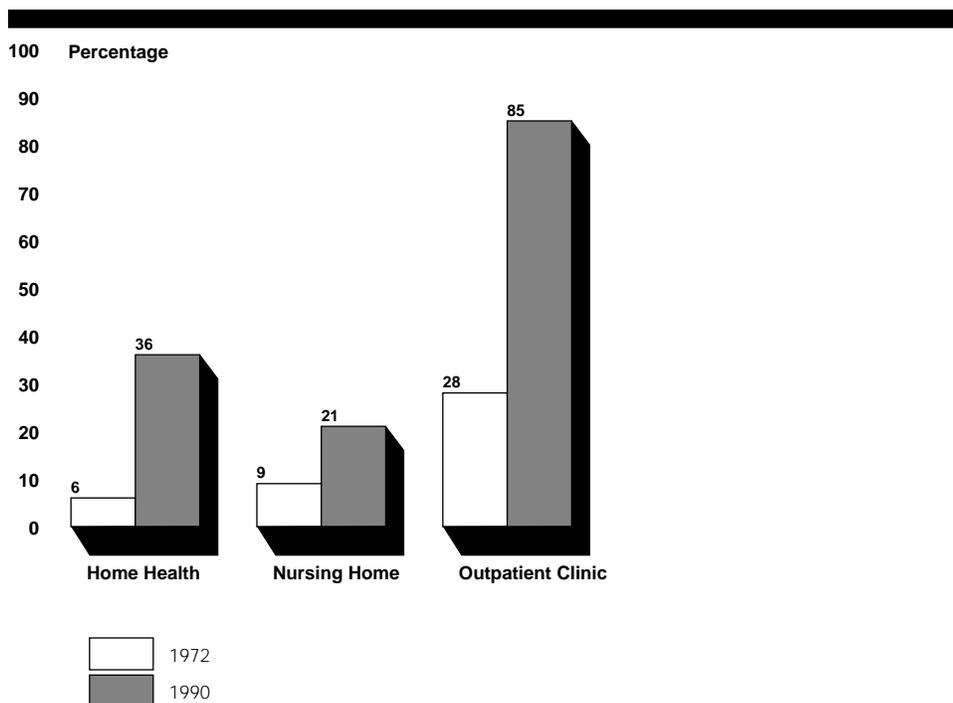
- offering home health services increased from 6.2 to 35.5 percent,
- operating nursing homes increased from 8.6 to 21.0 percent, and
- operating an outpatient clinic increased from 27.5 to 85.2 percent.<sup>89</sup>

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<sup>88</sup>On the Critical List: Hospital Strategies for Survival and Change, Watson Wyatt Worldwide (Washington, D.C.: 1995).

<sup>89</sup>James C. Robinson, "The Changing Boundaries of the American Hospital," *Milbank Quarterly*, Vol. 72, No. 2 (1994), pp. 259-75.

**Figure 7.1: Increasing Vertical Integration of Hospitals, 1972-90**



Source: Based on data from "The Changing Boundaries of the American Hospital" by James C. Robinson (*Milbank Quarterly*, Vol. 72, No. 2, 1994).

## VA Has Strengthened Vertical Integration

As a vertically integrated system, the VA health care system has for many years offered, in addition to hospital care, such services as outpatient, nursing home, domiciliary, and hospital-based home care. In 1996, VA operated, in addition to its 173 hospitals, 398 outpatient clinics, 133 nursing homes, and 40 domiciliaries. It also operated several special-emphasis programs focused on the health care needs of certain veterans, such as those who are homeless and those suffering from post-traumatic stress disorder (PTSD), substance abuse, blindness, acquired immunodeficiency syndrome, or spinal cord injuries. Through these facilities and programs, VA has offered a continuum of care that, even today, community hospitals do not adequately offer.

Among the objectives cited in VA's *Prescription for Change* is increasing the accessibility of VA services. VA has focused these efforts, however, on developing alternatives to hospital care—actions that would tend to reduce demand for VA hospital care—rather than generate new demand.

To improve veterans' access to VA health care, VHA, in February 1995, encouraged its facilities to establish more "access points," now known as CBOCs. VA has opened, or developed plans to open, 86 CBOCs during the past 3 years. Although VA's Prescription for Change indicates that VA was considering opening approximately 275 CBOCs, VA has not determined the exact number of CBOCs it will open. Virtually all VISN strategic plans have indicated that networks will establish additional CBOCs.

In addition to establishing CBOCs, VISN strategic plans have identified other initiatives to expand and reinforce the continuum of care offered by the VA health care system:

- VISN 11 (Ann Arbor) includes community support services in its continuum of care. In addition, the VISN has worked with neighboring VISNS 10 (Cincinnati) and 12 (Chicago) to develop services at state veterans' homes in those VISNS.
- VISN 12 (Chicago) plans to expand its continuum of clinical service settings so that patients' care can be provided in the most cost-effective and clinically appropriate setting. Specifically, the VISN is studying (1) establishing CBOCs and (2) shifting substance abuse and PTSD care to more cost-effective outpatient and residential settings.

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## Effectiveness of Vertical Integration Is Uncertain

Researchers, providers, and analysts give vertical integration mixed reviews. Research shows that community hospitals that have established primary care clinics have increased their market share of inpatient services.<sup>90</sup> Similarly, a study of California hospitals found that offering a continuum of care increased revenues—even after inflation. Adding more community-based physicians to the medical staff, providing more outpatient care, and expanding outpatient surgery services increased hospital revenues between 1983 and 1990. Prehospital strategies, such as adding hospital-based outpatient care and surgery, greatly contributed to increasing revenue or at least reducing declining Medicare revenues. Posthospital strategies, such as setting up home health agencies and nursing homes, did not increase revenue as much as the aforementioned practices.<sup>91</sup>

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<sup>90</sup>J.R.C. Wheeler, T.M. Wickizer, and S.M. Shortell, "Vertical Integration of Hospital and Physician Care: The Effects of Primary Care Groups on Hospital Utilization," Hospital and Health Services Administration, Vol. 31, No. 2 (1996), pp. 67-81.

<sup>91</sup>Cody, "Vertical Integration Strategies," Hospitals and Health Service, pp. 343-55.

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In reviewing the vertically integrated Henry Ford Health Care System, the Pew Health Professions Commission concluded that integrated health care systems have the potential to align health care delivery and financing to help improve care, increase patient and customer satisfaction, and reduce or hold costs to a minimum.<sup>92</sup>

Others, however, question the benefits of vertical integration. For example, one futurist has warned of the inherent discord in vertically integrated systems. He has noted that hospitals, health plans, and doctors continue to have conflicting motives under our health care system. In his view, integrated health care systems do not create proper incentives. Because they tend to pay salaries to doctors, they destroy physicians' incentives to share financial risk. And, in his opinion, hospitals that vertically integrate are more concerned with filling beds and increasing revenue than improving care.<sup>93</sup>

Concerns have also been raised about vertical integration at the local level. For example, the merger between a 250-doctor clinic and a nearby hospital failed after 4 years. The clinic expected the merger to help it access capital and reduce overhead and enable it to tap into managed care contracts. Instead, according to the clinic's vice president, the clinic was in ruin after 2 years; all of its midlevel administrators had left, its administrative costs had doubled, and the clinic had not benefited from managed care contracts. The vice president questioned whether physicians and hospitals can truly align their incentives.<sup>94</sup>

Researchers also question whether vertical integration increases rather than decreases health care costs. For example, Robinson noted costs are likely to be higher for hospital-owned outpatient, home health, and nursing home services than for comparable nonhospital providers. He noted that hospital-owned facilities tend to have higher wage rates for nurses, technicians, clerical workers, and other staff than wage rates in independent physician offices, nursing homes, and home health agencies. Finally, he noted that hospitals' practices tend to be more intensive than those of independent nursing homes and physician offices; hospitals therefore have higher costs, even after accounting for wages and other costs.

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<sup>92</sup>Critical Challenges, Pew Health Professions Commission.

<sup>93</sup>Anita J. Slomski, "Maybe Bigger Isn't Better After All," *Medical Economics* (Feb. 27, 1995), pp. 55-60.

<sup>94</sup>Slomski, "Maybe Bigger Isn't Better After All," *Medical Economics*, pp. 55-60.

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In addition, Robinson noted that a vertically integrated system allows potential for opportunistic cost and revenue accounting because costs may be shifted among inpatient, outpatient, and postacute care divisions.<sup>95</sup> In other words, one segment of a vertically integrated system may be used to subsidize other segments.

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## Hospitals Frequently Contract for Management Expertise

Many community hospitals have used outside management expertise to help improve efficiency and profitability. Although VA has not contracted out the management of any of its hospitals, it has used outside expertise to manage the VA system.

Contract management is an arrangement in which a hospital's board of trustees retains an outside organization to manage the hospital. The contractor provides an administrator, usually along with an entire management team, to oversee daily hospital operations. This arrangement contrasts with that in which a board of trustees hires an administrator or chief executive officer directly.<sup>96</sup>

Contract management is intended to improve the financial performance of hospitals facing possible closure. Contract management is expected to provide hospitals (1) greater management expertise, (2) easier access to capital markets, and (3) lower procurement costs. Contract management can produce lower procurement costs because of the economies of scale provided by joint purchasing with other hospitals managed by the same contractor.<sup>97</sup>

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## How Extensively Is Contract Management Used?

Contractors manage over 10 percent of the nation's community hospitals. Contractors managed 10.4 percent of community hospitals in 1982, and by 1987, this had grown to 12.4 percent. A representative from the Agency for Health Care Policy and Research (AHCPR), which developed the above estimates, indicated that the organization has not developed more recent estimates but believes that contract management is growing.

Contract-managed hospitals tend to be small, rural hospitals with fewer technology-intensive services. Contract-managed and noncontract-

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<sup>95</sup>Robinson, "The Changing Boundaries," *Milbank Quarterly*, pp. 259-75.

<sup>96</sup>A. Dor, *Are Contract Managed Hospitals More Efficient?* Agency for Health Care Policy and Research (AHCPR), Pub. No. 94-004 (Rockville, Md.: 1994), pp. 5-20.

<sup>97</sup>Dor, *Are Contract Managed Hospitals More Efficient?* AHCPR, pp. 5-20.

managed hospitals have like case mixes but appear to have greatly differing financial performances. With at least 2 or more consecutive years of control, contract managers have been able to reduce costs to below those of noncontract hospitals and to substantially improve their hospitals' capital structure. For example, the salaries and benefits cost per admission for hospitals that had been contract managed for 2 years or more was \$2,089 compared with \$2,459 for similar hospitals not contract managed. Similarly, the ratio of assets to liabilities for the contract-managed hospitals studied improved from 2.391 after 1 year to 2.897 after 2 or more years of contract management, slightly exceeding the performance of noncontract-managed hospitals.<sup>98</sup>

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## **VA Has Not Used Contract Management**

VA has not used contract management for any of its hospitals. As previously discussed, before October 1996 VA was not generally authorized to contract for direct patient care services or services incident to direct patient care. VA officials did not know of VA considering any use of contract management or whether contracting restrictions would have prohibited such contracts.

Neither VA's Vision for Change nor Prescription for Change discussed the hiring of contract management. Nor do any of the VISN business plans directly address the hiring of such management. The VISN 12 (Chicago) plan, however, indicates that the VISN will, if the need arises, recruit management staff with the skills and expertise needed to help accomplish its mission.

Although VA has not contracted for management of entire hospitals, it has used management expertise from the private sector in managing the veterans health care system, starting at the top with the Under Secretary for Health. The Under Secretary's prior experience included running the California Medicaid program (Medi-Cal), the nation's largest. Similarly, VA selected many VISN directors from outside the VA system.

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<sup>98</sup>Dor, Are Contract Managed Hospitals More Efficient? AHCP, pp. 5-20.

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## Improved Information and Accounting Systems Have Developed

Hospitals and health plans are spending billions of dollars on health care information systems.<sup>99</sup> As in the private sector, VA is developing and implementing both information and financial management systems to provide the data it needs to make sound management decisions.

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## What Is a Decision Support System?

Decision support systems (DSS) provide managers with information on business operations to ease decision-making. In the health care industry, these systems provide managers and clinicians with data on patterns of patient care and patient health outcomes, which can then be used to analyze resource utilization and the cost of providing health care services. Several vendors offer various types of DSSs for the health care industry.

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## Why Are DSSs Important?

Administrators and physicians often have limited information to support efforts to manage product lines and the process of clinical care. Existing information systems usually support only one portion of the health care system such as clinical laboratories and financial reporting systems. No major integration of financial and clinical data systems has taken place. Research on hospital information systems indicates that better integrated financial and clinical information could provide more efficient and effective decision support to both administrators and physicians.<sup>100</sup> For example, the clinical data in the system could support the development and monitoring of practice guidelines and critical pathways. Although cost savings have eluded those that have invested in integrated clinical and financial data systems, such investments have improved provider productivity, medical outcomes, and patient satisfaction.

DSSs can compute the costs of services provided to each patient by combining patient-based information on services provided with financial information on the costs and revenue associated with those services. For example, a private-sector hospital performing cataract surgery collects information on the services provided to each patient, including the laboratory tests performed and the medications supplied, through its billing system. The hospital then collects revenue and cost information through its accounting systems, incorporating the collections from the

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<sup>99</sup>“Improvements, But No Savings Seen With Fully Integrated Systems,” *Faulkner & Gray’s Medicine & Health*, Vol. 50, No. 34 (1996).

<sup>100</sup>Lawrence F. McMahon, Jr., “The Integrated Inpatient Management Model’s Clinical Management Information System,” *Hospital and Health Services Administration*, Vol. 39, No. 1 (1994), pp. 81-91.

insurance companies and applicable parties, such as Medicare, and expenditures for utilities and equipment.

Using a DSS to combine the clinical and financial information from the billing and accounting systems, the hospital can, for example, (1) calculate the specific cost of providing cataract surgery to a patient; (2) compare revenue received to costs incurred to determine profitability of this type of service; (3) compare costs incurred for different physicians and for surgery performed at different locations; (4) evaluate patient outcomes; and (5) analyze ways to increase the quality of service, reduce costs, or increase profitability. DSSs can also help compare patient care with predefined health care standards.<sup>101</sup>

DSSs have improved productivity and lowered costs. Responses to a survey published in 1989 also cited service improvement as a major benefit of their systems but seldom mentioned improved quality of care as an additional benefit.<sup>102</sup> A 1992 survey of health care chief executive officers (CEO) found that they viewed DSSs as most critical in supporting cost-control efforts (82 percent), physician-hospital relations (78 percent), quality improvement (66 percent), and managed care (65 percent). For each of these areas, however, 50 percent or less of the CEOs were satisfied with existing DSSs. The CEOs viewed DSSs' financial reporting capabilities most favorably; over 70 percent were satisfied with existing systems.<sup>103</sup>

DSSs are viewed as particularly important as the nation moves increasingly toward managed care, which requires hospitals to integrate their business and clinical operations. For example, an information system for a managed-care system might include the capability to (1) analyze capitation rates, (2) process claims, (3) determine eligibility, (4) manage health care utilization, and (5) credential providers.

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## Growth of Private-Sector DSSs

By 1990, more than 200 vendors were selling DSSs to hospitals. These systems included support for some or all functions of financial planning and modeling, diagnosis-related groups, cost accounting, facility utilization, and strategic marketing. A study by Sheldon Dorenfest Associates found that health care information system spending totaled

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<sup>101</sup>VA Health Care Delivery: Top Management Leadership Critical to Success of Decision Support System (GAO/AIMD-95-182, Sept. 29, 1995).

<sup>102</sup>"Decision-Support Systems' Downfall: Management," *Hospitals*, (Mar. 20, 1989), p. 100.

<sup>103</sup>"CEOs Link IS Visions to Hospital Strategic Plans," *Hospitals*, (Dec. 5, 1992), pp. 42-6.

\$8.7 billion in 1995 and would probably reach \$11 billion in 1997. In 1996, however, the Healthcare Financial Management Association said that only one in five integrated delivery systems had computerized planning systems that profiled doctors, projected demand, measured outcomes, or tracked patients electronically.

In addition, a study by Abt Associates for the Healthcare Financial Management Association found that no integrated U.S. health care delivery network had truly integrated its clinical and financial systems. Networks that have invested money in developing systems have done so without expecting, or getting, cost savings, according to the study. Although savings are elusive, an Abt senior consultant found improvements in provider productivity, medical outcomes, and patient satisfaction. The study cited shorter waiting times resulting from automatic scheduling systems as one example of the benefits of information systems.<sup>104</sup>

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## VA Is Implementing DSS and Financial Management System

Like the private sector, VA is working to improve its cost and utilization data. Its information and accounting systems cannot provide detailed information on the specific services VA provides or the cost of those services. VA's efforts include (1) implementing a DSS, (2) developing a National Patient Care Database, (3) developing a computerized patient medical record, and (4) implementing a new financial management system.

Since February 1994, VA has been phasing in at its facilities a new DSS that uses commercially available software to help provide managers data on patterns of care as well as their resource and cost implications. This DSS fundamentally differs from existing VA databases because it organizes each patient's selected resource utilization and clinical outcome data in a longitudinal format. This, according to VA, allows the Department to evaluate patterns of care for a user-defined patient population for an extended time period beyond a specific episode or care site.

The DSS receives input from diverse data systems and consistently allocates specific costs, including personnel, supplies, and fixed overhead, to each patient service or procedure. The DSS, by combining patterns of patient resource utilization (cost) information and patient outcome (quality), reflects the value of patient care delivered by VA.

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<sup>104</sup>"Improvements, but No Savings Seen With Fully Integrated Data Systems," Faulkner & Gray's Medicine & Health, p. 2.

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As of March 1996, 68 VA medical centers were in various stages of implementing DSS. VA's Prescription for Change called for 30 additional centers to be added to the DSS every 6 months until implementation is complete. Subsequently, VA accelerated DSS implementation, and the remaining centers began implementing DSS in March 1997.

Consistent with guidance provided in the Prescription, more than half the VISN strategic plans address DSS implementation. Only VISN 11's (Ann Arbor) business plan, however, identifies efforts to ensure the integrity and validity of data entered in DSS. VISN 11's (Ann Arbor) and VISN 12's (Chicago) plans also have more detailed information on potential uses of DSS data for comparative analyses than other plans. Many of the VISNS' plans indicate that networks are developing separate information system plans.

VA's Prescription for Change also called for establishing linkages between VA data systems and other public health care programs such as Medicare and Medicaid. It noted that VHA participated in the National Committee on Vital and Health Statistics' Core Data Elements Project sponsored by the National Center for Health Statistics.

VA is also developing a National Patient Care Database. Several systems are now used to gather clinical workload data. For example, VA has separate databases with inpatient (patient treatment file) and outpatient care (outpatient file) data. This limits the amount of information on services provided to individual patients according to the database. As a result, the current systems do not provide the data VA needs to support broader management, medical resource management, and policy decisions.

VA's current outpatient file is inadequate to meet VA's needs for clinical and management information. The outpatient file has information on specific clinic stops but not on the diagnoses made, services provided, or physicians or other clinicians providing services.<sup>105</sup> In addition, the data VA collects are not compatible with those collected by the Health Care Financing Administration (HCFA) or other health care programs, making it difficult to compare VA with other programs in efficiency or quality.

To address these problems, the Under Secretary for Health required VA facilities to gather, beginning in October 1996, certain information to

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<sup>105</sup>Ronald F. Gebbart and Marsha Gant, "No Longer Business as Usual: VA's Data Capture on Fast Track," VA, Veterans Health System Journal, Vol. 2, No. 2 (1997), pp. 37-8.

receive workload “credit” for outpatient visits. VA developed a new encounter form to gather data on patient demographics, diagnoses, procedures performed, and providers. In completing these forms, VA facilities must use the same coding and terminology typically used by HCFA and the private sector, including diagnostic and procedure codes.

The National Patient Care Database is expected to eliminate fragmented and overlapping data systems, resolve inconsistencies in current data systems, implement standard-based codes and data sets, move the focus from the program to the patient, and improve the timeliness of data. VA is developing the National Patient Care Database in two phases. In 1997, it collected outpatient care data; in 1998, it began adding inpatient data.

In addition, according to VA’s Prescription, VHA plans to work more with the National Library of Medicine’s electronic medical record system cooperative project to conduct large-scale testing of vocabularies for computer-based patient records. Similarly, many VISN strategic plans identify developing computerized patient records as a goal.

Finally, the Prescription called for the design of a management information system that would track and link care to individual caregivers throughout the VA system. VA established a National Provider Index that identifies caregivers and links them to patient care. The information is being incorporated into the DSS and National Patient Care Database.

VA replaced its former accounting system with the new Financial Management System (FMS) using upgraded technology and the governmentwide standard general ledger structure. According to VA officials, FMS is a tool to help VA improve its financial management and internal controls.

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**VA Must Address  
Many Issues About  
How VA Hospitals Are  
Managed and How  
They Relate to Other  
Health Care Providers**

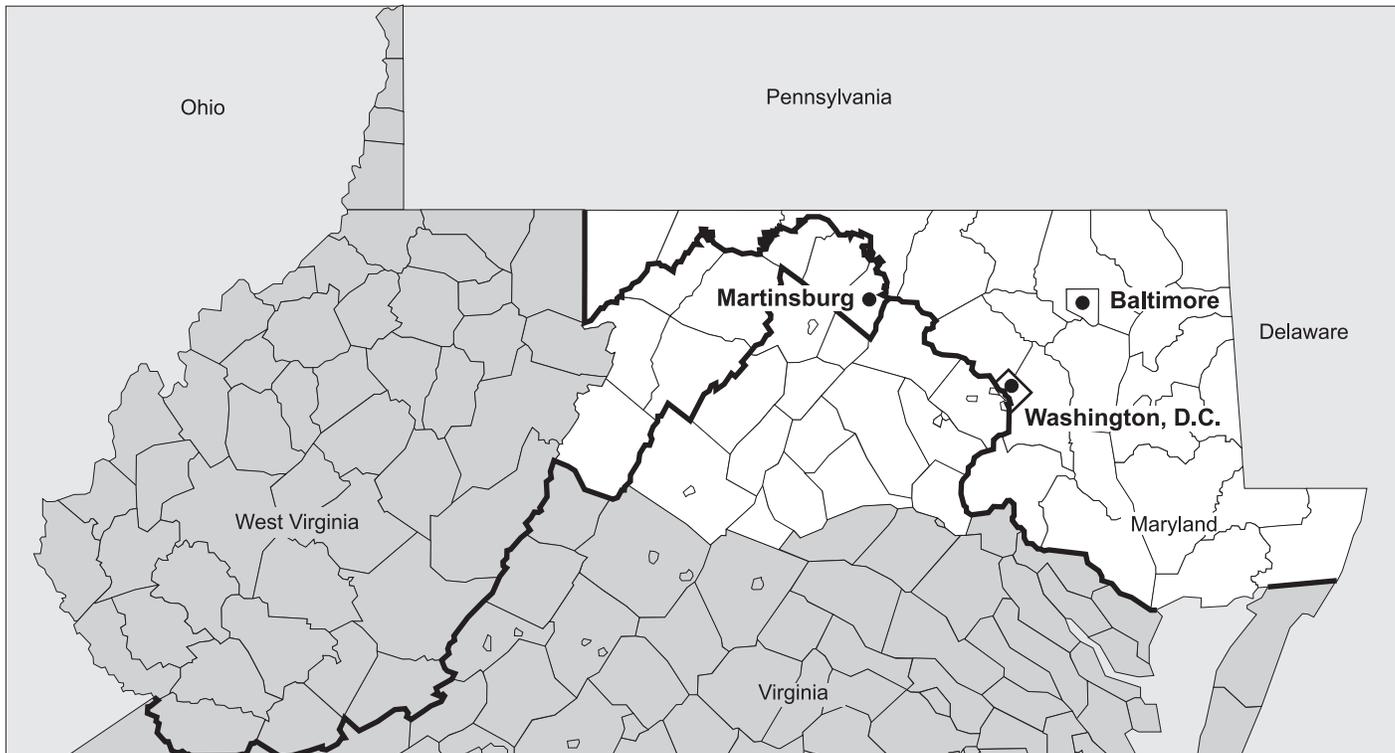
Many issues need to be addressed about VA’s efforts to change its hospitals’ management and their relationships with other providers. These issues involve horizontal and vertical integration as well as contract management issues.

**Hospital Integration Issues**

Traditionally, almost all veterans provided hospital care through the VA system have been expected to use VA-operated facilities. In establishing its 22 VISNS, VA horizontally integrated into networks with 4 to 11 VA hospitals in broad geographic areas. VA therefore expects veterans to be able to obtain virtually any health care service through referral to a network hospital. VA's hospitals and clinics, however, are often located hundreds of miles apart, making referrals between them problematic.

Horizontal integration in the private sector usually involves referral networks of hospitals and other nearby facilities. The referral networks established by VISNS, however, often cover vast distances. VISN 5 (Baltimore), one of the smaller VISNS geographically, includes hospitals in Washington, D.C.; Martinsburg, West Virginia; and Baltimore, Maryland (a total of three hospitals). (See fig. 7.2.)

**Figure 7.2: VA Hospitals in VISN 5 (Baltimore)**



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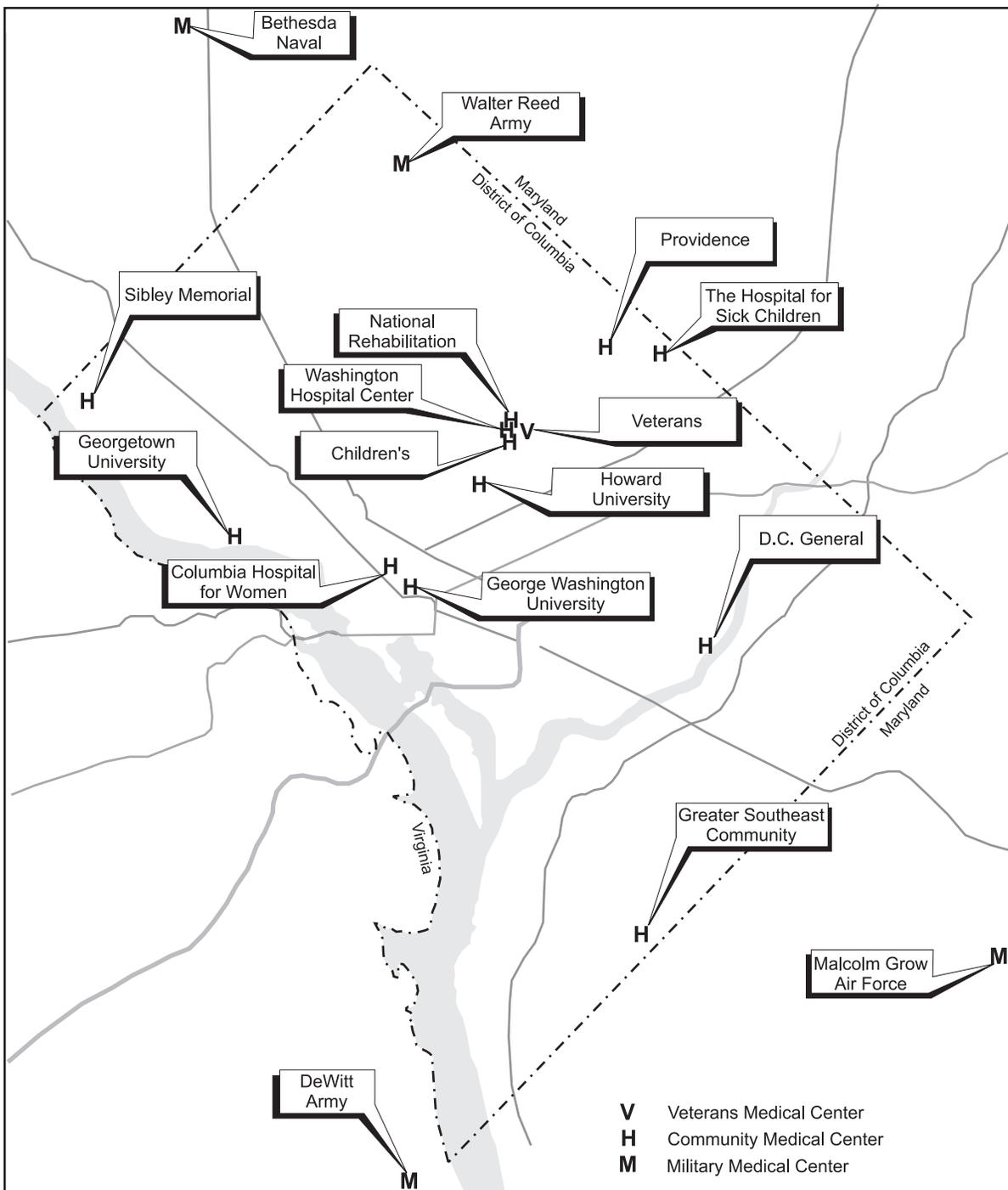
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The distances between Martinsburg and Washington, D.C., (about 90 miles) and Martinsburg and Baltimore (about 95 miles) raise questions about the extent to which patients needing services not available at the Martinsburg hospital are expected to obtain those services from VA hospitals in Washington, D.C., or Baltimore. Such referrals are necessary if community hospitals in Martinsburg or nearby cities such as Hagerstown, Maryland, cannot provide the services. But, for services available from community hospitals, referral to a distant VA medical center may create unnecessary hardships for veterans and their families. VISN strategic plans, however, have little information on the community hospital services available and the relative cost of providing services through contracts with such hospitals compared with the cost of referring a patient to the nearest VA hospital that can offer the services (including any transportation and lodging costs).

By integrating its hospitals with non-VA hospitals in their communities, VISNS might be able to establish referral patterns comparable with those of community hospitals. For example, the Washington, D.C., medical center could form a referral network with the four Washington area military hospitals to improve the two systems' beneficiaries' access to hospital services. (See fig. 7.3.)

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**Figure 7.3: Major VA, Military, and Community Hospitals in the Washington, D.C., Metropolitan Area**



VA hospitals would need to address the following issues before joining a local network:

- To what extent would the network help increase demand for VA-supported hospital care?
- Can the VA hospital support additional workload without compromising services for veterans?
- Would VA be able to generate enough revenues from selling services to military and community hospitals in the network to offset the increased contracting costs?
- To what extent would current VA hospital users shift their use to other, more convenient, military or community hospitals in the network?
- To what extent can VA reach agreements to consolidate specialized services in fewer locations to increase efficiency and quality?

Another potential advantage of VA hospitals joining local networks would be VA's increased consideration of the health care capacity and needs of local communities in its planning. For example, VA could reach agreements with community hospitals about the proliferation of high-technology equipment. Similarly, in placing expensive new equipment in the VA system, VA could consider the extent to which the equipment could serve the community as well as veterans. VISN strategic plans, however, generally do not address the health care capacity and needs of the communities with VA hospitals.

One approach that might increase veterans' access to more convenient community or military hospitals but preserve veterans' incentives to use VA hospitals would be to impose higher veteran cost sharing for services obtained from non-VA hospitals. In effect, VA would be establishing a point-of-service plan, allowing veterans to obtain care from any willing provider but paying for more of the cost of the care if it is obtained from a preferred provider (a VA hospital) or participating provider (other network hospital).

As of July 1997, VA had initiated integrations in 18 geographic areas with five reported as completed. VA indicates the integrations are having positive results. VA has, however, had difficulties planning and implementing some of the integrations.<sup>106</sup> Our ongoing work has revealed areas where improvements could be made. For example, VA generally makes integration decisions incrementally, that is, on a service-by-service

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<sup>106</sup>VA Health Care: Lessons Learned From Medical Facility Integrations (GAO/T-HEHS-97-184, July 24, 1997).

basis throughout the process instead of on the basis of decisions affecting all activities in integrated facilities. Also, planning and implementation activities often take place simultaneously, which precludes VA's considering the collective effect of such changes on the integration. In addition, stakeholders, though involved at varying times in different ways, do not always receive sufficient information at key decision points.

Our work suggests that as VA considers ways to improve its facility integration process, several actions might facilitate better results. These include

- adopting a more comprehensive planning approach,
- completing planning before implementing changes,
- improving the timeliness and effectiveness of communications with stakeholders, and
- using a more independent planning approach.

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## Vertical Integration Issues

Considerable uncertainty surrounds the potential effects of VA's vertical integration efforts on future demand for VA hospital care. Because VA has been a vertically integrated health care system for many years, it may have already reaped many of vertical integration's benefits. For example, community hospitals expect to retain or increase demand for hospital care by operating nursing homes and home health agencies. VA, however, has both operated nursing homes and contracted for nursing home care in the private sector since the 1960s. Transfers between these nursing homes and VA hospitals have long generated a portion of VA's hospital demand.

One way for VA to increase hospital demand would be to expand its nursing home program, either by establishing additional VA nursing homes or contracts with community nursing homes. Such actions would, however, require significant new VA resources to only slightly increase hospital admissions. Changes need to be made in the financing of VA nursing home care. Veteran cost sharing provides less than 1 percent of the cost of providing VA-supported nursing home care. On the other hand, expanding the availability of nursing home care would help bridge the gap in health care coverage for elderly veterans.

The second major issue concerning vertical integration is the extent to which CBOCs may generate new demand for VA hospital care. Many CBOCs

are located far (often over 50 miles) from the nearest VA facility.<sup>107</sup> CBOC physicians are expected to refer veterans needing specialized services or hospital care to a VA hospital. Distance from a VA hospital, however, significantly affects the likelihood that veterans will seek care from a VA facility. The rate at which veterans use VA hospitals declines significantly at distances of over 5 miles from a VA facility. Thus, the extent to which CBOCs serve veterans who have other health care options through public or private health insurance further reduces the likelihood of VA hospital use.

Because VA's contracting authority did not expand until October 1996, it is too soon to determine its effect on demand for VA hospital care. Use of the authority to contract for hospital and specialized services from private-sector providers to improve veterans' access to hospital care could further reduce demand for VA hospital care. Our work on other countries' veterans health care systems found that use of veterans' hospitals declined once veterans gained access to community hospitals through national health insurance or changes in the veterans' program to authorize contract care.<sup>108</sup> As discussed, one option that could limit the effect of giving veterans greater access to community hospitals closer to their homes would be to require higher veteran cost sharing for care from non-VA hospitals.

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## Contract Management Issues

One change that community (but not VA) hospitals have tried is contracting for outside hospital management to restructure operations and improve efficiency. VA could test contract management under several scenarios. For example, because contract management appears to have succeeded most in small, rural community hospitals, VA could work with the Congress to develop a pilot program to test contract management at one or more of its small rural hospitals. On the other hand, it could try contract management in hospitals facing significant management challenges. Similarly, VA could use outside management to plan and implement facility integrations.

In designing such demonstration projects, however, VA would need to establish evaluation plans to determine the effects both on efficiency and quality of care. In other words, it would need to ensure that the contractor did not increase efficiency by compromising quality of care.

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<sup>107</sup>Of the first 12 CBOCs, 3 were located more than 100 miles from the nearest VA facility; 6, between 50 and 100 miles from a VA facility; and 3, within 50 miles of a VA facility.

<sup>108</sup>Veterans' Health Care: Implications of Other Countries' Reforms for the United States (GAO/HEHS-94-210BR, Sept. 22, 1994).

While the DSS may significantly improve VA's ability to manage its health care operations, the ultimate usefulness of the system will depend not on the software but on the completeness and accuracy of the data entering the system. If the DSS cannot provide reliable information, VA facilities and VISNS will either continue to make decisions on the basis of unreliable information or spend valuable time developing their own data systems.

Two years ago, we recommended that VA develop a strategy to identify data needed to support decision-making and ensure that these data are complete, accurate, consistent, and reconciled monthly.<sup>109</sup> VA's Prescription for Change advocated swift implementation of the DSS but did not target any actions to ensure that the data and systems entering the DSS could provide complete and accurate data. Similarly, VISN strategic plans generally do not address plans to ensure the completeness and accuracy of data entering the DSS and other data systems. As a result, it is not clear whether the DSS, FMS, and other data systems will generate the reliable data VA needs to support management decisions.

VA's facility integrations create additional challenges for VA data systems. For example, decentralized hospital computer programs at VA facilities have been largely locally developed and may not be compatible with other facilities' systems. Similarly, VA will have to resolve facilities' differences in data coding and entry.

Both VA and community hospitals face the challenge of reprogramming their computers to recognize the next century. Most computer software in use today is limited to a two-digit date field such as "97" for 1997. Thus, this software will not be able to distinguish between the years 1900 and 2000 because both will be designated "00." VA's draft strategic plan states that VA's objective is to ensure that its information systems will provide uninterrupted service to support VA medical care in the year 2000. The plan includes a performance goal that full implementation and testing of compliant software (that is, software capable of processing dates beyond 1999) will be completed by December 1999.

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<sup>109</sup>GAO/AIMD-95-182, Sept. 29, 1995.

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# Work Transformation Leads to More Efficient Use of Personnel Resources

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Personnel accounts for over 40 percent of community hospital expenditures. Hospitals are the major employers of nursing staff, including registered nurses, licensed practical nurses, and nursing assistants. Throughout the 1980s, the use of nursing staff, particularly registered nurses, increased steadily, raising costs. By 1992, registered nurses accounted for about 25 percent of hospital employment.<sup>110</sup> The increased demand for and limited supply of registered nurses led to significant wage increases, raising operating costs further.

Because personnel accounts for such a large part of hospital costs, any effort to reduce costs must focus on effectively using health care workers. Community hospitals often change their basic work processes to more efficiently use personnel resources. For example, community hospitals are

- contracting for patient and nonpatient care services when such contracting is less costly than providing the services through the hospital's staff;
- using part-time and temporary nurses and other health care professionals to more flexibly meet changing workloads and patient mix;
- cross-training personnel to perform multiple jobs to more efficiently use available staff;
- developing nurse extender programs to allow nurses to devote more time to direct patient care; and
- restructuring care delivery around patient-centered teams to increase efficiency and patient satisfaction.

In the past, VA has not focused as much as the private sector on work transformation in part because of limitations on its authority to contract for patient care services. VA's Prescription for Change, however, placed increased emphasis on such concepts as cross-training and patient-centered care. Veterans Integrated Service Network (VISN) strategic plans, however, hardly mention efforts to implement the changes the Prescription calls for. As a result, VA faces many issues concerning the extent to which its hospitals should change work processes.

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<sup>110</sup>Barbara H. Wooton and Laura T. Ross, "Hospital Staffing Patterns in Urban and Nonurban Areas," *Monthly Labor Review*, (Mar. 1995), pp. 23-33.

## Hospitals Are Increasingly Contracting for Patient and Nonpatient Care Services

Community hospitals try to control costs by contracting for a wide variety of patient and nonpatient care services. By doing so, hospitals can shift some costs from fixed to variable, allowing them to react to changing workloads. In other words, hospitals using contract services pay only for the services they use. In addition, use of contract employees reduces employee benefits costs. Until recently, VA's legislative authority did not permit it to contract for patient care services. VA is now, however, increasingly exploring options to contract for both patient and nonpatient care services.

## Community Hospitals' Use of Contract Services Is Increasing

Although we found no studies that identify the number or percentage of community hospitals using contract services, annual surveys of hospital executives by Modern Healthcare suggest that this is a growing trend. The services hospitals most frequently contract for include food service, emergency services, housekeeping, laundry, equipment maintenance, and pharmacy services. Between 1994 and 1995, the number of hospitals surveyed that reported using contract services increased, particularly services for emergency room, financial management, equipment maintenance, and physical and rehabilitation therapy. (See table 8.1.)

**Table 8.1: Top 10 Hospital Services Contracted, 1994 and 1995**

Type of service	Number of hospital clients		Percent change
	1994	1995	
Food	1,550	1,733	11.8
Hospital-based emergency	981	1,298	32.3
Housekeeping	619	718	16.0
Laundry	533	557	4.5
Equipment maintenance	289	445	54.0
Pharmacy	370	436	17.8
Plant operations	310	341	10.0
Rehabilitation/physical therapy	255	308	20.8
Financial management	342	474	38.6
Psychiatric	214	211	-1.4

Source: Modern Healthcare Contract Management Surveys, 1994 and 1995.

Controlling costs was the main reason chief executive officers (CEO) cited for using contractors to provide support and business services. Nearly 60 percent of the executives responding to Hospitals & Health Networks' Fifth Annual Contract Management Survey in 1995 cited cost as a reason

for contracting for support services; 56 percent cited the need to obtain specialized expertise; 42 percent cited the ability to downsize the workforce. Similarly, slightly more than half of the respondents said that they contract for business services to contain costs and take advantage of vendors' specialized expertise. Cost was not as much a factor in hospitals' decisions to contract for clinical services. Respondents most often cited the need to obtain specialized expertise (54 percent) and difficulty in recruiting staff (52 percent) as reasons for contracting for such services.<sup>111</sup>

Lack of capital appears to be a major factor in decisions to contract for diagnostic imaging services. A diagnostic imaging contractor provides such services as mobile computed tomography, magnetic resonance imaging, single photon emission computed tomography, ultrasound, and nuclear medicine. Hospitals that cannot afford to purchase, or justify on the basis of workload, such equipment, which may cost \$2 million or \$3 million, may purchase the service from a contractor.<sup>112</sup>

Another reported trend is for contractors to hire hospital employees. For example, when Marriott contracts to provide food service operations, it may hire hospital employees. Contracting for food service operations can save money because contractors generally pay lower wages than hospitals.<sup>113</sup>

Overall, hospital executives appeared satisfied with use of contract services. Over 90 percent of hospital executives participating in Hospitals & Health Networks' 1995 survey were very or generally satisfied with contracts for clinical, support, and business services.<sup>114</sup>

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## Many Community Hospitals Use Temporary Staffing Agencies

More than one-third of the nation's hospitals regularly use temporary staffing agency personnel. The nursing shortage of the mid-1980s led hospitals to rely on temporary contract nursing staff to meet staffing requirements. Some inner-city hospitals reportedly pay \$50 an hour for such personnel.<sup>115</sup>

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<sup>111</sup>J. Duncan Moore, Jr., "Outsourcing Firms Ride Changing Tides," Modern Healthcare, (Sept. 2, 1996), pp. 61-76.

<sup>112</sup>Elizabeth J. Moran, "Medical Firms Make Clinics Efficient," Hospitals, Vol. 64, No. 8 (1990).

<sup>113</sup>Moore, "Outsourcing Firms Ride Changing Tides," Modern Healthcare, pp. 61-76.

<sup>114</sup>Cathy Tokarski, "Value Driven: Fifth Annual Contract Management Survey," Hospitals & Health Networks, (June 20, 1995), pp. 42-6.

<sup>115</sup>Katherine Kostbade Hughes and Richard J. Marcantonio, "Recruitment, Retention, and Compensation of Agency and Hospital Nurses," Journal of Nursing Administration, Vol. 21, No. 10 (1991), pp. 46-51.

Temporary staffing agencies (1) help hospitals meet staffing shortages and (2) allow nurses flexibility in their work schedules. Hospital administrators like using agency personnel because it avoids the costs of providing insurance and other benefits to permanent employees. On the other hand, permanent employees often complain that use of agency personnel makes it harder to maintain continuity of care. Many also resent the significantly higher hourly wages that agency nurses receive without having to assume the same nonclinical responsibilities as permanent staff.<sup>116</sup>

The number of nurses working in independent contract positions is increasing.<sup>117</sup> Despite the increased use and considerable cost of such nurses, we found little information on them. A 1990 survey of registered nurses in Illinois (66,005 out of 117,796 nurses responded), however, found that agency nurses received higher hourly wages but fewer benefits than permanent hospital staff nurses. Hospital staff nurses were more likely than agency nurses to receive pension plans, health and dental insurance, reimbursement for continuing education, child care services, and parking.<sup>118</sup>

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### VA Use of Contract Personnel Has Been Limited

Historically, VA hospitals have not been allowed to contract for patient and nonpatient care services to the same extent as community hospitals. Now that legislative barriers to such contracting have been removed, VA expects its hospitals to increasingly use contract services when they are less expensive and of equal or better quality.

Until fiscal year 1994, VA was, in general, prohibited from contracting for direct patient care services, such as nursing services, which are currently provided by federal employees. Section 8110(c) of title 38 of the U.S. Code generally precluded VA from entering into contracts under which VA direct patient care, or activities incident to direct patient care, would be performed by non-VA personnel. VA interpreted activities such as dietary and laundry services as incident to direct patient care and therefore exempted them from efforts by the Office of Management and Budget to

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<sup>116</sup>Hughes and Marcantonio, "Recruitment, Retention, and Compensation," *Journal of Nursing Administration*, pp. 46-51.

<sup>117</sup>Karen Leidy, "Effective Screening and Orientation of Independent Contract Nurses," *The Journal of Continuing Education in Nursing*, Vol. 23, No. 2 (1992), pp. 64-8.

<sup>118</sup>Hughes and Marcantonio, "Recruitment, Retention, and Compensation," *Journal of Nursing Administration*, pp. 46-51.

have agencies contract out functions previously performed by federal employees.

The Veterans' Benefits Improvements Act of 1994 (P.L. 103-446, title XI, section 1103) suspended these requirements for fiscal years 1995 to 1999. The Secretary of VA must, however, (1) ensure that contractors give priority to former VA employees displaced by contract awardees and (2) provide former VA employees all possible help in obtaining other federal employment or entering job training programs.

In August 1995, the Under Secretary for Health distributed criteria for potentially realigning VA facilities and programs to help field managers identify opportunities for improving efficiency. Several criteria focus on contracting for services when the community offers the same kind of service of equal or better quality at a lower cost. While the criteria present hypothetical examples of situations in which a VA facility would purchase a service from another facility rather than provide it directly, field managers could also interpret the criteria to include situations in which a private contractor would be hired to operate services, such as laundry and food services, within a VA facility.

Public Law 104-262, which became law on October 9, 1996, removed additional barriers to expanded VA contracting. Specifically, it (1) expanded the types of professionals and services for which VA may contract, (2) simplified procedures for complying with federal procurement processes when contracting with commercial firms, and (3) permanently eliminated the restriction on contracting for patient care-related services.

Several VISN business plans have identified efforts to contract for patient and nonpatient care services using this expanded authority:

- VISN 7 (Atlanta) plans to purchase laboratory services from more cost-effective non-VA providers.
- VISN 12 (Chicago) expects to save 40 percent on staffing and 25 percent on other costs by contracting out selected administrative, clinical, and support services. Among the activities the network is considering for contracting are grounds maintenance, warehousing, and fire prevention.
- VISN 14 (Grand Island) is reevaluating its in-house provision of dialysis services to determine whether it would be less expensive to contract for the services. It is also weighing the possibility of sharing its other dialysis resources with community providers.

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## **Use of Part-Time and Intermittent Employees Can Offer Flexibility**

To cope with rapidly changing workloads and help contain staffing and benefits costs, community hospitals are using more part-time and intermittent nursing employees.<sup>119</sup> Although VA also uses part-time and intermittent employees, such use has declined in the past 5 years. In addition, some community hospitals are developing regional staffing pools to share personnel among facilities. VA officials did not know of any personnel sharing among its facilities but believe integration of VA medical centers may encourage this practice.

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## **Use of Part-Time and Intermittent Employees Has Advantages and Disadvantages**

The use of part-time and intermittent employees provides several advantages as well as disadvantages to both staff and hospitals.

First, the use of part-time and intermittent employees can enable hospitals to cost-effectively meet staffing needs due to changes in patient loads, case mix, and vacancies. Intermittent employees generally receive higher wages instead of benefits and have more control in scheduling their work assignments than do part timers.<sup>120</sup> Second, using part-time and intermittent employees also allows hospitals an expanded pool of nurses from which to recruit and the ability to retain nurses who might have left the workforce or sought other employment if their families' situation changed.

Nurses often prefer part-time or intermittent work because it gives them greater flexibility in scheduling their work hours and more time to spend with their families and reduces stress. By requiring intermittent employees to work a minimum number of shifts, weekends, and holidays, hospitals also make it easier for full-time staff to schedule time off.

The use of part-time and intermittent employees also has disadvantages, however. Programs that allow lots of movement of such staff among work units may have difficulty keeping intermittent employees abreast of hospital policies and procedures. On the other hand, programs that allow such employees to work in a limited number of units may have difficulty meeting staffing needs without relying on outside staffing agencies. Finally, intermittent employees are often viewed as lacking a permanent staff's commitment to an organization.

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<sup>119</sup>Federal regulations (5 C.F.R. 340-202) define part-time employees as those career employees who work regular schedules of from 16 to 32 hours a week. As used in this report, the term "intermittent" includes employees who work intermittently, on a temporary, seasonal, or on-call basis or on a time-limited appointment.

<sup>120</sup>Mary Bogos Kutash and Deana Nelson, "Optimizing the Use of Nursing Pool Resources," *Journal of Nursing Administration*, Vol. 23, No. 1 (1993), pp. 65-8.

One hospital, Tampa General Hospital, addressed these problems by organizing its intermittent staff, including registered nurses, licensed practical nurses, paramedics, certified surgical technicians, mental health technicians, and emergency medical technicians, into unit-based and divisional pools. The unit-based pool places intermittent employees under the direct supervision of the unit nurse manager. Although assigned to a specific unit, such employees receive a pay differential as well as retirement and Social Security benefits.<sup>121</sup>

In contrast, Tampa General's divisional nursing pool is intended for employees who want greater flexibility in scheduling and assignments. Staff in the divisional pool work at least 16 weekend hours every month and one 8-hour shift during the Thanksgiving, Christmas, and New Year holiday season.

The nursing pools have allowed the hospital to decrease its use of overtime and staffing agencies, according to hospital officials, and offered other advantages. First, the unit-based pool has allowed the hospital to meet fluctuating demand or cover vacancies with nurses familiar with the unit. Second, when intermittent employees convert to permanent status, orientation costs are typically lower than for newly hired nurses.

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## Use of Part-Time and Intermittent Nurses Increasing

Between 1966 and 1986, the percentage of nurses working part time in hospitals ranged from 15 to 20 percent. The percentage of nurses working part time increased to 26 in 1988, according to another source.<sup>122</sup> Similarly, in a 1993 study conducted by the Florida Hospital Association, 47 percent of the hospitals surveyed indicated that they used intermittent contract staff only when needed. In addition, 40 percent of the hospitals reported that they had "float pools" to meet staffing needs. Float pools comprise hospital staff who agree to work in different units due to changing patient loads and case mix. The survey did not include data on use of nurses obtained from nursing agencies.<sup>123</sup>

Almost half of the more than 7,000 nurses responding to the Patient Care Survey of the American Journal of Nursing reported that part-time or

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<sup>121</sup>Kutash and Nelson, "Optimizing the Use of Nursing Pool Resources," Journal of Nursing Administration, pp. 65-8.

<sup>122</sup>Susan V. Owen, "Empowering Part-Time Nurses in the Treatment of Depressed Inpatients," Journal of Psychosocial Nursing, Vol. 30, No. 8 (1992), pp. 17-22.

<sup>123</sup>Kutash and Nelson, "Optimizing the Use of Nursing Pool Resources," Journal of Nursing Administration, pp. 65-8.

intermittent registered nurses have been substituted for full-time registered nurses at their facilities; two out of five reported the substitution of unlicensed auxiliary personnel for registered nurses. Nurses in the Pacific region reported significantly higher rates of substitution. Nurses in the Northeast and East North Central regions reported the greatest cutbacks in the use of registered nurses.<sup>124</sup>

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### VA Use of Part-Time and Intermittent Nurses Is Declining

Like community hospitals, VA uses part-time and intermittent nurses and other health care professionals to increase its flexibility in meeting changing workloads and patient mix. Unlike community hospitals, however, VA is decreasing its use of part-time and intermittent nurses.

Overall, the use of part-time and intermittent nurses in the VA health care system has declined steadily since 1992, when about 13.3 percent of VA nurses worked as part-timers or intermittents. At the end of fiscal year 1995, about 11.2 percent of VA nurses and nurse anesthetists worked as part-timers or intermittents. According to VA's chief consultant in its Nursing Strategic Health Care Group, hospitals that have had to reduce staffing due to budget problems have sometimes eliminated part-time and intermittent nurses to protect full-time, permanent nurses. This, she said, can result in reducing the hospital's flexibility in responding to changing workloads.

VA statistics on part-time and intermittent employees provide systemwide information on physicians, dentists, and nurses but have no data on other types of health care workers. In addition, VA officials did not know of any studies or data on the actual extent to which part-time and intermittent nurses and other staff are working in VA hospitals.

To date, VA's restructuring efforts have not specifically focused on use of part-time and intermittent staff. Neither VA's Vision for Change nor Prescription for Change addresses the use of part-time and intermittent employees. Nor do any of the VISN business plans address the issue. VA officials, however, agreed that use of part-time and intermittent employees can increase flexibility and reduce costs. They also said that use of part-time and intermittent nurses probably varies within the VA system due to local conditions, such as the supply of nurses.

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<sup>124</sup>Judith Shindul-Rothschild, Diane Berry, and Ellen Long-Middleton, "Where Have All the Nurses Gone?" American Journal of Nursing, Vol. 96, No. 11 (1996), pp. 25-39.

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## Hospitals Are Pooling Resources

Some community hospitals have developed staffing networks to pool hospital personnel geographically. For example, rural hospitals in Vermont have developed an interhospital staff sharing system to alleviate staffing shortages. Under the pooling arrangements, some hospitals lend staff more often than they borrow them from the pool, while others borrow more than they lend. All hospitals, however, cited advantages. For example, hospitals borrowing staff from the pool reported that it allowed them to (1) keep a department or unit in a small institution open and (2) avoid having to transfer patients because of short staffing. Similarly, hospitals lending staff through the pool said that it gave them an alternative to sending staff nurses home without pay during low demand periods.

Lending hospitals are responsible for ensuring the competency of pool members. Employee participation is voluntary, but those who participate are (1) paid \$3 to \$5 above their regular hourly salary depending on when they work and (2) reimbursed for travel. Even with the salary differential, hospitals paid less than they would have if they had obtained staff from a nursing agency.

Other advantages of the pooled resources cited were

- better communication among hospitals in the pool,
- avoiding the need to use more costly and less reliable staffing agencies, and
- sharing innovative approaches and best practices as pool staff were exposed to other hospitals' care management practices.

Hospital administrators plan to expand the pool to include other health care providers in smaller, more geographically compact Vermont communities. For example, hospitals and home health agencies might share staff.<sup>125</sup>

VA central office officials did not know of any VA hospitals that have set up float pools comparable with those in community hospitals but said that such programs might be considered in the future, particularly by hospitals under common management.

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<sup>125</sup>Jill L. Sherer, "Personnel Power," *Hospitals & Health Networks*, (Sept. 5, 1994).

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## **Hospitals Cross-Train Employees for Effective Staff Utilization**

To maintain patient care, while coping with staff shortages, community hospitals increasingly cross-train both clinical and support personnel. VA's Prescription for Change calls for increased cross-training and multi-skilling of VA personnel; VISN strategic plans, however, generally do not discuss plans to accomplish this.

Initially, community hospitals used cross-training to help cope with the shortage of nurses during the 1970s and 1980s. As the nursing shortage eased, the demands for greater efficiency driven by managed care and payment reforms became the impetus for cross-training. Therefore, cross-training has focused heavily on training to reduce the need for or make more effective use of nurses in delivering patient care. Hospitals have developed individual programs to meet their needs and labeled both their programs and staff positions differently. Rural hospitals, in particular, have had to develop programs to cope with chronic shortages of medical personnel, and they have reportedly done so successfully.

Clinical personnel are usually cross-trained within their general area of expertise to allow them to expand the scope of their practice. For example, a registered nurse normally working on general surgical cases might be cross-trained to assist with orthopedic surgery. Similarly, licensed practical nurses may be trained to assume certain duties traditionally performed by registered nurses.

Cross-training allows hospitals to more efficiently use resources by expanding the number of clinical and nonclinical staff trained to perform a given task. For example, if nursing assistants are trained to perform nonpatient care duties, such as changing bed linens, they can substitute for housekeeping staff.

The 1996 Patient Care Survey of the American Journal of Nursing, a national survey including responses from 7,560 nurses, reported that nurses are caring for more patients, have been cross-trained to assume more nursing responsibilities, and have substantially less time to provide all aspects of nursing care.

In its December 1995 report, Critical Challenges: Revitalizing the Health Professions for the Twenty-First Century, the Pew Health Professions Commission recommended that team training and cross-professional education continue and expand.

VA similarly supports cross-training and multi-skilling and, according to a VA official, VA facilities are using physician extenders and other allied health professionals. For example, the Acting Director of Surgical Services told us that VA started cross-training some technicians in intensive care, respiratory therapy, and laboratory services. Neither he nor other VA officials, however, could provide data on the extensiveness of cross-training in the VA system.

In VA's Prescription for Change, the Under Secretary for Health described several actions to expand the use of cross-training and multi-skilling. First, under its goal of improving customer service, VA plans to establish new positions for multi-skilled caregivers as part of efforts to empower staff to plan and execute their work to best respond to patient needs. In addition, to help make VA an employer of choice, VA established a work group to examine cross-training, employee development, and other workforce issues. Finally, in March 1995, VA revised its directives on the scope of practice for nurse practitioners, physician assistants, and clinical pharmacists to better utilize such personnel. The revised guidance also established prescribing guidelines for these professions.

VA's Office of Academic Affairs is also supporting cross-training through its Primary Care Education program and "firm" system.<sup>126</sup> VA officials told us that the programs emphasize team building among multidisciplinary staff rather than cross-training of staff to perform more than one job.

VISN strategic plans generally support the need to enhance training of hospital personnel but focus more on retraining personnel to work in outpatient settings and in providing primary care. This focus is appropriate in the short term, given the significant shift in VA care from inpatient to outpatient settings.

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## Hospitals Are Creating Nurse Extender and Other Auxiliary Positions

Another approach community hospitals sometimes use to reduce personnel costs that closely relates to cross-training is expanding the roles and responsibilities of nursing assistants and other ancillary personnel. Likewise, VA supports expanded roles for nursing assistants and other ancillary personnel, but the extent to which VISNs are increasing their use is unclear.

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<sup>126</sup>The "firm" system refers to an academic group practice in which a designated set of health care providers is responsible for the inpatient and outpatient care of a defined set of patients.

If money were no object and the supply of nurses endless, hospitals would undoubtedly prefer to use only registered nurses to provide direct patient care. But, with the shortage of registered nurses in the 1980s and increasing pressures to contain costs, community hospitals increasingly sought to develop lower cost alternatives. One such alternative is the use of specially trained nursing assistants, often referred to as nurse extenders, to assume many tasks normally performed by registered nurses. This reduces the need for higher paid nurses and allows registered nurses to use their advanced education and experience to enhance all patient care activities.

Registered nurses remain pivotal in coordinating care in hospitals, sometimes as case managers. Nursing assistants' roles, however, have been changing. In some community hospitals, nursing assistants, under the direction of a registered nurse, are assuming more responsibility for direct care. Under nurse extender programs, nursing assistants or other ancillary personnel are generally trained to replace or assist registered nurses in performing relatively simple bedside care such as changing dressings and taking vital signs. In addition, they sometimes help nurses in providing total bedside care. Still others are trained to help telemonitor, lift patients, administer electrocardiographs, or provide physical therapy.<sup>127</sup>

Registered nurses assume additional management and supervisory responsibilities to monitor the nurse extenders. Meanwhile, nurse extenders relieve registered nurses of many routine patient care-related duties. Creating nurse extender positions is sometimes accompanied by changing the roles of other support personnel such as those performing dietary, housekeeping, and transportation services.

Following are examples of three hospitals' efforts to expand the roles of nursing assistants and other ancillary personnel:

- A Southern Maryland hospital developed a new patient care delivery model to respond to a nursing shortage. The hospital, forced to close 10 percent of its beds because of a staffing shortage, could reopen the beds only through the use of agency nurses, a temporary and costly option. To reduce its need for registered nurses, the hospital created two new patient care positions—nursing technician and patient care assistant—by expanding the duties of nursing assistants and housekeepers. It expanded the former nursing assistant job description to

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<sup>127</sup>Nursing Staff in Hospitals and Nursing Homes: Is It Adequate? eds. Gooloo S. Wunderlick, Frank A. Sloan, andCarolyn K. Davis, Committee on the Adequacy of Nurse Staffing in Hospitals and Nursing Homes, Division of Health Care Services, Institute of Medicine (Washington, D.C.: 1996).

include more technical duties previously performed by nurses. It reassigned unskilled tasks to personnel in other departments. The hospital pairs nursing technicians with the same registered nurses to establish strong working relationships.

The hospital expanded the housekeepers' role to include delivering water, mail, and linen directly to patients; accompanying discharged patients to the front door; delivering specimens and requisitions to other departments; helping nurses with patient turning and positioning; applying side rails and assembling traction to unoccupied beds; and cleaning equipment. Before assuming these expanded duties, the former housekeepers were trained in infection control procedures and body mechanics. Many of the tasks the patient care assistants assumed had been previously done by nursing assistants. Unlike the former housekeepers, who reported to the general services department, patient care assistants report directly to the care unit.

The hospital also expanded the roles of other nonpatient care staff. For example, dietary aides distribute and collect patient meal trays, a task previously performed by nursing assistants.

The hospital reported that it reduced by 12 percent the number of registered nurses needed by shifting non-nursing tasks to nursing technicians and patient care assistants. The hospital also reported increased employee satisfaction among nursing technicians and patient care assistants resulting from their interaction with patients and nurses, improved documentation and care planning, better continuity of care from shift to shift, more time for patient teaching, and a cleaner unit.<sup>128</sup>

- Boston's University Hospital developed a patient care technician position.<sup>129</sup> Patient care technicians, who must have 4 years of education beyond high school, complete a formal 8-week training program followed by a 3-month probationary period. As in the Southern Maryland hospital, the patient care technician worked closely with a registered nurse.<sup>130</sup> An official from the Boston University Medical Center, however, told us that the hospital discontinued the program because it was not cost-effective.

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<sup>128</sup>Yvonne M. O'Brien and Barbara A. Stepura, "Designing Roles for Assistive Personnel in a Rural Hospital," *Journal of Nursing Administration*, Vol. 22, No. 10 (1992), pp. 34-7.

<sup>129</sup>Karen K. Kirby and Christine M. Garfink, "The University Hospital Nurse Extender Model," *Journal of Nursing Administration*, Vol. 21, No. 1 (1991), pp. 25-30.

<sup>130</sup>Kirby and Garfink, "The University Hospital Nurse Extender Model," *Journal of Nursing Administration*, pp. 25-30.

She said that the positions had high turnover rates because the program was limited to individuals with college degrees in fields other than nursing and such individuals often returned to their original fields or took other jobs. Another problem the program had was inadequate training of nurses in delegating duties to the technicians.

- Braintree Hospital (in Maine) developed a rehabilitation technician position. In addition to the duties normally performed by a nursing assistant, the rehabilitation technician (1) prepares narrative documentation; (2) provides special eye and skin care, bowel care, simple treatments and dressings, and tube feeding; and (3) applies hot and cold compresses.<sup>131</sup>

Just as nurse extenders are reducing community hospitals' demand for registered nurses, nurse practitioners, physicians assistants, and nurse midwives often substitute for physicians. Several factors have influenced this trend, including the need to lower health care costs and improve access to care for the poor and residents of rural areas. In 1990, Medicare and Medicaid began reimbursing certain nonphysician health professionals for the care they deliver, allowing them to expand their roles and perform functions previously performed by physicians.<sup>132</sup>

Many nurses frown on the use of nurse extenders and other unlicensed assistive personnel. For example, the Patient Care Survey of the American Journal of Nursing revealed that only about 13 percent of the nurses surveyed believed the use of such personnel improved patient care where they worked. The responses are somewhat misleading, however, because only about 42 percent of the respondents reported the hiring of auxiliary personnel to provide direct patient care previously provided by registered nurses.<sup>133</sup>

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## VA Is Expanding Scope of Practice for Auxiliary Personnel

As in the private sector, VA is expanding the scope of work of certain paraprofessionals to enable them to substitute for physicians and pharmacists. Neither central office nor VISN strategic plans, however, focus on expanded use of nurse extenders and other personnel to substitute for registered nurses.

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<sup>131</sup>Mary-Jean Crockett and Jeanne Gibbs, "Use of a Nurse Extender Role in the Rehabilitation Setting," Rehabilitation Nursing, Vol. 18, No. 1 (1993), pp. 37-9.

<sup>132</sup>Wootton and Ross, "Hospital Staffing Patterns," Monthly Labor Review, pp. 23-33.

<sup>133</sup>Shindul-Rothschild, Berry, and Long-Middleton, "Where Have All the Nurses Gone? Final Results of Our Patient Care Survey," American Journal of Nursing, pp. 25-39.

In March 1995, VA issued revised policy directives expanding the scope of practice for physician assistants and nurse practitioners. It similarly revised policy directives covering clinical pharmacists in May 1996. VA revised prescribing guidelines to allow certain advanced practice nurses to prescribe medications without a physician's review.

In VA's Prescription for Change, the Under Secretary for Health called for better utilization of nurse practitioners, physician assistants, and clinical pharmacists. Subsequently, a VA work group was charged with identifying barriers to increased use of nurse practitioners, clinical pharmacy and nurse specialists, and physician assistants. The work group submitted its report to the Under Secretary for Health in August 1997. The report identified informal barriers to greater use of such personnel. According to a VA official, the primary barrier is VA's culture, which has been physician driven and therefore closed to expanded roles for allied health professionals.

Neither the Prescription nor the VISN strategic plans identify efforts to expand the use of nurse extenders or other auxiliary personnel to substitute for registered nurses. Several facilities have identified efforts to create such positions, however, as they develop patient-centered care approaches.

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## **Both VA and Community Hospitals Are Implementing Patient-Centered Care**

Many community hospitals are using the above-mentioned and other novel practices to fundamentally reengineer the provision of hospital care. Generally referred to as "patient-centered" care (sometimes "patient-focused" care), such reengineering typically involves creating care teams, including both registered nurses and other specially trained nurse extenders and ancillary personnel cross-trained to offer maximum flexibility and interchangeability in providing patient and nonpatient care services. Many VA hospitals are similarly developing patient-centered care programs for both inpatient and outpatient care.

Although no single definition of patient-centered care exists, such programs often involve changing how care is managed using such tools as clinical guidelines (see ch. 11); case management; strengthened discharge planning; and shared decision-making among physicians, nurses, and allied professionals. Patient-centered care also focuses on customer satisfaction by increasing involvement of patients and their families in treatment decisions and reducing the number of a patient's caregivers during a hospital stay. Finally, patient-centered care often involves decentralizing

ancillary services, moving many services, such as X rays and pharmacy, to wards.

Patient-centered care involves developing integrated care teams. Many hospitals have reorganized the nursing and other patient and nonpatient care personnel into care teams. Under some programs, the team includes not only nursing staff, but also pharmacists, respiratory therapists, and other caregivers with functional expertise and training.

Team members' work responsibilities typically overlap so that staff can better respond to both patients and management. By allowing team members to share responsibilities, hospitals can eliminate the inefficiencies associated with rigidly defined job responsibilities. Including the task of cleaning and preparing rooms in the work responsibilities of all team members, for example, avoids waiting for a housekeeping staff member to prepare a room—a common cause of delays in admitting patients.

Although teams are a central feature of patient-centered care, their makeup and structure vary. For example, one approach relies mainly on expanded caregiver roles to improve efficiency; other approaches feature organizational changes involving staff from other units, such as the pharmacy, being supervised by the care team leader, typically a registered nurse.<sup>134</sup>

Another feature of patient-centered care involves reducing the number of staff interacting with patients. Patient-centered care generally reduces the number of caregivers interacting with a given patient during a 3-day stay from up to 55 to fewer than 15.<sup>135</sup>

A third feature of patient-centered care involves redesigning wards to bring ancillary services closer to patients. Hospitals group patients with similar care needs together on a single ward rather than disperse them to several wards. This enables redesigning wards to bring ancillary services closer to patients. By grouping like patients together, hospitals can move ancillary services for about 90 percent of the procedures required by these

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<sup>134</sup>S.B. Schweikhart and V. Smith-Daniels, "Reengineering the Work of Caregivers: Role Redefinition, Team Structures, and Organizational Redesign," *Hospital and Health Services Administration*, Vol. 41, No. 1 (1996), pp. 19-34.

<sup>135</sup>James G. Lee, Robert W. Clarke, and G.H. Glassford, "Physicians Can Benefit From a Patient-Focused Hospital," *Physician Executive*, Vol. 19, No. 1 (1993), pp. 36-8.

patients to that ward.<sup>136</sup> Hospitals can use space previously used for supplies and the central nursing station for high-volume ancillary services such as pharmacy, laboratory, radiology, and physical therapy.

With supplies, medical records, and caregivers closer to patients, hospitals may also move the traditional nursing station closer to patients. In addition, hospitals may locate work areas for preparing patient charts and other functions at smaller units throughout the ward.<sup>137</sup>

Placing ancillary services, such as X ray, laboratory, pharmacy, and rehabilitation, on the patient floor often greatly reduces travel time from patients' rooms to the service area. In addition, X ray technicians, medical technologists, pharmacists, and therapists can become more a part of the care team. Hospitals also report that this feature reduces the time needed to obtain test results. For example, one hospital reported that it reduced the time required to obtain X ray results from almost 2-1/2 hours to just 28 minutes.<sup>138</sup>

Although we found little data on the extent to which community hospitals have implemented patient-centered care, nearly half of the hospital CEOs responding to a 1992 survey indicated that they are either planning to or are already implementing patient-centered care.<sup>139</sup> One health analyst predicts that within 10 years, most hospitals will have patient-centered care programs.

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## VA Is Studying Patient-Centered Care

In June 1995, the Veterans Affairs Nursing Board of Directors established a task force to study patient-centered care. The task force evaluated over 40 patient-centered care delivery systems in both VA and the private sector.

In April 1997, the task force issued a resource guide, Value: Patient Centered Health Care, which (1) reviews the models currently in use to provide "templates for transforming traditional illness-based organizations

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<sup>136</sup>Lee, Clarke, and Glassford, "Physicians Can Benefit From a Patient-Focused Hospital," Physician Executive, pp. 36-8.

<sup>137</sup>Jill L. Sherer, "Putting Patients First: Hospitals Work to Define Patient-Centered Care," Hospitals, (Feb. 5, 1993), pp. 14-24.

<sup>138</sup>Lee, Clarke, and Glassford, "Physicians Can Benefit From a Patient-Focused Hospital," Physician Executive, pp. 36-8.

<sup>139</sup>Hospitals and ServiceMaster Co. conducted the survey, to which 311 hospital executives responded. The executives were asked about the extent to which they had implemented patient-centered care, defined as "the redesign of patient care so that hospital resources and personnel are organized around patients rather than around various specialized departments."

into transdisciplinary, cost-effective, health-focused systems” and (2) provides a self-assessment tool to allow facilities to identify their reorganization status.

The task force analyzed 20 community hospitals and 13 VA medical centers adopting patient-centered care models in their outpatient or hospital care programs. The following examples illustrate VA’s use of patient-centered care in hospital settings:

- The Iowa City VA medical center is developing a patient-centered care approach that organizes staff and services around patient needs. The medical center is creating four care teams: critical/special care, psychiatry, medical/neurology, and surgical. Each team includes a wide range of direct care providers such as registered nurses, nursing assistants, housekeepers, dieticians, physical and respiratory therapists, and social workers. The program is intended to (1) increase staff and patient satisfaction, (2) redirect scarce resources to patient care activities, (3) improve patient care processes, (4) reengineer medical center systems, and (5) redesign jobs and work processes.
- The Providence VA medical center has established an integrated inpatient/outpatient firm system.<sup>140</sup> As the medical center’s inpatient workload decreased and its outpatient workload increased, nursing staff were shifted from inpatient to outpatient care. In addition to registered nurses, the firm includes physician assistants, nurse practitioners, licensed practical nurses, clerks, and patient care assistants. The newly created patient care assistant position is one involving skills intended to include nursing, medicine, and medical administration. Although the firm is outpatient care-based, physicians, nurse practitioners, and social workers make daily rounds of firm system patients in the hospital. This provides both continuity of care and helps plan for discharging and following up on the patient after discharge. VA’s analysis of the program found that (1) access to care greatly improved, (2) waiting times decreased, (3) patient and staff satisfaction improved, and (4) patient education improved.
- The San Diego VA medical center restructured its nursing service to create self-directed teams to decentralize management and empower staff. The program decentralized clinical specialists to the wards and reduced the number of assistant chiefs of nursing service. The program restructured the role of the head nurse into a new position—clinical services director—

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<sup>140</sup>The firm system refers to an academic group practice in which a designated set of health care providers is responsible for the longitudinal care (inpatient and outpatient) of a defined set of patients. In the context of a teaching institution, this system of parallel teams emphasizes not only continuity of patient care, but also continuity of faculty-trainee relationships.

and developed a new staff nurse facilitator role. VA's analysis of the program found that the restructuring energized the nursing staff and promoted creativity.

- The Louisville VA medical center is developing a patient-centered care pilot project based on a program at the University of Arizona. The medical center has developed new positions for multi-skilled administrative and clinical workers. The administrative position, the patient support associate, includes duties from emergency medical services, escort services, and food and nutrition services. The clinical multi-skilled position, the patient care associate, adds duties relating to respiratory therapy, phlebotomy, rehabilitation medicine, and electrocardiograms to the existing duties of nursing assistants and licensed practical nurses. Staffing and budget considerations have delayed the pilot's implementation.

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## Effectiveness of Patient-Centered Care Is Uncertain

Little quantitative data exist on the benefits of patient-centered care.<sup>141</sup> Hospitals that have implemented patient-centered care, however, have reported improved physician satisfaction.<sup>142</sup>

Many hospital executives also see benefits to patient-centered care. Hospital executives responding to a survey conducted jointly by Hospitals and ServiceMaster cited the following reasons, among others, for establishing or developing patient-centered care programs:

- They are the best way to provide patient care (88 percent).
- They will lower expenses (55 percent).
- They grew out of the hospitals' total quality management or continuous quality improvement programs (43 percent).
- They were part of their survival strategy (37 percent).
- They will improve their hospital's reputation (36 percent).
- They will improve their hospital's market share (33 percent).
- They will help attract and retain physicians (29 percent) and allied health professionals (30 percent).

Not all hospital executives responding to the survey, however, viewed patient-centered care as an improvement. Over half of the respondents indicated that they do not plan to adopt patient-centered care programs

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<sup>141</sup>Nursing Staff in Hospitals and Nursing Homes: Is it Adequate? Institute of Medicine.

<sup>142</sup>Lee, Clarke, and Glassford, "Physicians Can Benefit From a Patient-Focused Hospital," Physician Executive, pp. 36-8.

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because of uncertainty about their benefits.<sup>143</sup> Similarly, some VA officials expressed concern that some patient-centered care may be a veiled attempt to cut costs by reducing nursing staff.

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## **Many Issues Need to Be Addressed Concerning VA's Work Transformation Efforts**

Because staffing accounts for such a large percentage of hospital costs, many challenges remain to be addressed as VA considers transforming its hospital staffing. One major challenge involves VA's central office convincing VISNS and individual hospitals to use their new contracting authority to seek less costly ways to provide services such as laundry, dietetics, and housekeeping. Although the Under Secretary for Health's criteria for potential realignment encourage contracting for services when they are cheaper and of equal or better quality, VISN strategic plans generally do not address such contracting. Until VA completes improvements in information and financial management systems, VA hospitals may not have the type of reliable cost and utilization data they need to make informed decisions on contracting for services rather than providing them directly or obtaining them from another VA facility. Another factor relating to such decisions is their effect on VA employees and the community. For example, contracting to obtain dietary services from a local provider might save jobs in the community and provide employment opportunities for current employees without relocating them. On the other hand, providing the services through one consolidated VA location might save jobs within the VA system and improve efficiency at the gaining VA facility through economies of scale. Such action would, however, more adversely affect the community standing to lose jobs.

In addition, VISNS and individual VA hospital directors will have to make difficult choices about using part-time and intermittent employees. For example, in an era of downsizing, to what extent should VA protect full-time permanent employees by eliminating positions for part-time and intermittent employees even if doing so decreases staffing flexibility? Similarly, can VA devise alternatives to using, or other ways to use, part-time and intermittent employees to make comparable efficiency improvements without the disadvantages associated with using such employees? For example, VA facilities might be able to save resources by pooling staff with each other or with nearby community hospitals.

Finally, community hospitals typically pay differentials to part-time and intermittent employees, but such differentials are not available to VA

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<sup>143</sup>Sherer, "Putting Patients First: Hospitals Work to Define Patient-Centered Care," *Hospitals*, pp. 14-24.

employees. Offering pay differentials might encourage some full-time staff to shift to part-time or intermittent status. In addition, it might make it easier for VA to compete with community hospitals for available staff. It is not clear, however, to what extent VA is having difficulty filling part-time and intermittent positions under its current pay system. Adding pay differentials if recruiting part-time and intermittent staff can be easily done but could needlessly increase operating costs.

VA's Prescription for Change addresses the need for increased cross-training and developing VA staff's skills and physician extender programs. Similarly, VA issued a resource guide to patient-centered care. Decisions on starting or expanding the use of such programs are difficult, however, because the private sector does not uniformly support the concepts. For example, some have expressed concern that using nurse extenders and patient-centered care sacrifices quality of care to reduce costs. VISNS and hospital directors thus face difficult challenges in planning for the use of such personnel and programs to ensure improvement of patient care.

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# Hospitals Reduce Procurement and Inventory Costs Through Changes in Materials Management

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Materials management refers to the systems, functions, and tasks involved in obtaining goods, such as pharmaceuticals, medical equipment, and other supplies, and moving them to where they will be used. It involves not only hospitals, but also manufacturers and distributors. Materials management affects from 25 to 45 percent of a hospital's operating budget.

Effective materials management (1) allows nursing staff to spend more time with patients and (2) reduces the staff, inventory, space, and other resources needed to ensure that supplies are available when needed.

Community hospitals are improving materials management, reducing operating costs in several ways. For example, they may

- join purchasing groups and alliances to take advantage of volume discounts;
- use just-in-time and stockless delivery to manage inventory costs;
- use the hospital formulary to reduce pharmacy costs;
- change the methods used to procure high-technology equipment, such as purchasing remanufactured equipment, leasing rather than purchasing equipment, and centralizing procurement; and
- more effectively use high-technology equipment through sharing arrangements and joint purchases.

The VA system is a leader in materials management and, in some cases, such as the use of purchasing alliances, VA actions preceded widespread private-sector efforts by many years.

Changes in materials management, however, create policy issues and management challenges. For example, the Congress faces decisions about the extent to which nonfederal health care facilities should be allowed to use federal supply schedules (FSS). Similarly, VA faces challenges in encouraging its health care facilities to take full advantage of the changes in materials management, such as just-in-time delivery, instituted by its National Acquisition Center (NAC) and in realizing financial benefits from such changes.

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## Hospitals Increasingly Join Purchasing Groups and Alliances

Joining purchasing groups and alliances is one way community hospitals strengthen materials management. By representing multiple hospitals in negotiations with manufacturers, purchasing groups can obtain volume discounts on pharmaceuticals and medical equipment and other supplies.

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VA's joint procurement efforts pre-date private-sector efforts by about 25 years.

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## Development of Private-Sector Purchasing Groups and Alliances

During the late 1970s, community hospitals formed purchasing groups to buy equipment and supplies at discounted prices. Initially, these groups were formed mainly at the local, state, or regional level. Subsequently, some of the groups joined together to form large regional or national organizations, known as hospital purchasing alliances.

Alliances take advantage of their relatively large membership to negotiate larger discounts from manufacturers and suppliers. Although some alliances use diverse suppliers, others use sole-source procurers (prime vendors) to secure volume discounts. Some alliances also try to provide their members other types of aid and experience to help them get more managed care contracts.

Supplies available through purchasing groups and alliances include furniture, medical and surgical supplies, laboratory supplies, nonmedical equipment, X ray film, pharmaceuticals, and office and medical equipment.

A 1995 survey by Modern Healthcare of purchasing groups and alliances identified over 12,000 hospital memberships as of September 30, 1994, a 13-percent increase over prior-year memberships.<sup>144</sup> However, most hospitals belonged to two or more purchasing groups and alliances and were therefore counted more than once.

According to Modern Healthcare, in 1994 each of the 10 largest purchasing groups/alliances represented more than \$1 billion in annual purchases of supplies and equipment for their members. The two largest purchasing alliances responding were American Health Care Systems/Premier Health Alliance with \$6.2 billion in contract purchases in 1994 and Voluntary Hospitals of America with contract purchases of \$5.6 billion in 1994.

In 1995, two of the largest alliances had contract compliance requirements that specified the percentage of eligible goods that members must purchase under contract. This enabled the alliances to negotiate significant discounts from vendors. American Health Care Systems required its member hospitals to buy 90 percent of eligible goods under its corporate contracts. Similarly, Voluntary Hospitals of America established

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<sup>144</sup>Memberships in purchasing groups and alliances also included almost 7,800 nursing home and 19,500 alternate site providers such as physician-operated clinics and surgery centers.

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a committed buying program that intended to save members 12 to 14 percent on 13 product categories. Participants must achieve 95-percent compliance on contracts with seven vendors. In return, members received quarterly dividends from an incentive pool, according to their purchasing volume.<sup>145</sup>

UHC, Inc., a purchasing alliance serving 68 academic medical centers, estimates that it saves about \$1 million a year for each alliance member. Similarly, American Health Care Systems/Premier Health Alliance, which serves 40 multihospital systems with 820 hospitals in 46 states, estimates that it negotiates savings averaging 20 percent.<sup>146</sup>

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**Federal Joint Procurement  
Efforts Precede  
Private-Sector Efforts**

VA operates one of the largest purchasing cooperatives in the United States, NAC,<sup>147</sup> which has multiyear contracts valued at over \$10 billion. Established in 1951, NAC supports VA's health care delivery systems and those of other government agencies by providing an acquisition program for health care products and, since the late 1970s, managing certain FSSS.

The FSSS are based on a multiple-award contracting system, which determines the low cost through negotiations with each offeror. A variety of product choices, including pharmaceuticals, and medical and other supplies and equipment, are available from the schedules.

The FSS for pharmaceuticals catalogs almost 23,000 pharmaceutical products and their prices available to federal agencies and institutions and several other purchasers, such as the District of Columbia, U.S. territorial governments, and many Indian tribal governments. VA, which received responsibility for administering the pharmaceutical schedule from the General Services Administration, negotiates prices with drug manufacturers. VA is also the largest purchaser of products from the schedule; in fiscal year 1996, it purchased about \$922 million worth of products or about 71 percent of the government's purchases from the pharmaceutical FSS.<sup>148</sup>

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<sup>145</sup>Lisa Scott, "Purchasing Groups Struggle to Keep Pace With Members," *Modern Healthcare*, (Sept. 25, 1995), pp. 49-62.

<sup>146</sup>Jim Montague, "Can Purchasing Alliances Adapt?" *Hospitals & Health Networks*, (Aug. 20, 1995), pp. 30-3.

<sup>147</sup>NAC is part of VA's Office of Acquisitions and Material Management. All operations of the Office are funded through the self-sustaining VA Supply Fund managed by the Office. NAC recovers its operating costs through a variety of mechanisms designed to pass the costs of services on to beneficiaries.

<sup>148</sup>Drug Prices: Effects of Opening Federal Supply Schedule for Pharmaceuticals Are Uncertain (GAO/HEHS-97-60, June 11, 1997).

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Similarly, VA has received responsibility for administering the FSS for medical products and certain nonperishable subsistence items such as dietary supplements. Sales under the FSS medical products programs managed by NAC exceeded \$529 million in fiscal year 1996. Although VA manages and is the largest purchaser of products from the FSS for medical products, other government agencies accounted for approximately \$208 million of the \$529 million in sales.

NAC has three divisions:

- The Pharmaceutical Products Division solicits, awards, and administers national contracts for pharmaceutical products and medical gases and three FSSs.
- The Medical Care Products Division administers FSSs of such diverse products as medical supplies and equipment; dental equipment and supplies; wheelchairs; X ray equipment and supplies; and certain food items, including cereals, cookies, and crackers.
- The Medical Equipment Division administers both FSS and direct delivery contracts for highly technical equipment, such as computerized axial tomographic scanners, magnetic resonance imagers (MRI), positron emission tomography (PET) scanners, and systems used in federal medical facilities.

In addition to the FSS, NAC uses national contract awards to negotiate lower prices for certain high-volume products. FSS is a multiple-award type of contract; national contracts, however, are competitively bid, single-award contracts for 1 year, typically with four 1-year options. According to NAC, the leveraged national buying power results in better prices than can be obtained under the FSS. The national contracts are mandatory for use by VA facilities.

In addition, NAC uses blanket purchase agreements (BPA) and incentive agreements to encourage effective procurement. BPAs are agreements with authorized suppliers of pharmaceutical products. They essentially are charge accounts that provide medical centers a simple way of obtaining supplies and services for which demand is repetitive. Incentive agreements range from volume rebates and free goods based on quantities purchased to special incentive programs developed for Veterans Integrated Service Networks (VISN).

The use of BPAs, NAC reports, has enabled both VA and DOD to save significant amounts of money. It reported that one contractor's BPA saved

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VA \$4 million and DOD \$5.5 million in 1 year. NAC noted that VISN 8 (Bay Pines) avoided \$500,000 in expenditures by using a BPA with one contractor. NAC also reported that a second contractor's BPA saved VA and DOD over 35 percent.

NAC's Medical Equipment Division administers the FSS that negotiates contracts with clinical laboratories on a cost per test (CPT) basis. Under this newly established program, contractors must provide a price for each test they can perform. The price per test covers equipment use, all consumables, reagents, standards, controls, and supplies; all necessary service and maintenance; and training for government personnel. Procurement through CPT contracting allows hospitals to reduce capital expenditures, while maintaining access to state-of-the-art equipment.

In addition to the economies of scale available through NAC, several VISN strategic plans identify further efforts to consolidate purchasing:

- VISN 19 (Denver) plans to establish a Rocky Mountain Network Acquisition Center to consolidate contracting activities and determine possible savings through larger scale purchasing arrangements and enhanced contracting expertise. The VISN strategic plan indicates that the network acquisition center will do essentially the same things NAC does but at a regional level. The VISN plans to use NAC for items that can be obtained at a lower price through national procurement.
- VISN 17 (Dallas) plans to consolidate network procurement of open market items.
- VISN 5 (Baltimore) plans to establish a section of its Acquisition and Material Management Service to contract at the network level for leases, community nursing home services, halfway houses, preventive maintenance services, and supply contracts that exceed \$25,000.
- A Contract Service Center, located at the Milwaukee Medical Center in VISN 12 (Chicago), has been providing centralized consolidated purchasing to the network area since 1992. The center now handles contracting of real property leases, equipment leases, architect/engineer services, sharing agreements, medical equipment maintenance, transportation, blood and blood products, home oxygen and durable medical equipment, nursing home and extended care, elevator maintenance and inspection, and fire alarm maintenance and inspection. The VISN reports that the Center generates yearly savings of over \$1 million through a variety of methods, including an active BPA and economies-of-scale quantity discounts. The Center received one of the Vice President's National Performance Review

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Hammer Awards in 1995. The network plans to expand the scope of goods and services available through the Center.

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## Implementing Just-in-Time and Stockless Delivery Systems Reduces Costs

Community hospitals have been shifting to just-in-time and stockless inventory systems. VA similarly closed its supply depots in 1994 and now offers both VA and other government health care facilities a choice of conventional, just-in-time, or stockless delivery.

The just-in-time delivery technique (developed in Japan) involves shipping supplies directly to customers or vendors on an as-needed basis, eliminating the need for large inventories. The supplier/vendor, rather than the hospital, maintains the bulk of the inventory. Hospitals implementing just-in-time delivery systems typically buy from a limited number of suppliers, share information about their operations with their suppliers, and eliminate certain hospital-based supply and inventory functions that the supplier now performs. Just-in-time delivery can reduce costs, increase productivity, improve utilization of equipment, and reduce the need for certain workers such as material handlers.<sup>149</sup>

Other hospitals have taken just-in-time delivery one step further by using stockless inventory, in which an outside vendor manages much of an organization's supplies. Stockless inventory allows hospitals to eliminate storerooms, significantly reducing savings by lowering staffing. It is not clear, however, whether these savings offset the service fees paid to the suppliers.<sup>150</sup> Although stockless inventory is gaining popularity, it is far from being accepted as the industry standard.<sup>151</sup>

A 1993 study found that just-in-time and stockless material management systems can increase hospital efficiency.<sup>152</sup> For example, one small specialty hospital reported that it reduced its annual inventory value from

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<sup>149</sup>R. Dennison, Y. Kathawala, and D. Elmuti, "Just-in-Time: Implications for the Hospital Industry," *Journal of Hospital Marketing*, Vol. 8, No. 1 (1993).

<sup>150</sup>J.C. Kowalski, "Inventory to Go: Can Stockless Deliver Efficiency?" *Healthcare Financial Management*, Vol. 45, No. 11 (1991), pp. 21-34.

<sup>151</sup>J. Trinkaus, D. Dannenbring, and J. Nathan, "A JIT-Type Stocking System for Hospital Pharmacies: The Stockless Method," *Hospital Materiel Management Quarterly*, Vol. 17, No. 4 (1996), pp. 1-13.

<sup>152</sup>G.C. Kim and M.J. Schniederjans, "Empirical Comparison of Just-in-Time and Stockless Material Management Systems in the Health Care Industry," *Hospital Materiel Management Quarterly*, Vol. 14, No. 4 (1993), pp. 65-74.

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\$2.3 million to an estimated \$1.2 million over a 3-year period by using just-in-time delivery.<sup>153</sup>

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**VA Shifts to Just-in-Time  
and Stockless Delivery**

VA, like the private sector, has been shifting to just-in-time and stockless delivery systems. Delivery options available through NAC's Pharmaceutical Prime Vendor program include conventional, stockless, and just-in-time delivery.

Historically, VA benefited from the deep discounts it obtained from manufacturers through volume procurement. Manufacturers generally delivered the products to VA's three supply depots. The supply depots, in turn, distributed the products to warehouses operated by individual VA medical centers. This distribution system was costly—about \$138 million in fiscal year 1991—and resulted in storing relatively large inventories in both supply depots and at the medical centers.

The Veterans Health Care Act of 1992 established ceiling prices for covered drugs, eliminating the pricing advantage of many of the products distributed through the depot system. Under the act, drug manufacturers must make their brand-name drugs available through the FSS to receive reimbursement for drugs covered by Medicaid. The act also requires drug manufacturers to sell drugs covered by the act to VA, DOD, the Public Health Service, and the Coast Guard at no more than 76 percent of the nonfederal average manufacturer price,<sup>154</sup> a level referred to as the federal ceiling price. The FSS price may be higher or lower than the ceiling, but if it is higher than the ceiling, the protected purchasers, including VA facilities, pay no more than the ceiling price.

Meanwhile, VA completed a pilot test of a just-in-time commercial delivery system for FSS pharmaceuticals through prime vendor arrangements. Under the prime vendor arrangements, medical centers, using centralized contracts, order products from the prime vendor with delivery made directly to the medical center, bypassing the VA distribution network.

Subsequently, a VA task force established in January 1993 recommended that VA phase out its depot system and move to a commercial distribution system. With the support of the Vice President's National Performance

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<sup>153</sup>B.B. Friedman, "Controlling Inventory in a Small Specialty Hospital," *Hospital Materiel Management Quarterly*, Vol. 15, No. 3 (1994), pp. 8-13.

<sup>154</sup>The nonfederal average manufacturer price is the weighted average price of each single form and dosage of a drug paid by U.S. wholesalers to a manufacturer, accounting for any cash discounts or similar price reductions. Prices paid by the federal government are excluded from this calculation.

Review, the supply depots were closed at the end of fiscal year 1994 and contracts for just-in-time delivery of drugs instituted. Both national contract and FSS items are now distributed by the Pharmaceutical Prime Vendor program. This fee-based distribution contract allows readily available access to FSS and national contract items. In addition to conventional delivery (72 hours), the program offers both just-in-time (24 hours) and stockless (8 hours) delivery options.

Just-in-time contracts for medical supplies and subsistence items were completed by 1996. This affords medical facilities the same delivery options for medical supplies and equipment as for pharmaceuticals. VA expects closing the supply depots and moving to just-in-time delivery to save \$168 million over 6 years.

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## **Limiting Pharmaceuticals Included in Formularies Can Reduce Pharmacy Costs, but Effectiveness May Be Limited**

The pharmacy is estimated to account for 4 to 8 percent of a hospital's total expenses, and a higher demand for fewer drugs improves hospitals' ability to secure discounts from manufacturers. Both VA and community hospitals are limiting the numbers and types of pharmaceuticals in their formularies to reduce costs. The effect of such actions on costs, however, may be limited because increases in other charges may offset savings in pharmacy charges.

Although hospital formularies have existed for over 150 years, early formularies simply listed all of the drugs carried by the pharmacy. Over time, formularies became a mechanism to control costs by limiting the number and types of drugs routinely stocked in the hospital pharmacy. By procuring larger quantities of a smaller number of pharmaceuticals, hospitals can negotiate volume discounts from manufacturers. Keeping fewer infrequently used drugs in the hospital's inventory also reduces costs. Finally, further savings can accrue if a formulary convinces physicians to prescribe less expensive, but therapeutically equivalent, drugs.<sup>155</sup> Some practicing physicians complain, however, that formularies infringe on their ability to select the drugs they feel are most appropriate for their patients.

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## **VA Establishes VISN and National Formularies**

VA, like the private sector, is establishing formularies to reduce costs. Historically, each VA facility has established its own formulary. VA's Prescription for Change provided for the establishment of VISN formularies,

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<sup>155</sup>Frank A. Sloan, Gilad S. Gordon, and Douglas L. Cocks, "Hospital Drug Formularies and Use of Hospital Services," *Medical Care*, Vol. 31, No. 10 (1993), pp. 851-67.

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with a national formulary to follow. VA noted that establishing a national formulary should increase standardization, decrease inventory costs, improve efficiency, and lower pharmaceutical costs through enhanced competition. VA officials told us that the VISN formularies were established as of April 30, 1996, and the initial version of the national formulary was established by June 1, 1997.<sup>156</sup> According to another VA official, 22 national pharmaceutical contracts will save VA over \$150 million annually, and standardized contracts for intravenous solutions have saved VA over \$100 million.

The official also told us that with the increased focus on standardization, VA will award more national contracts. He said that because some VISN contracting will be done simultaneously with national contracting, good communication will be necessary to avoid duplicated effort and diluting of VA's buying power. VA has asked medical centers to include "escape" language in their contracts and agreements stating that a national contract will take precedence over local contracts.

NAC established a Value Incentive program to save money by using standardized commercial products. For example, its Medical Care Products Division recently awarded national contracts or blanket purchase agreements for products such as wheelchairs, needles and syringes, urinary drainage products, and anti-embolism stockings. These contracts are for VA-preferred sources and should be used before FSS contracts.

VISN strategic plans generally do not discuss standardization beyond establishing pharmaceutical formularies. The VISN 8 (Bay Pines) plan, however, indicates that the network is considering establishing a formulary for prosthetics. Similarly, VISN 20 (Portland) plans to decrease unit costs of medical/surgical supplies through more standardization.

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<sup>156</sup>In addition to establishing the VISNs' and national formularies, VA has taken several other actions to improve the management of pharmaceuticals in the last 6 years. These include establishing a pharmacy benefit management (PBM) function to reduce overall health care costs through appropriate use of pharmaceuticals. Specifically, the PBM is to identify (1) efficient and effective contracting processes; (2) efficient and effective distribution systems, such as the consolidated mail outpatient pharmacies; and (3) appropriate utilization of pharmaceuticals through the issuance of evidence-based disease management protocols, treatment protocols, and drug use protocols. In addition, VA is testing the use of commercial software to compare pharmaceutical utilization with these established protocols and to measure outcomes from drug therapy.

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## Some Argue That Formularies Increase Overall Health Costs

Most studies of formularies, which focus on a narrow range of drugs, a single hospital, and effects on pharmacy costs, generally confirm that a limited drug inventory reduces pharmacy costs. A 1993 study,<sup>157</sup> however, reported that while such limits reduced pharmacy charges, increases in other charges tended to offset any savings. The effectiveness of hospital formularies, according to this study, depends on several other factors, such as the extent of efforts to educate physicians about appropriate drug use, the ease with which physicians can obtain nonformulary drugs for their patients, and the overall emphasis the hospital places on cost containment.

The study also raised concerns that limiting the number of drugs in a hospital formulary could compromise quality because patients may react differently to the same drug. In other words, a drug that effectively treats a condition in one patient may not so effectively treat the same condition in another patient. According to the study, even small differences in a drug's effectiveness in a therapeutic category could be clinically important, both to achieve good outcomes and to avoid adverse reactions. A drug could be less cost-effective on average but provide a much more cost-effective therapy in specific cases.<sup>158</sup>

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## Hospitals Use Alternative Strategies for Procuring High-Technology Equipment

High-technology equipment generally accounts for the largest share of hospitals' capital expenditures, totaling about 7 percent of hospital spending in 1989.<sup>159</sup> Although hospitals predominantly buy high-technology equipment using internal funds or gifts, many community hospitals are limiting their capital expenditures by (1) renting or leasing rather than buying such equipment when this is cost-effective and (2) buying remanufactured equipment. VA supports both approaches.

Before the introduction of prospective payment and the growth of managed care, hospitals generally did not compete on the basis of costs or charges. As a result, they passed the costs of the latest technology on to their patients, or, more often, to their insurers. Essentially, hospitals could use newly acquired technologies to attract both physicians and patients.

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<sup>157</sup>Sloan, Gordon, and Cocks, "Hospital Drug Formularies and Use of Hospital Services," *Medical Care*, pp. 851-67.

<sup>158</sup>Sloan, Gordon, and Cocks, "Hospital Drug Formularies and Use of Hospital Services," *Medical Care*, pp. 851-67.

<sup>159</sup>Samy Veluchamy and Cynthia L. Saver, "Clinical Technology Assessment, Cost Effective Adoption, and Quality Management by Hospitals in the 1990s," *Quality Review Bulletin*, (June 1990), pp. 223-8.

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The average U.S. hospital spent nearly \$2.8 million on medical equipment in fiscal year 1990, according to a survey of hospital chief executive officers.<sup>160</sup> Hospitals tend to base procurement decisions on whether such new equipment will generate profits. For example, because of concerns that the number of lithotripters exceeds demand, hospital executives do not generally view such equipment as profitable.<sup>161</sup>

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**Leasing Reduces Risks of  
Obsolescence**

Executives responding to a 1990 Hospitals survey identified leasing as one way to acquire most types of high-technology equipment. Among the equipment the executives identified as being leased were ultrasound (15 percent), automated laboratory (34 percent), radiography and fluoroscopy rooms (19 percent), cardiac catheterization laboratories (18 percent), and MRIS (22 percent).<sup>162</sup>

One significant change in rental/leasing arrangements is the adoption of the same type of charge structure as for photo and other copiers for obtaining high-technology services. Under these arrangements, hospitals pay a basic rental fee plus a charge for each test conducted on the equipment. Hospitals' costs are essentially based on the extent to which they use the equipment. If their workloads decline, so do their expenditures for the rented equipment. Under straight rental/leasing arrangements, however, hospitals pay the same amount regardless of workload fluctuations.

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**Refurbished Equipment  
Can Lower Procurement  
Costs**

Another option for reducing the cost of high-technology equipment is purchasing refurbished equipment. Sales of refurbished imaging equipment were expected to reach \$300 to \$500 million in 1997, more than double 1992 sales.<sup>163</sup>

Refurbished equipment costs from 25 to 65 percent less than new equipment depending on its age and the work done. Hospitals, however, generally prefer new imaging equipment because the latest technology can produce better images, be more comfortable for patients, and require fewer staff to operate.

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<sup>160</sup>Saul N. Weingart, "Deciding to Buy Expensive Technology," International Journal of Technology Assessment in Health Care, Vol. 11, No. 2 (1995), pp. 301-13.

<sup>161</sup>"Survey Identifies Trends in Equipment Acquisitions," Hospitals, (Sept. 20, 1990), pp. 30-5.

<sup>162</sup>"Survey Identifies Trends in Equipment Acquisitions," Hospitals, pp. 30-5.

<sup>163</sup>Lisa Scott, "Used Equipment's Bright Future," Modern Healthcare, (Nov. 27, 1995), pp. 45-50.

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Refurbished equipment is an option, however, when the latest technology is not clinically necessary, the technology is not changing rapidly, or the equipment can be rebuilt to take advantage of technological advances. For example, technology in X ray/fluoroscopy rooms is not rapidly advancing, and equipment can often be rebuilt to operate like new equipment. Refurbishing and adding digital technology to an 8-year-old X ray machine can bring it up to current standards.

Hospitals, however, often distrust refurbished equipment. The term “refurbished” might mean that the equipment underwent a complete retooling or that only cosmetic changes were made, a so-called “spray-and-pray” job.

An estimated 500 to 600 firms, including equipment manufacturers such as General Electric and Picker International, refurbish equipment, but only about 24 firms perform more complex remanufacturing. The Food and Drug Administration (FDA) published regulations in June 1997 exempting the refurbishing industry from the level of review used for equipment manufacturers because refurbishers restore equipment to the original manufacturers’ specifications. Refurbishers are, however, subject to good manufacturing regulations. In addition, according to an FDA official, in December 1997, FDA published a Federal Register notice of its intention to review and, as necessary, revise or amend, its compliance policy guides and regulatory requirements for remarketing of used medical devices and those who refurbish, recondition, rebuild, service, or remarket such devices. Written comments on the notice were due by March 23, 1998.

In the meantime, individual hospitals and alliances must decide for themselves which refurbishers are reputable. For example, Columbia/HCA, in 1995, designated one company a preferred supplier of refurbished imaging equipment.<sup>164</sup> A hospital alliance, however, reported that its member hospitals showed little interest in purchasing refurbished equipment without a good warranty and indemnification.

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**VA Uses Methods Similar  
to Community Hospitals to  
Limit Cost of High-Tech  
Equipment**

Like community hospitals, VA is seeking to share rather than purchase high-technology equipment or to purchase refurbished equipment. In addition, VA is emphasizing central procurement of high-technology equipment to obtain better prices.

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<sup>164</sup>Scott, “Used Equipment’s Bright Future,” Modern Healthcare, pp. 45-50.

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VA's Prescription for Change calls for developing and implementing a major medical equipment acquisition methodology. It notes that a proposed methodology has to balance the need for facilities and networks to make local decisions with the need for VA's central office to ensure that federal procurement laws and regulations are followed. Subsequently, VA developed a decentralized equipment assessment and planning program (DEAPP), a needs-driven plan similar to equipment planning programs used by the private sector. According to VA, DEAPP builds on the strength of existing medical center equipment committees and describes a consistent approach to identifying equipment needs. The methodology establishes a point-scoring system to assess needs on the basis of three categories—function, reliability/regulatory compliance, and economy.

The Veterans Health Administration's (VHA) criteria for potential realignment noted in VA's Prescription also has guidance on how VISNS and medical centers should determine when to purchase high-tech equipment and services or obtain such services from other VA facilities or community providers. For example, it suggests that VISNS consider both capital and operating costs for new high-tech or automated equipment in cost-effectiveness analyses. Our prior work found that the Albuquerque VA medical centers underestimated the cost of providing lithotripsy services because it overestimated workload and set excessively long equipment depreciation periods.<sup>165</sup>

NAC's Medical Equipment Division solicits, awards, and administers FSS and direct delivery contracts for highly technical equipment and systems used in VA and other government medical facilities. The Direct Delivery program allows medical facilities to order high-tech equipment directly from the manufacturer at prices negotiated by NAC. Among the equipment available through the Direct Delivery program are computerized tomographic (CT) and MRI scanners, nuclear medicine systems, and X ray systems.

In addition to procuring new equipment, NAC negotiates cost per use contracts to provide facilities an alternative to buying high-technology equipment when demand may not justify the purchase. Under such contracts, medical facilities pay only for the services they use. For example, they might pay for each periodic use of an MRI rather than purchase the equipment.

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<sup>165</sup>VA Health Care: Albuquerque Medical Center Not Recovering Full Costs of Lithotripsy Services (GAO/HEHS-95-19, Dec. 28, 1994).

Another option available through NAC is the purchase of refurbished equipment. NAC has awarded 12 contracts for the purchase of refurbished equipment. Our review of VISN strategic plans identified several additional initiatives to improve the procurement of high-tech equipment and services:

- VISN 8 (Bay Pines) plans to coordinate its needs assessments for high-tech equipment with neighboring networks. The network also developed a methodology for rating and ranking medical facilities' requests for high-tech equipment.
- VISN 12 (Chicago) reports that by approaching vendors as a network customer, it saved a substantial amount of money when recently buying CT scanners.
- VISN 18 (Phoenix) is evaluating the feasibility of purchasing remanufactured equipment, where appropriate, instead of new items.
- VISN 20 (Portland) has a shared equipment purchasing program under which each facility pays 20 percent of its allocated equipment budget for each item funded under the program. The planned equipment purchased under this program in fiscal year 1997 includes three CT scanners and a cardiac catheterization imaging system.
- VISN 7 (Atlanta) plans to consolidate the procurement of standard radiology and fluoroscopy suites, saving money on the purchase price, on expendable supplies, and on service contracts.

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## Hospitals Share High-Tech Equipment

Another method hospitals use to reduce capital expenditures is sharing high-technology equipment. To allow federal agencies' resources to be used to maximum capacity and avoid unnecessary duplication and overlap of activities, federal agencies have been authorized for over 60 years to obtain goods or services through other federal agencies. In the past 15 to 20 years, we have identified and VA and the Congress have addressed barriers to sharing. As these barriers have been addressed, VA sharing both with DOD and the private sector has increased. More recently, VA has placed greater emphasis on sharing services and equipment among VA facilities.

Health resources sharing, which involves the buying, selling, or trading of health care services, benefits both parties in the agreement and helps contain health care costs by better utilizing medical resources. For example, a hospital that buys an infrequently used diagnostic test from another hospital often pays less money than it would buying the needed equipment and providing the service directly. Similarly, a hospital that

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uses an expensive piece of equipment only 4 hours a day but has staff to operate it for 8 hours a day may generate additional revenues by selling its excess capacity to other providers.

The following are examples of efforts to share high-technology equipment and services:

- Two hospitals in Missoula, Montana, agreed to share an MRI when neither hospital had sufficient demand to solely support the equipment. A microwave link relays test results between the two hospitals. In addition, the two hospitals established a mobile lithotripsy network to serve hospitals in western Montana.<sup>166</sup>
- A PET scanner at the University of Texas Health Science Center in San Antonio was jointly funded by the University of Texas, VA, and DOD. The PET facility, the first in the DOD system, will become a national referral center for DOD patients and a regional referral center for VA patients. The PET equipment alone cost \$5.3 million; the construction of a building to house the equipment cost millions more. Under an access agreement, the University of Texas will have 50 percent of the facility's workload, with VA and DOD getting 25 percent each. The PET facility will be used for both research and patient care.
- The San Antonio VA medical center jointly purchased an MRI with the neighboring medical center and a linear accelerator with Southwest Texas Methodist Hospital.<sup>167</sup>
- Ten Rhode Island hospitals formed a network to share the costs and services of four MRIs. The network bought four MRIs for the price of three, paying about \$10 million for them, including the construction of one fixed site and pads for three mobile units. The network uses a centralized scheduling system, which also saves money. Because hospitals pay a fixed daily rate for MRI use regardless of volume, they have an incentive to image as many patients as possible during their allocated periods.<sup>168</sup>
- Two hospital systems in the Sacramento area, which together operated six acute care hospitals and a psychiatric facility, joined forces to establish a \$5.7 million PET scanner facility. A management firm under contract to the two systems will oversee the facility's daily operations. Officials estimated eventual demand for PET scans at about eight to nine scans a day in the

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<sup>166</sup>"Collaboration: Hospitals Find That Working Together Is Tough, Rewarding—and Vital," *Hospitals*, (Dec. 5, 1991), pp. 24-31.

<sup>167</sup>"Collaboration: Hospitals Find That Working Together Is Tough, Rewarding—and Vital," *Hospitals*, pp. 24-31.

<sup>168</sup>"Collaboration: Hospitals Find That Working Together Is Tough, Rewarding—and Vital," *Hospitals*, pp. 24-31.

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Sacramento area, with initial demand at only four to six. Neither system, each of which operated over 800 acute care beds, had sufficient demand to justify purchase of a PET scanner.<sup>169</sup>

A 1992 survey of hospital chief executive officers found that 38 percent reportedly had collaborated with other area health care providers to share technology. Forty-six percent said that they had collaborated on service development to avoid duplicating services.<sup>170</sup> The following are examples of collaboration:

- Three hospitals and a home health agency in Roanoke, Virginia, created a shared, off-site, intravenous admixture center to prepare intravenous solutions.<sup>171</sup> Creating the admixture center was reported to have saved about \$230,000 in personnel costs over a 2-year period (October 1992 to September 1994). In addition, about \$207,000 was reportedly saved over the 2-year period for nonbillable supplies (for example, syringes, needles, and diluents). Other reported benefits included expanding availability of intravenous admixture services in several service areas, eliminating duplicated services, savings from nonbillable supplies, avoiding salary and benefits costs associated with hiring new personnel, improved quality control, and acquisition of state-of-the-art equipment.<sup>172</sup>
- Three Boston hospitals combined their cancer programs to avoid duplication. The Dana Farber Cancer Institute combined its adult patient care and research operations with those at Massachusetts General and Brigham and Women's Hospital. Dana-Farber transferred its inpatient beds to Brigham and Women's.<sup>173</sup>

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**VA Has Increased  
Emphasis on Sharing as a  
Source of Revenue**

To use federal agencies' excess resources to maximum capacity and avoid overlapping of activities, VA has, at our urging, long been authorized to share excess health care services with DOD. In addition, VA has, since 1966, been authorized to share specialized medical resources with nonfederal hospitals, clinics, and medical schools. Such sharing is permitted only if it

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<sup>169</sup>"Moving Target: Hospitals Take Careful Steps in Acquiring PET," *Hospitals*, (Apr. 5, 1992), pp. 58-62.

<sup>170</sup>"Survey Outlines Hospital Collaboration Efforts," *Hospitals*, (Feb. 20, 1993), p. 56.

<sup>171</sup>William S. Fauber, Sam J. Cosnotti, and Ron L. Mady, "Offsite Intravenous Admixture Center Shared by Health-System Facilities," *American Journal of Health Systems Pharmacology*, Vol. 52 (Nov. 15, 1995), pp. 2550-5.

<sup>172</sup>Fauber, Cosnotti, and Mady, "Offsite Intravenous Admixture Center Shared by Health-System Facilities," *American Journal of Health Systems Pharmacology*, pp. 2550-5.

<sup>173</sup>John Morrissey, "Three Boston Hospitals Agree to Combine Cancer Programs," *Modern Healthcare*, (Jan. 22, 1996), p. 16.

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does not adversely affect health care services to veterans. As an incentive to share excess health care resources, VA facilities providing services through sharing agreements may recover and retain the cost of the services from DOD or private-sector facilities.

In fiscal year 1996, VA sold about \$20.0 million in specialized medical resources to private-sector hospitals and about \$29.3 million in health care services to the military health care system. During the same year, VA purchased about \$23.6 million in health care services from DOD and about \$60.0 million from private-sector hospitals. Services sold and purchased through sharing agreements included organ transplants, open-heart surgery, and specialized laboratory and radiology procedures.

In 1992, enactment of Public Law 102-405 gave VA specific authority to jointly acquire advanced technology. Specifically, it allows the joint holding of titles to medical equipment between VA and a sharing partner. In fiscal year 1995, VA spent about \$900 million on the shared acquisition program. With the creation of VISNS, VA transferred responsibility for funding joint acquisitions to the networks.

The Veterans' Health Care Eligibility Reform Act of 1996 expanded both the types of providers VA may contract with and the types of services VA may contract for. In addition, it simplified the procedures for complying with federal procurement processes when contracting with commercial providers. (Ch. 1 more fully discusses these provisions.)

VA's Prescription for Change calls for VISNS to increase sharing with both government and nongovernment health care providers. Our review of VISN strategic plans identified many efforts to expand sharing among VA facilities, VA and other government facilities, VA and TRICARE, and VA and community providers:

- VISN 13's (Minneapolis) strategic plan indicates that generating alternative revenues through sharing agreements with DOD, the Indian Health Service, and the Bureau of Prisons and serving as a TRICARE provider are key survival strategies.
- VISN 17 (Dallas) proposes to diversify its funding base by sharing with the Civilian Health and Medical Program for the Uniformed Services (CHAMPUS), TRICARE, DOD, other federal agencies, and the private sector. In addition, it proposes a pilot project to provide services to Medicare and Medicaid recipients.

- VISN 3 (Bronx) wants to increase the income generated through sharing agreements by \$500,000 per year, primarily through agreements with DOD and its medical school affiliates.

#### Sharing Among VA Facilities

Many of the sharing efforts among VA facilities focused on developing telemedicine capability. The following examples illustrate VISN efforts to expand sharing among VA facilities:

- VISN 18 (Phoenix), in conjunction with DOD and the Texas Tech University Health Center, has purchased equipment to provide telemedicine capability at three network facilities.
- VISN 12 (Chicago) is developing a telemedicine strategic plan. The VISN's telepathology initiative between the Milwaukee and Iron Mountain medical centers received the Vice President's National Performance Review Hammer Award.
- VISN 8 (Bay Pines) plans to study the sharing of gamma camera capability and other imaging equipment networkwide.

#### Sharing With the Private Sector

VA has also expanded sharing efforts with private-sector providers. Following are some of these efforts:

- VISN 11 (Ann Arbor) proposes a pilot program under which VA facilities would provide specialty services, such as clinical laboratory services, to community hospitals in exchange for primary care services.
- VISN 9 (Nashville) anticipates establishing a network of mental health primary care providers through contracting.
- VISN 18 (Phoenix) has a sharing initiative for the Phoenix medical center to purchase a new MRI in conjunction with a local hospital.
- The Augusta medical center in VISN 7 (Atlanta) contracted with a 16-bed community residential care facility to provide care to veterans with spinal cord injuries. The residential care facility is used to provide temporary housing for spinal cord-injured veterans coming to the medical center for outpatient annual evaluations and may, in the future, be used as a permanent home for veterans who might otherwise enter nursing homes.

#### Contracting With DOD, CHAMPUS, and TRICARE

VISN plans mention sharing agreements with the military health care system, including the following planned actions:

- VISN 7 (Atlanta) plans to implement a TRICARE contract that can be replicated VISN-wide.

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- VISN 5 (Baltimore) has a sharing agreement with Walter Reed Army Medical Center to obtain obstetric/gynecological and urology services and with Bethesda Naval Hospital to obtain neurosurgery services.
- VISN 19's (Denver) Cheyenne medical center has a sharing agreement with F.E. Warren Air Force Base that includes inpatient, outpatient, and special medical services.
- VISN 18 (Phoenix) shares extensively with DOD, including a joint venture at Albuquerque. VA and Kirtland Air Force Base share inpatient and outpatient services at collocated facilities. In addition, VA's El Paso health care center has a joint venture with the William Beaumont Army Medical Center. Finally, VA's Tucson medical center and DOD jointly established community-based outpatient clinics (CBOC) in Yuma and Sierra Vista.

**Sharing With Other  
Government Facilities**

Some VISN plans also detailed efforts to share with other federal, state, and local government facilities:

- VISN 19's (Denver) Fort Harrison medical center has a sharing agreement with the Indian Health Service's community hospital in Browning, Montana.
- VISN 18's (Phoenix) Amarillo medical center is collaborating with the Pantex plant to establish an outpatient surgery unit to serve as a decontamination unit in a nuclear disaster.
- VISN 9 (Nashville) plans to contract with the Tennessee and Kentucky health departments for establishing CBOCs in rural, underserved areas. It also plans to contract with its medical school affiliates (Vanderbilt, East Tennessee State, and Kentucky) for establishing CBOCs in rural areas.
- VISN 6 (Durham) is developing an enhanced use lease of the nursing home at the Salisbury medical center to permit the state of North Carolina to operate the nursing home as a state veterans' home. Under the proposal, the state would place \$5.2 million in a trust to be used by VA to benefit veterans in North Carolina. The VISN plan indicates that one use of the trust funds would be to establish additional CBOCs.

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**Changes in Materials  
Management Create  
Multiple Challenges  
and Policy Issues**

The changes in materials management in both the private sector and VA create a number of challenges and policy issues for the administration and the Congress. The administration faces challenges to ensure that VA (1) facilities use NAC and other purchasing groups to the extent practicable; (2) achieves the benefits anticipated through closure of supply depots and implementing just-in-time and stockless delivery systems; (3) appropriately balances cost containment and physician preferences in implementing its formularies; (4) facilities use cost-effective strategies to

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procure high-technology equipment; and (5) facilities both buy high-technology services from and sell such services to other health care providers, including community hospitals and other government agencies whenever cost-effective. An important policy issue relates to the extent to which nonfederal facilities should be allowed to use FSSs.

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## Purchasing Groups

Although NAC offers significant savings compared with local procurement, VA faces a challenge in ensuring that its hospitals obtain pharmaceuticals and medical supplies through NAC rather than through local procurement. Similarly, VA faces challenges in deciding when to establish regional acquisition centers and when to allow medical centers to conduct their own acquisition and when they should rely on NAC. For example, procurements by the regional acquisition centers should complement rather than duplicate those by NAC. Finally, VA faces challenges in ensuring that the prices it pays, whether through NAC, regional acquisition centers, or local procurement, are comparable with or better than prices available through private-sector purchasing groups and alliances.

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## Opening FSSs

One important policy issue facing the Congress and the administration is the extent to which nonfederal hospitals and health care facilities should be allowed to use FSSs.<sup>174</sup> The Federal Acquisition Streamlining Act of 1994 (P.L. 103-355, sec. 1555) authorized creation of a cooperative purchasing program that would allow state, local, and Indian tribal governments and the Commonwealth of Puerto Rico to purchase pharmaceuticals and other goods and services from FSSs. Neither the nonfederal agencies nor the manufacturers would have to participate. For example, manufacturers could decline to make their products available to nonfederal entities.

VA raised concerns that drug manufacturers would seek to increase schedule prices if a larger group of purchasers received access to those prices. As a result, the General Services Administration, which has overall responsibility for the FSSs, proposed that the pharmaceutical schedule be excluded from the cooperative purchasing program because it could otherwise have the unintended effect of increasing federal agencies' drug costs.

Pharmaceutical manufacturers' and public hospitals' representatives' views differ on whether the FSS should be open to nonfederal providers. Representatives of several drug manufacturers explained that their

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<sup>174</sup>GAO/HEHS-97-60, June 11, 1997.

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companies have been willing to give federal purchasers such low prices because they consider the FSS to be a special, limited category of pricing that affects no more than 2 to 3 percent of total dollars in domestic pharmaceutical sales. Some manufacturers, however, have expressed an unwillingness to offer the same low prices to an expanded group of government purchasers. They have also expressed an unwillingness to treating similarly different types of purchasers that they are used to treating as separate markets.

The Public Hospital Pharmacy Coalition, on the other hand, favors opening the schedule to public hospitals. A Coalition analysis of the differences between FSS prices and the prices nine public hospitals paid for drugs showed that, on average, FSS prices were considerably lower—on average about 17 percent lower—than the hospitals' purchase prices for 100 drugs on which the hospitals spent the most during fiscal year 1997. The Coalition contends that any adverse effects on FSS or other drug prices would be negligible and state and local purchasers would have access to many FSS prices that would be lower than the drug prices they currently pay.

We reported in June 1997 that opening the pharmaceutical schedule to state and local purchasers could change the dynamics of negotiating FSS prices for both VA and drug manufacturers. VA has been able to obtain significant discounts from drug manufacturers by seeking the most favored customer price. Many FSS prices are more than 50 percent below nonfederal average manufacturer prices.

The Congress, through the National Defense Authorization Act of 1996 (P.L. 104-106, sec. 4309), subsequently delayed opening the schedules pending our assessment of the possible impact. We reported in June 1997 that the effect of opening the FSSs for pharmaceuticals on schedule prices ultimately depends on the outcome of negotiations between VA and drug manufacturers. It is not possible to predict how schedule drug prices would change or what the ultimate effect on federal, state, and local purchasers would be.<sup>175</sup> However, several factors could cause schedule prices to rise. In emergency supplemental appropriation legislation (P.L. 105-18), the Congress further delayed implementation of the cooperative purchasing program until adjournment of the first session of the 105th Congress.

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<sup>175</sup>GAO/HEHS-97-60, June 11, 1997.

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## Just-in-Time Delivery

The overall effectiveness of NAC's efforts to implement just-in-time and stockless delivery depends largely on individual VA medical facilities. VA, however, to assess the effectiveness of these efforts, would need information on the extent to which

- VA facilities are using just-in-time and stockless delivery systems,
- VA facilities have reduced inventories and personnel as they implement just-in-time and stockless inventory systems,
- VA has achieved the expected savings from closing its supply depots,
- just-in-time and stockless delivery has reduced local procurements, and
- facilities are using higher cost stockless or just-in-time delivery for items that could be procured through conventional 72-hour delivery.

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## Formularies

VA faces several challenges concerning establishing VISN and national formularies. First, as previously discussed, some believe that formularies that limit the number and types of drugs a hospital stocks may reduce pharmacy costs but increase overall health care costs. Because VA's national and VISN formularies were recently established, no data are available yet to determine the extent to which they reduce the number of drugs hospitals stock or their effect on drug costs and overall health care costs.

The effect of VA's formularies on health care costs depends on many factors, such as the amount of flexibility they, and individual hospital directors, give physicians in prescribing drugs not on the formulary. If a physician can easily prescribe a drug not on the formulary and obtain it within 8 hours through stockless delivery or local procurement, then VA may limit its savings by limiting the number of drugs on its formularies. On the other hand, placing too many restrictions on physicians' ability to prescribe drugs not on the formulary might deny them the ability to tailor treatments to individual circumstances. Another uncertainty about the effect of VA's formularies on costs is the extent to which the formularies would succeed in changing physicians' prescribing habits. Finally, the formularies' effectiveness in reducing procurement costs depends on how restrictive the formularies are.

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## High-Tech Equipment

Hospital directors face difficult challenges in choosing the most cost-effective strategies for procuring high-technology equipment. Procuring refurbished equipment offers significant cost savings, but little is known about the experiences—either positive or negative—with such equipment

and individual refurbishers. Hospital directors often hesitate to buy such equipment because of concerns about its reliability. NAC has tried to address such concerns through its program to certify remanufacturers. Still, FDA's limited oversight of refurbishers might hinder efforts to expand use of refurbished equipment.

Another alternative to buying new equipment is transferring equipment within the VA system. With the planned integration and consolidation of VA hospitals, VA may have excess high-technology equipment. Hospital directors, however, may have the same concerns about the reliability of used equipment that they have about refurbished equipment.

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## Sharing

Although the Under Secretary's Criteria for Potential Realignment of VHA Facilities and Programs calls for VISNS to purchase services from community providers when such services are equal in quality and lower in price, VISN plans indicate sharing agreements only between VA and the military hospital care system.

Without assessments of underused capacity in the surrounding community, VA hospitals may purchase high-technology equipment that increases excess capacity. Similarly, where VA already has underused high-technology equipment, selling the excess capacity both to government and private-sector providers could generate additional revenues and help other health care facilities avoid procuring high-cost equipment that would probably increase excess capacity. For example, additional opportunities may exist for VA facilities to sell services to the Indian Health Service and Bureau of Prisons. Similarly, VA might be able to provide high-technology services to support community health centers in exchange for primary care services for veterans. Another approach being pursued by some VA hospitals is jointly procuring high-technology equipment with teaching affiliates, DOD hospitals, or community hospitals.

Finally, VA has increased its sharing with both nongovernment and DOD health care providers. The following are among the challenges VA faces in implementing such agreements:

- VA must ensure that payments cover VA's cost of providing the services. This is important primarily if VA is maintaining capacity expressly for selling it to CHAMPUS or TRICARE, in which case any deficit detracts from funds available for serving veterans.

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**Chapter 9  
Hospitals Reduce Procurement and  
Inventory Costs Through Changes in  
Materials Management**

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- VA must ensure that sharing agreements do not detract from services available to veterans.

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# Changes in Hospitals' Marketing of Their Services

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As excess capacity grows, community hospitals are seeking ways to retain current users and attract new ones. Among the ways they are marketing their services and building market share are

- redesigning the hospital environment to be more homelike,
- conducting market research and patient satisfaction surveys,
- advertising their services,
- contracting with managed care plans and preferred provider organizations (PPO), and
- establishing service delivery arrangements with physicians to increase referrals.

In general, VA has not as actively marketed its hospital services as the private sector. Its facilities generally lack the privacy and other amenities typical of community hospitals. In addition, VA does not pay for advertising to attract new users or enter into risk-sharing agreements with either managed care plans or physicians to build workload. VA is, however, beginning to change the way it markets its health care services; it is increasing its use of market research and patient satisfaction surveys and expanding efforts to sell its excess resources to DOD and others using its recently expanded contracting authority.

If VA decides to try and preserve certain VA hospitals by competing with private-sector hospitals, then it will probably have to expand its marketing efforts. Among the decisions that VA would face is whether to revise its policy against using paid advertising and—if it decides to advertise—whether to use comparative or negative advertising. Similarly, VA would also have to decide on the extent to which it should (1) market its services to nonveterans, (2) enter risk contracts with managed care plans and individual physicians, (3) invest resources in improving privacy and amenities in VA hospitals, and (4) grant admitting rights to non-VA physicians with practices near a VA hospital.

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## Hospital Environment Redesigned to Be More Homelike

Community hospitals are increasingly marketing their services directly to patients. An important part of such marketing efforts is redesigning hospitals to provide a more homelike environment. Although VA has made some progress in improving the privacy and amenities offered by its hospitals, most VA hospitals cannot compete with community hospitals in these areas.

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**Appearance and Amenities**  
**Help Create Overall**  
**Impression of Hospital**

People often view the comfort and appearance of hospital rooms as a reflection of a hospital's attitude and concern toward patients.<sup>176</sup> Designing the physical environment is important because patients and their families tend to judge a hospital by their first impression. For example, hospitals that appear old fashioned and run-down are not likely to instill confidence in the medical treatment. Unattractive facilities have also been reported to adversely affect patients' psychological well-being. Patients already depressed about their health tend to become more depressed in a drab environment, slowing their recovery.

Just as a drab hospital can adversely affect patients' perceptions of the quality of care they receive and therefore their psychological well-being, a hospital designed to provide a bright, homelike feeling can instill patients' confidence in a hospital and the quality of care it provides.

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**Community Hospitals**  
**Improve Appearance and**  
**Amenities**

Among the approaches community hospitals have used to make their facilities more appealing to patients and visitors are color, artwork, plants, attractive and comfortable furnishings, and textured walls. Following are examples of such approaches:

- Methodist Hospital in Omaha, Nebraska, renovated its hospital wards to create a more homelike environment. It created mini-nursing stations between every two to four patient rooms to locate nurses closer to the patients. It changed most of its semiprivate rooms to private rooms and added handicapped-accessible bathrooms. It added chairs that fold down into beds to patient rooms to accommodate family members. In addition, it established family lounges, nourishment stations with beverages and microwaves and a deli-style cafeteria to accommodate visitors. The hospital remodeled patient rooms to include clocks, plant shelves, and erasable "white" boards for leaving messages. To create a homelike environment, designers used light wood with drapes and wall coverings in soothing colors.<sup>177</sup>
- The Samuels Planetree Model Hospital Unit in New York City, a 945-bed, not-for-profit tertiary care teaching hospital, remodeled patient rooms to include (1) patterned curtains, (2) soothing wall and hallway colors, (3) furniture that was both attractive and comfortable, (4) a special living room setting where patients and visitors could spend time together, and

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<sup>176</sup>Julie Baker and Charles W. Lamb, "Physical Environment as a Hospital Marketing Tool," Journal of Hospital Marketing, Vol. 6, No. 2 (1992), pp. 25-35.

<sup>177</sup>Robert Holm, Larry Loftus, and James Kucks, "Savvy Service and Innovative Design Help Patient Feel Right at Home," Health Facilities Management, (Sept. 1996). pp. 14-5.

(5) a sleeper couch in the patient room where family members or friends could comfortably stay overnight. In addition to a television, the rooms include magazines and a videocassette recorder. The hospital also added a kitchen for use by patients' family and friends.<sup>178</sup>

- Baptist Hospital in Miami, Florida, redesigned its emergency room to create the ambiance of a hotel lobby. Natural light was filtered, artificial lights focused on architectural details, and high-tech machines hidden behind panels or camouflaged by soft fabrics. Because the hospital converts about 25 percent of its emergency room visits into admissions, it believes the calming and attractive design of its emergency room contributed to an increase in hospital admissions.<sup>179</sup>

Some community hospitals have focused on changes to attract certain types of patients such as the affluent. For example, Christ Hospital in Oak Lawn, Illinois, decorated rooms with 18th century furniture and began offering specially prepared meals served on china to attract affluent patients. Similarly, Century City Hospital in Los Angeles designed rooms with rich wood patterns, faux marble, and plaster moldings. The hospital's luxury accommodations also include imported china, silver flatware, and antique artwork.<sup>180</sup>

Just as giving hospitals a more homelike appearance can influence patients' overall perceptions, accommodating patients' disabilities can increase patient satisfaction. For example, by lowering closet rods, hospitals can allow patients in wheelchairs to be more independent. Similarly, chairs designed to allow patients to rise without help can increase patients' independence and reduce demands on nurses.<sup>181</sup>

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## VA Hospitals Lack the Privacy and Amenities Typical of Community Hospitals

VA hospitals have a distinct competitive disadvantage compared with community hospitals regarding privacy and hospital amenities. VA hospitals are often outdated and lack amenities comparable with private-sector hospitals. Most VA hospitals are more than 30 years old, some more than 50 years old. Although VA has some hospitals that are

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<sup>178</sup>Arthur E. Blank, Steven Horowitz, and Deborah Matza, "Quality With a Human Face? The Samuels Planetree Model Hospital Unit," *Journal of Quality Improvement*, Vol. 21, No. 6 (1995), pp. 289-99.

<sup>179</sup>Holm, Loftus, and Kucks, "Savvy Service and Innovative Design Help Patient Feel Right at Home," *Health Facilities Management*, pp. 14-5.

<sup>180</sup>Baker and Lamb, "Physical Environment as a Hospital Marketing Tool," *Journal of Hospital Marketing*, pp. 25-35.

<sup>181</sup>Baker and Lamb, "Physical Environment as a Hospital Marketing Tool," *Journal of Hospital Marketing*, pp. 25-35.

relatively new or have been updated, many still have four- and six-bed rooms and communal toilets and showers. In addition, many VA hospitals lack basic amenities, such as in-room televisions, that community hospitals have.

Beyond amenities, older VA facilities face additional structural problems. For example, they often have inadequate space in clinics and nurses' stations, poorly designed intensive care units, and inadequate ventilation systems.

VA has, however, made progress in improving both privacy and amenities. For example, in response to recommendations from us and the Vice President's National Performance Review, VA has installed bedside telephones in its hospitals.

The lack of privacy in VA hospitals can create particular problems for women veterans. In 1982 and again in 1992 and 1994, we reported on VA facilities' problems in accommodating women veterans. At the time of our 1982 report, women could not be accommodated in 10 of the 16 domiciliaries and in some inpatient psychiatric programs. By 1992, VA had made significant progress in improving the availability of services for women veterans; by that time, for example, VA could accommodate women in all VA domiciliaries. Still, VA had problems in meeting women's privacy needs. For example, men and women still shared communal showers at many facilities. At our urging, VA surveyed all of its facilities to identify needed construction projects to ensure women adequate privacy. Medical centers identified almost \$1.5 billion worth of projects. By October 1993, 131 of the 336 planned projects had been completed or funded at an estimated cost of over \$672 million. VA expected most of the remaining projects to be funded by the year 2000.

In a separate survey conducted in late 1993, VA facilities identified over \$3.3 billion in construction and renovation projects it viewed as necessary to allow VA to effectively compete with the private sector. The Veterans Health Administration's (VHA) Strategic Planning and Policy Office compiled a prioritized inventory of requested projects ranging from improving patient amenities to new bed towers. The Office requested more than 1,400 of these projects.

Even this estimate, however, did not accurately portray the capital investment that would be needed to make VA competitive with community

hospitals in the area of amenities. This is because the amount VA planned to spend on construction projects was capped at \$3.3 billion.

VA has not proceeded, however, with most of the projects. Because of the uncertainty about the future missions of and demand for care in many VA hospitals, VA, at our urging, has limited its major construction projects primarily to expanding outpatient capacity rather than building or renovating hospital capacity. For example, in its fiscal year 1998 budget submission, VA sought \$79.5 million for major construction and renovation of medical facilities, of which \$35 million is for seismic corrections at the Memphis, Tennessee, medical center.

VA's Prescription for Change does not address improving the appearance and amenities of VA hospitals to make them more attractive to potential customers. Nor do Veterans Integrated Service Network (VISN) strategic plans generally address improvements to hospital privacy and amenities. The VISN 6 (Durham) plan, however, discusses renovations to improve privacy particularly for women veterans and identifies planned projects at the Beckley, West Virginia, and Salisbury, North Carolina, medical centers. It notes that the acute medical and surgical wards at the Salisbury hospital include one-, two-, three-, and four-bed rooms, but less than 10 percent have toilets. The planned renovation would increase privacy and provide handicapped-accessible bathing and toilet facilities. The other VISN strategic plan that discusses amenities—VISN 18's (Phoenix)—focuses on services rather than renovations. Specifically, this network plans to establish a guest services program that will use hotel-like amenities and services for its hospitals.

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## Hospitals Conduct Patient Satisfaction Surveys and Market Research

To effectively market their services, hospitals need information on both current and potential users. For example, they need to know who is using their services and their motivation (convenience, reputation for quality, amenities, services, and the like) for using that particular hospital. Just as important, they need to know who is not using their services and why. They need information on the types of outreach efforts (newspaper, television, or direct mail) that will most effectively attract new users and retain current ones.<sup>182</sup> Among the methods hospitals use to identify potential customers and retain current ones are patient satisfaction surveys and market research. VA, like community hospitals, is increasingly

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<sup>182</sup>David P. Paul and Earl D. Honeycutt, Jr., "An Analysis of the Hospital-Patient Marketing Relationship in the Health Care Industry," *Journal of Hospital Marketing*, Vol. 10, No. 1 (1995), pp. 35-49.

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emphasizing customer satisfaction and market research to help keep current users and identify potential new ones.

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## Both Community and VA Hospitals Use Customer Satisfaction Surveys

With decreasing demand and increasing competition, hospitals no longer assume that users will choose the same hospital in the future. Hospitals therefore are increasingly focusing on ways to improve customer service. An important way to identify what patients like and dislike about a hospital experience is the patient satisfaction survey. Both community and VA hospitals use such surveys extensively.

Responses to patient satisfaction surveys tend to focus on interactions—either positive or negative—with hospital staff. The results can thus provide important information on needed changes in staff education and training to improve customer service. Such surveys can also identify other changes in the hospital that might attract users. For example, surveys that reveal frequent complaints about the food service, delays in answering call buttons, or drab decor can be used to target needed changes.

Hospitals can conduct satisfaction surveys in several ways. For example, hospitals can call patients or send them a questionnaire after patients are discharged. Patient satisfaction surveys generally show a relationship between patient satisfaction and whether the patient will return to the same hospital.

One approach to improving patient satisfaction, developed by the Cleveland Clinic Foundation, is a Patient Callback Program. The hospital calls patients 3 weeks after discharge to identify and resolve any clinical or service concerns. The hospital found that the program creates perceptions of higher quality care and contributes to more effective clinical care by identifying patients' concerns. Other reported benefits of the program are identifying and resolving past and current problems and increased patient satisfaction, leading to a greater likelihood of future use by the patients as well as their family and friends. Although the hospital initially limited the program to patients discharged from surgical services, it subsequently expanded the program to include discharges from medical bed sections and outpatient surgery.<sup>183</sup>

Historically, veterans often complained about excessive waiting times for VA care and poor customer service. For example, participants in 14 focus

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<sup>183</sup>W.R. Gombeski and others, "Patient Callback Program: A Quality Improvement, Customer Service, and Marketing Tool," *Journal of Health Care Marketing*, (Fall 1993), pp. 60-5.

group discussions we held with veterans nationwide during 1994 elicited frequent complaints about poor customer service, poor staff attitudes, excessive waiting times, and inadequate parking.<sup>184</sup> Similarly, the Vice President's National Performance Review made a series of recommendations in September 1993 intended to improve customer service throughout VA programs. Subsequently, VA established the National Customer Feedback Center and began revising the standard of care and therefore increasing patient satisfaction. In addition, VA published customer service standards for its medical facilities in October 1994.

VA's Prescription for Change identifies several planned actions to assess and improve patient satisfaction. For example, it provides that VHA will annually assess compliance with the customer service standards through patient surveys. In addition, it provides for the development and implementation of corrective action plans for those areas in which customer feedback or other data indicate a need for service improvement.

VA's fiscal year 1998 budget submission identified two performance measures based on the customer service standards. The first performance measure is to increase the percentage of patients reporting their care as very good to excellent by 5 percent annually, starting at 60 percent for both inpatient and outpatient care. VA reported that it met the goal for inpatient care but satisfaction with outpatient care increased by only 1 percent. The second measure tracks VISN improvements regarding nine customer service standards.<sup>185</sup> VA's goal is for 95 percent of its networks to improve performance on two-thirds of the customer service standards. VA will gauge progress on the basis of results of surveys mailed to veterans nationwide receiving VA care. VA reported that in fiscal year 1996, 86 percent of VISNs showed improvement on two-thirds or more of the customer service standards.

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## Market Research Helps Hospitals Target Potential Users

Demographic information on users helps hospitals target marketing toward nonusers most likely to be influenced by such efforts. In other words, if a hospital has historically drawn users from a particular demographic group, such as the uninsured or elderly, it may want to target those demographic groups in its marketing efforts.

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<sup>184</sup>Veterans' Health Care: Veterans' Perceptions of VA Services and Its Role in Health Reform (GAO/HEHS-95-14, Dec. 23, 1994).

<sup>185</sup>The customer service standards relate to courtesy, timeliness of care, coordination of care, emotional support, attention to preferences, patient education, family participation, continuity of care, and transition between care settings.

In addition to identifying the demographics of the market area's population, a hospital may want to elicit perceptions about it that might hinder efforts to attract new users and identify added services that might attract users as well as evaluate the competition. On the basis of such research results, hospitals develop marketing strategies that target advertising toward certain types of people or add services likely to generate new workload.

One of the actions discussed in VA's Prescription for Change is the use of focus groups and customer surveys to evaluate services. According to the Prescription, VA conducted focus groups and telephone market surveys in the referral networks of over 75 medical centers during 1994 and 1995. The studies targeted current and former users as well as nonusers to get a better understanding of VA's current and potential customers, their perceptions about VA, and their individual needs.

VISNS appear to be further expanding the use of market research. Almost all VISN strategic plans indicate that market surveys have been planned or completed, often through contracts with public polling firms such as the Gallup Organization.

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## Hospitals Increasingly Advertise and Market Their Services

In the past, hospitals did not extensively advertise or otherwise market their services, relying instead on physicians to generate workload. As patients and their families have expanded their role in selecting hospitals, advertising has become an important marketing tool for community hospitals. Although VA directives do not permit the use of paid advertising to market health care services, VISNS and individual facilities may use a variety of other methods, such as newsletters and public service announcements, to inform veterans of their VA benefits.

Historically, patients typically relied on their family physician to determine where they went for hospital care. Those patients choosing their own hospital generally did not have a family physician and tended to use the hospital emergency room as a physician's office. In other words, their choice of hospitals was more a matter of necessity than preference. In the mid-1980s, an estimated 40 percent of patients (or their family members) chose their own hospital. By the 1990s, however, one report estimated that 90 percent of hospital inpatients were playing an active role in choosing their own hospital, often on the basis of others' opinions.<sup>186</sup> A logical

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<sup>186</sup>John Joby, "Referent Opinion and Health Care Satisfaction," *Journal of Health Care Marketing*, Vol. 14, No. 2 (1994), pp. 24-30.

outgrowth of this trend has been increased hospital advertising directed toward patients and their families.

Advertising generally promotes the hospital's services without criticizing other hospitals. Hospital advertisements have progressed from providing general information to advertising such distinct product lines as cardiology, psychiatry, and lithotripsy. Hospitals in major urban areas advertise more than hospitals in rural communities, and large hospitals advertise more than small ones.

To be effective, hospital marketing programs must specifically target the correct individuals with appropriate messages to convince them to become hospital customers. Advertising campaigns often target specific groups of potential users gleaned from market research. For example, hospitals may target their marketing toward people between the ages of 50 and 60 because this age group accounts for nearly 60 percent of all health care spending. Others may target the elderly because they represent the fastest growing segment of the population and are the most intensive users of health care services. A third target of marketing efforts is people interested in the wellness movement: Some hospitals have developed programs targeted to attract individuals interested in exercise, diet, and preventive health programs.<sup>187</sup>

Unlike the private sector, VA is restricted in its ability to advertise its health care services to the general public. VA may prepare informational brochures and public service announcements, but it may not advertise in newspapers or on radio or television. VA regulations limit the use of paid advertising to personnel recruitment and certain loan guaranty activities; they specifically prohibit the purchase of advertising time and space to promote VA benefits and services.

Although it may not generally use paid advertising, VA has express authority to conduct a Veterans Outreach Services program to ensure that all veterans are "provided timely and appropriate assistance to aid and encourage them in applying for and obtaining" VA benefits and services. According to two VA assistant general counsels, this authority requires VA to distribute full information to eligible beneficiaries on all services for which they might be eligible. This, according to VA's Office of General Counsel, permits VA to advertise VA medical services using exhibits, photographic displays, and other visual educational information and

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<sup>187</sup>Paul and Honeycutt, "An Analysis of the Hospital-Patient Marketing Relationship in the Health Care Industry," *Journal of Hospital Marketing*, pp. 35-49.

descriptive material. In addition, the assistant general counsels concluded that although VA's authority to conduct outreach does not specifically authorize VA to give information to veterans comparing VA services with those of other providers, VA could determine that to give veterans full information, it might be necessary to give them comparative information.

The two assistant general counsels, however, concluded that VA may not, under its legislative authority, conduct negative advertising or, under VA policy, use paid advertising to promote its health care services. The assistant general counsels recommended that the VA policy be revised to explicitly authorize use of paid advertising. As of August 1997, the policy had not been revised.

Neither VA's Vision for Change nor its Prescription for Change contains specific initiatives about advertising and outreach. Many of the VISN strategic plans, however, discuss outreach efforts, including the following examples:

- VISN 3 (Bronx) established a network marketing implementation group and conducts direct mail outreach to service-connected veterans.
- VISN 4 (Pittsburgh) plans to mail promotional materials to and telephone targeted groups of nonusers.
- VISN 16 (Jackson) indicates that its medical centers are encouraged to use customer-centered advertising, including patient newsletters and promotional videos, health information fairs, and good media relations to reach its marketing goals.
- VISN 22 (Long Beach) plans to publish a quarterly newsletter and use public service announcements to inform veterans of their medical benefits.

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## Hospitals Share Risks With Managed Care Plans in Return for a Guaranteed Patient Base

Another method community hospitals use to maintain or broaden market share is contracts and risk-sharing arrangements with managed care plans. Until recently, VA had no authority to either routinely treat nonveterans or contract with managed care plans. As a result, few VISN strategic plans identify efforts to contract with managed care plans other than DOD's TRICARE managed care plan.

Historically, community hospitals were fairly well insulated from risk. During the 1960s, both public and private insurance generally paid hospitals' billed charges or actual costs. Although hospitals had a financial risk, they could raise prices to compensate. Hospitals assumed greater risk in the 1970s as insurers increasingly set limits on allowable charges or

costs and developed utilization management tools to reduce unnecessary hospital use. It was not until Medicare developed a prospective payment system in 1983, however, that most hospitals had to assume direct risk for the cost of care provided to individual patients. That change, however, did not force hospitals to directly compete with each other for market share.

The growth of managed care plans, however, has increasingly put hospitals in direct competition with each other for dwindling inpatient workload. With about 40 percent of hospital beds empty on any given day, managed care plans have strong bargaining power with hospitals.<sup>188</sup> If a hospital charges too much, an HMO will merely contract with another hospital. Managed care plans typically pay hospitals on a per case or per diem basis to encourage efficient delivery of services and discourage the provision of unnecessary services. In return, the HMO typically guarantees a certain workload.

Since the mid-1980s, the number of hospital contracts with HMOs has increased significantly. In 1985, only about one-third of community hospitals were providing care to HMO members. By 1990, the percentage of community hospitals contracting with HMOs or PPOs had increased to 63 percent. By 1994, three-fourths of community hospitals reported having such contracts.

Unlike community hospitals, VA hospitals generally do not have formal relationships with HMOs or other managed care plans to serve either veterans or nonveterans.<sup>189</sup> To become a preferred provider under some plans, VA would be required to accept discounted payments. Historically, VA has not been allowed to negotiate discounted payments.<sup>190</sup> Before enactment of the Balanced Budget Act of 1997, VA was required to recover its full cost of providing care; it was not authorized to negotiate on the basis of price. The Balanced Budget Act shifted VA's basis for recovering costs from that of a reasonable cost to a reasonable charge, giving VA greater flexibility to negotiate on the basis of price. VA already had such flexibility when seeking to participate as a provider of care to nonveterans. VA may use its recently expanded contracting authority,

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<sup>188</sup>Medicare and the American Health Care System Report to the Congress, Prospective Payment Assessment Commission (Washington, D.C.: June 1996).

<sup>189</sup>An official from VA's Office of General Counsel knew of only one agreement between VA and an HMO.

<sup>190</sup>Under the Balanced Budget Act, VA could recover the reasonable charge for care or services starting on Oct. 1, 1997.

which allows it to negotiate payments in the best interest of the government, to sell services to managed care plans.

HMOs and PPOs have little interest in VA's providing services to their veteran policyholders. Because HMOs and PPOs typically pay only for care provided by hospitals that have negotiated provider agreements, they have no obligation to pay VA for care provided to their veteran policyholders as long as they do not accept VA facilities as participating providers. In other words, to the extent that managed care plans' veteran policyholders obtain care from nonparticipating VA facilities, the plans' profits will be higher.

VA currently contracts with only one HMO—Dakota Care—in South Dakota but has been trying to negotiate with at least two other HMOs to become a participating provider. VA officials attribute their ability to obtain a provider agreement in South Dakota to the state's rural nature and the limited number of providers.

VA is succeeding somewhat more in negotiating provider agreements under its medical care cost recovery authority with point-of-service (POS) plans. Unlike HMOs and PPOs that may be able to avoid all payments to VA (other than for emergency care) by excluding VA as a participating provider, POS plans have less to gain by not accepting VA as a participating provider. This is because a POS plan is obligated to pay providers for nonemergent care, including those without a provider agreement. Since February 1995, VA's General Counsel has reviewed and approved at least 32 provider agreements between VA facilities and POS plans. VA does not have readily available information on the number of such contracts.

In the past, VA was not allowed to sell hospital services to managed care plans. It could sell any health care service to DOD and other federal agencies and specialized medical resources to hospitals, clinics, and medical schools. VA's 1996 Prescription for Change recognized, however, the need to market specialized VA clinical services to other government health care providers and the private sector. It also noted that legislation was pending that would expand VA's resource-sharing authority to allow VA to offer any health care resource to any public or private entity.

Because of VA's limited sharing authority, its Prescription focused primarily on increasing sharing with DOD and other government health care programs. For example, VA plans to implement contracts with regional TRICARE contractors and providers as DOD expands TRICARE nationwide. VA's Prescription notes that a standard provider agreement has

been negotiated with Foundation Health Corporation for medical and surgical care. Contracts with TRICARE are mentioned in the strategic plans of VISNS 5 (Baltimore), 14 (Grand Island), and 16 (Jackson).

With the enactment of Public Law 104-262 later in 1996, VA received authority to sell hospital and other health care services to managed care plans and others. Because the legislation was passed after VA's Prescription for Change was issued and during the development of the VISN strategic plans, these plans do not address expanding contracting with managed care plans.

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## Hospitals Enter Risk-Sharing Arrangements With Physicians

Community hospitals are also seeking to maintain or broaden their market share by purchasing physician practices and securing a patient base through various risk-sharing arrangements with physicians. VA does not have similar risk-sharing arrangements with private practice physicians but is establishing community-based outpatient clinics (CBOC) to encourage more referrals to VA hospitals.

Physicians and hospitals see benefits from closer cooperation in an environment of higher financial risk. Hospitals see stronger linkages with primary care physicians as an important source of hospital admissions, particularly under managed care plans. They also see such linkages as allowing them to shift some financial risk to physicians. Individual and small group (physician) practices benefit because such arrangements allow them access to sophisticated information systems, medical technology, and personnel familiar with managed care contracting, marketing, and management without investing significant capital.

Many community hospitals seek to increase their market share by obtaining control of physicians either by buying physician practices or providing them substantial subsidies.<sup>191,192</sup> One study noted that the percentage of physicians practicing as employees rose from 24.2 percent in 1983 to 42.3 percent in 1994.<sup>193</sup> During that period, the percentage of self-employed physicians in group practices fell from 35.3 percent to 28.4 percent. The study notes that most such change occurred during the

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<sup>191</sup>S.A. Hepps, "Beware: Hospital Control or Ownership of Medical Groups," Journal of Medical Group Management, Vol. 42, No. 3 (1995).

<sup>192</sup>S. Becker and J. Callahan, "Physician-Hospital Transactions: Developing a Process for Handling Valuation-Related Issues," Journal of Health Care Finance, Vol. 23, No. 2 (1996).

<sup>193</sup>P.R. Kletke, D.W. Emmons, and K.D. Gillis, "Current Trends in Physicians' Practice Arrangements: From Owners to Employees," Journal of the American Medical Association, Vol. 276, No. 7 (1996).

last 6 years of the 12-year period and was most prominent among young physicians. Increased earnings of employee physicians compared with those of self-employed physicians accounts for the shift.

The Prospective Payment Assessment Commission reported in 1996 that hospital-physician arrangements improve hospitals' ability to secure managed care contracts, expanding market share and improving financial performance. The Commission noted that such arrangements subject both hospitals and physicians to increased financial risk but also create opportunities for greater profits.<sup>194</sup>

Concerns have been raised about such hospital-physician arrangements. For example, some are concerned that these arrangements may violate antitrust laws. In addition, some believe that an inherent conflict exists in hospital-physician arrangements because the two principals have different strategic needs.<sup>195</sup> Hospitals and physicians often have opposing views on such issues as working environment, decision-making goals, and working and management style.<sup>196</sup>

Others have questioned whether the hospitals and other health care organizations acquiring physician practices are realizing a positive return on investment.<sup>197</sup> One author notes that acquisitions often create excess capacity, raise costs, and reduce an organization's ability to attract managed care contracts.<sup>198</sup> Finally, concerns have been expressed about the methods used to value the physician practice<sup>199</sup> and potential violations of the Medicare anti-kickback statute when physician practices continue to be affiliated with the buyers of those practices.<sup>200</sup>

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<sup>194</sup>Medicare and the American Health Care System Report to the Congress, Prospective Payment Assessment Commission.

<sup>195</sup>Hepps, "Beware: Hospital Control or Ownership of Medical Groups," Journal of Medical Group Management.

<sup>196</sup>K.M. Ward and G.E. Mathews, "Overcoming the Physician Group-Hospital Cultural Gap," Healthcare Financial Management, Vol. 51, No. 3 (1997).

<sup>197</sup>J.P. Ortiz, "Ensuring the Profitability of Acquired Physician Practices," Healthcare Financial Management, Vol. 51, No. 1 (1997).

<sup>198</sup>J.E. Bolinger and D.E. Hough, "Making Acquired Physician Practices Profitable," Healthcare Financial Management, Vol. 51, No. 2 (1997).

<sup>199</sup>R.W. Curry, "IRS Offers Guidance on Physician Practice Valuation," Healthcare Financial Management, Vol. 50, No. 7 (1996).

<sup>200</sup>R.J. Kurland, "Physician Noncompete Agreements Must Be Carefully Tailored," Health Care Law Newsletter, Vol. 10, No. 4 (1995).

Unlike community hospitals, which rely primarily on private-practice physicians to generate hospital admissions, VA hospital admissions come mainly from within the VA system. Only salaried VA physicians may admit and treat patients at VA hospitals. As of February 1998, VA had, however, opened 198 CBOCs since 1994, which have brought new users into the system. A CBOC is either a VA-operated clinic or a VA-funded or reimbursed private clinic, group practice, or single practitioner that is geographically distinct or separate from the parent facility. CBOCs provide only primary care and are expected to refer veterans to VA hospitals for inpatient and more specialized care. Unlike the hospital-physician arrangements emerging in the private sector, however, CBOC physicians have no financial incentive to refer patients to VA hospitals.

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## **Marketing of VA Hospital Care Raises Many Issues**

VA has established a goal of increasing the number of VA users by 20 percent over the next 5 years to use its excess capacity. VA will need to address many issues, however, concerning the likely effect of this strategy on the use of its excess hospital capacity.

Although VA appears capable of attracting new users through its plans to establish additional CBOCs, this approach is not likely to generate much new demand for VA inpatient hospital care. This is because new users are most likely to choose their local hospital rather than a distant VA facility and veterans' use of VA hospital care decreases significantly at distances of over 5 miles from the hospital. In addition, to the extent that physicians at CBOCs have admitting privileges at nearby community hospitals, they will have little financial incentive to refer patients to a distant VA hospital. One option for increasing referrals from CBOC physicians would be to use physician incentive arrangements like those used by community hospitals.

If VA decides to try to preserve certain VA hospitals by competing with private-sector hospitals, then VA might want to target its marketing efforts toward veterans and nonveterans living near its hospitals. One approach might be to grant admitting privileges to private practice physicians. This might increase referrals of veterans who routinely obtain needed health care services from private practice physicians. Such physician referrals are an important source of admissions to community hospitals. VA's 1992 National Survey of Veterans found that most of the veterans surveyed (74 percent) indicated that they did not use VA hospitals because their private practice physicians would most likely send them to a specific hospital. Another approach for increasing hospital users would be for VA hospitals to become preferred providers under managed care plans. This

might generate new hospital demand from both veterans and nonveterans who normally use other hospitals.

The success of such efforts, however, would depend on many factors. The perceptions, if not the reality, that VA facilities are outdated, lack the patient amenities of private-sector hospitals, or provide inadequate care and customer service will probably affect the decisions of both veterans and nonveterans to use VA hospitals. Because most patients have a choice of whether to go to a VA or community hospital, considerable uncertainty surrounds VA's ability to attract more hospital users. In addition, managed care plans may be unwilling to contract with VA for hospital care because of the lack of privacy and amenities comparable with what their members are accustomed to. Spending money to improve privacy and amenities in VA hospitals to attract additional hospital users would, however, be risky.

Even if VA hospitals were to provide modern accommodations with private and semiprivate rooms, veterans may still have negative perceptions of the VA system and its quality of care. VA attributes such perceptions to its inability to use paid advertising to change people's perception. This creates difficult policy choices. For example, should VA change its policy on use of paid advertising to attract new users? If so, what restrictions should be placed on such advertising regarding comparative and negative advertising?

The ability of VA to attract new hospital users will also probably depend on the population VA targets. For veterans with limited resources and no health insurance, VA may be their only health care option. But VA wants to serve more higher income, Medicare-eligible veterans. Most such veterans either have Medigap insurance as well as their Medicare coverage or are enrolled in Medicare HMOs. As a result, these veterans incur no or minimal cost sharing regardless of where they obtain care. Medicare-eligible veterans have used VA hospital care less and less since the mid-1980s.

Other individuals VA appears to be targeting as new users are those with private health insurance. Veterans with private insurance are, however, less likely to use VA hospitals than are those without insurance. Therefore, considerable uncertainty exists about the ability of VA to increase use of VA hospitals by targeting marketing efforts toward insured and higher income veterans.

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# Changes in Monitoring and Delivering Hospital Patient Care

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Pressures resulting from prospective payment, capitation, and utilization review have forced community hospitals to more closely monitor and manage the treatment of individual patients to ensure the cost-effectiveness of their care. Specifically, hospitals are

- implementing clinical guidelines to help physicians and other caregivers follow cost-effective courses of treatment;
- developing outcome measures to enable hospitals to evaluate their performance and that of individual physicians;
- performing tests and other procedures on an outpatient basis before, or as an alternative to, admitting patients; and
- discharging patients sooner to alternative settings such as nursing home, home health, and hospice care.

VA's Prescription for Change outlines ambitious plans for VA to expand the development and use of clinical guidelines, develop and implement outcome measures, and shift care from inpatient to outpatient and other more cost-effective settings. Veterans Integrated Service Network (VISN) strategic plans generally identify additional such efforts.

Neither VA nor the private sector is sure about the extent to which clinical guidelines are being followed and to what effect. Similarly, both VA and the private sector are in the early stages of developing and using outcome measures. Some of VA's early efforts to develop performance measures, however, have focused more on process than outcomes and appear to conflict with other VA initiatives such as the Veterans Equitable Resource Allocation (VERA) system. Finally, VA faces challenges in ensuring that its facilities shift care to other treatment settings when cost-effective.

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## Development of Clinical Guidelines Is Increasing, but Effectiveness Is Unclear

Both community and VA hospitals are increasing efforts to develop and implement clinical guidelines. Despite the rapid development of guidelines, little effort has been devoted to determining whether they achieve their intended effect.

A clinical guideline explicitly states what is known and believed about the benefits, risks, and costs of a particular medical treatment intended to achieve a meaningful difference in patient outcomes.<sup>201</sup> By identifying which services are beneficial (and which are not), guidelines can help patients get needed care and help them avoid the risks of unnecessary

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<sup>201</sup>Clinical guidelines are sometimes referred to as "practice parameters," "clinical policies," or "preferred practice patterns."

services. Guidelines can also support cost containment efforts by reducing unnecessary care and providing information on the benefits, risks, and costs of services. Such information can help patients, physicians, payers, and others make appropriate choices in an environment of limited resources. Without guidelines, attempts to contain health care costs may inadvertently result in patients being denied needed services.

The Physician Payment Review Commission classifies clinical guidelines as either diagnostic, management, or service.<sup>202</sup> Diagnostic guidelines establish procedures for evaluating patients with particular symptoms (such as chest pain) to effectively identify the source of the problem. Diagnostic guidelines can also be developed to guide providers in screening asymptomatic patients for early stages of disease. Management guidelines establish appropriate courses of treatment once a diagnosis has been made. Finally, service guidelines identify appropriate and inappropriate uses of particular diagnostic and therapeutic procedures (such as a chest X ray, colonoscopy, or administration of hepatitis vaccine). Service guidelines help in deciding whether a particular treatment or test should be administered.

A guideline's effectiveness is evaluated by the frequency with which it produces the desired patient outcome. For example, a diabetes guideline might be evaluated on the basis of its success in regulating patients' hemoglobin levels. Similarly, a hypertension guideline might be evaluated using a longer term (over time) outcome measure, such as reduced morbidity and mortality from coronary artery and renal disease and stroke.

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## **Public- and Private-Sector Efforts to Develop Clinical Guidelines**

The Congress created the Agency for Health Care Policy and Research (AHCPR) to sponsor clinical guidelines development and conduct research on medical outcomes to provide information needed for developing future guidelines. In March 1992, AHCPR issued the first of 18 clinical guidelines it developed—on acute pain management and urinary incontinence in adults.<sup>203</sup>

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<sup>202</sup>Physician Payment Review Commission Annual Report to Congress, Physician Payment Review Commission (Washington, D.C.: 1992).

<sup>203</sup>In Apr. 1997, AHCPR announced a major restructuring of its clinical guideline program. Under the restructuring, AHCPR will no longer develop clinical guidelines but will produce the scientific foundation for use by private- and public-sector organizations in developing guidelines.

Multidisciplinary panels knowledgeable about managing certain conditions developed the guidelines. AHCPR chose these areas for guideline development because they permitted consideration of the following factors: the adequacy of scientific-based evidence; the number of people whose care the guidelines would affect; the likelihood of the guidelines' reducing variation in prevention, diagnosis, management, and outcomes of the condition; the specific needs of Medicare and Medicaid beneficiaries; and the costs of treating the condition to all payers, including patients.

Many others are also developing clinical guidelines. For example, in a 1991 report, we identified 27 medical specialty societies that had or were developing clinical guidelines.<sup>204</sup> Similarly, a 1992 Physician Payment Review Commission report indicated that more than 1,000 guidelines, covering an array of topics, had been identified by the American Medical Association (AMA). The Commission reported that more than 50 organizations were developing clinical guidelines, including professional groups, payers, hospitals, academic medical centers, HMOs, government agencies, public and private researchers, and malpractice insurers.

Hospital executives view guidelines as important in shaping the future of health care. Asked what key factors will influence health care delivery in the years ahead, 41 percent of executives in a 1995 survey cited clinical guidelines and outcome measures compared with just 22 percent of executives surveyed in 1990. Moreover, nearly two-thirds of the executives believed that costs can be successfully controlled by using monetary physician incentives if effective protocols and guidelines are developed.<sup>205</sup>

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## VA Is Establishing Clinical Guidelines

VA, like AHCPR, AMA, and the specialty societies, is developing and implementing clinical guidelines. Using AHCPR and other guidelines as a starting point, VA developed national guidelines for rehabilitation of stroke patients and treatment of amputees in June 1996. Other nationally developed guidelines cover major depressive disorders, diabetes, psychoses, and ischemic heart disease. National guidelines are under development for anxiety, gout, degenerative joint disease, asthma, and prostate disease, among others.

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<sup>204</sup>Practice Guidelines: The Experience of Medical Specialty Societies (GAO/PEMD-91-11, Feb. 21, 1991).

<sup>205</sup>On the Critical List: Hospital Strategies for Survival and Change, Watson Wyatt Worldwide (Washington, D.C.: 1995).

In addition to these clinical guidelines, the Veterans Health Administration (VHA) has developed several pharmacological management guidelines. These guidelines, developed by VA's Pharmacy Benefits Management Medical Advisory Panel, cover drug therapy for chronic obstructive heart disease, human immunodeficiency virus/acquired immunodeficiency syndrome, hyperlipidemia, hypertension, and noninsulin-dependent diabetes. Guidelines are being developed for congestive heart failure, depression, peptic ulcers, glaucoma, benign prostate hypertrophy, and degenerative joint disease.

In his 1996 Prescription for Change, the Under Secretary for Health called for the increased use of clinical guidelines to both measure and improve care in the VA system. In response to his earlier Vision for Change, the Office of Policy, Planning, and Performance and the Office of Patient Care Services began distributing existing guidelines and efforts to develop a uniform process for developing and implementing clinical guidelines. Under the guidance issued in VA's Prescription for Change, VISNS are expected to standardize clinical processes by using nationally developed clinical guidelines.

In addition, the Prescription for Change indicated that VISNS are expected to delegate clinical care responsibility to nonphysician caregivers, when appropriate, through locally developed clinical pathways.<sup>206</sup> VA's Prescription also called for establishing minimal criteria for local development of clinical pathways and a mechanism for internetwork sharing of pathways. Subsequently, a clinical pathways networking group was established at the Quality Management Institute located at the Durham VA medical center. In 1995, the Institute published a directory of clinical pathways.

Under its 1997 Network Directors' Performance Measures, networks were expected to implement, by September 30, 1997, 12 nationally developed networkwide clinical guidelines, 2 of which must focus on special-emphasis populations. Our review of VISN strategic plans identified a wide range of actions to implement clinical guidelines and pathways:

- VISN 1 (Boston) indicated that it had developed clinical guidelines for eight health conditions, including diabetes, pneumonia, and congestive heart failure.

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<sup>206</sup>VA defines clinical pathways as clinical management tools that organize, sequence, and specify timing for the major patient care activities and interventions of the entire interdisciplinary team for a particular diagnosis or procedure. Clinical pathways define key processes and events in the daily management of care.

- VISNS 3 (Bronx) and 6 (Durham) indicated that they implemented five clinical guidelines in fiscal year 1996.
- VISN 5 (Baltimore) indicated that it has implemented 34 national clinical practice guidelines and plans to develop clinical pathways for the network's top five diagnoses during fiscal year 1997.
- VISN 10 (Cincinnati) planned to complete development of 12 clinical pathways in fiscal year 1997, including pathways for stroke, acute and chronic back pain, major depressive disorders, and hypertension.

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## Evaluations of Guideline Use and Effectiveness Are Limited

Despite the intense efforts to develop clinical guidelines, little is known about how extensively they are followed and their results. For example, our 1991 study noted that only a few evaluative studies had been done on the effects of clinical guidelines.<sup>207</sup> Similarly, the Physician Payment Review Commission noted in its 1992 report that little was known about the validity of clinical guidelines<sup>208</sup> and that questions existed about how many physicians use or even know about the availability of such guidelines.

A 1993 study of 59 published evaluations of clinical guidelines, however, concluded that explicit guidelines improve clinical practice. All but 4 of the 59 evaluations studied found significant changes in the care proposed by the guidelines. All but 2 of the 11 studies that evaluated patient outcomes found significant improvement.<sup>209</sup>

A Canadian researcher noted in 1995 that the ultimate success of clinical guidelines depends on routine evaluation. He also noted, however, that compared with efforts to develop guidelines, little effort is devoted to their evaluation.<sup>210</sup>

Similarly, neither VA's Prescription for Change nor individual VISN strategic plans focus on determining the extent of the use of the guidelines being developed and their effect on patient care. VA does, however, assess the extent to which nationally recognized clinical guidelines are followed in

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<sup>207</sup>GAO/PEMD-91-11, Feb. 21, 1991.

<sup>208</sup>Physician Payment Review Commission Annual Report to Congress, Physician Payment Review Commission.

<sup>209</sup>Jeremy M. Grimshaw and Ian T. Russel, "Effects of Clinical Guidelines on Medical Practice: A Systematic Review of Rigorous Evaluations," Lancet, Vol. 342, No. 1317-1322 (1993), pp. 469-70.

<sup>210</sup>Ash Basinski, "Evaluation of Clinical Practice Guidelines," Canadian Medical Association Journal, Vol. 153, No. 11 (1995), pp. 1575-81.

treating certain high-cost/high-volume conditions such as diabetes and hypertension.

VA's draft strategic plan, developed under the Government Performance and Results Act, indicates that VA plans not only to expand the development and implementation of clinical guidelines, but also, in future years, to analyze how the guidelines are working to improve care processes and patient outcomes. According to the draft plan, by the year 2000, VA expects to be able to demonstrate improved processes resulting from six of its clinical guidelines. By the year 2002, it expects to be able to implement improvements in patient care or patient outcomes resulting from clinical guidelines.

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## **Outcome Measures Increasingly Developed to Evaluate Hospitals, Physicians, and Health Plans**

The private sector, the Health Care Financing Administration (HCFA), and VA are developing outcome measures to compare the performance of hospitals, physicians, and health plans. Outcome measurement is the assessment of the results or consequences of a medical intervention.<sup>211</sup> Typically, comparative analysis is used to determine whether a course of treatment or medical intervention had its intended effect. For example, a patient's condition at the end of a course of treatment is compared with his or her condition before treatment. Similarly, mortality rates for a specific surgical procedure may be compared with some baseline.

Whether comparing hospitals, health plans, or physicians, outcome measures must compare like procedures and like patients. For example, it is meaningless to compare mortality rates following a heart transplant with mortality rates following the setting of a broken arm. It is also important to compare similar hospitals and patients. For example, mortality rates for a teaching hospital that accepts the most complex surgery cases should not be compared with those of a small rural hospital performing only minor surgery. Similarly, mortality rates for 25-year-old males should not be compared with those for 75-year-old males to assess effectiveness of care. Severity determinations attempt to group diseases (and patients) of similar intensity to make outcome comparisons meaningful. For example, the rate of patient deaths following open-heart surgery may be compared with rates in other hospitals or with some national average. Similarly, patient satisfaction can be compared over time.

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<sup>211</sup>"Outcomes Measurement: Compliance Tool or Strategic Initiative?" Health Care Management Review, Vol. 16, No. 4 (1991), pp. 21-33.

Attempts to assess hospitals' performance using outcome measures have been under way for several decades. These assessments have been performed by federal and state inspectors, private accrediting agencies, and health care organizations. But specific results of these activities have been generally kept confidential. Other than informal communication or knowledge of an organization's accreditation or license, corporate and individual health care purchasers had no method for determining which organization provided the best care.

Outcome measures are intended to (1) provide hospital managers, managed care plans, and physicians information on the relative effectiveness of their treatment programs, allowing them to focus changes on problem areas; (2) provide consumers with meaningful data to use in making health care choices on the basis of quality as well as price; and (3) allow regulators to identify and sanction physicians and hospitals providing substandard care.

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## Interest in Outcome Measures Is Increasing

Employers and consumers are increasingly seeking outcome data to help guide their selections of hospitals, health plans, and other providers. As employers negotiate for lower premiums or limit employees' access to providers, they want to ensure that their employees still receive quality care. Individual consumers want assurance that they have access to quality providers and that they make the right health care decisions. As a result, both employers who purchase health care and individual consumers have demanded more information about quality.<sup>212</sup>

The first widespread public disclosure of quality assessment using outcome measures took place in 1987 when HCFA reported on the observed and expected mortality rates in hospitals performing coronary artery bypass graft surgery. Although the data were intended to be used only by peer review organizations and hospitals for quality assessment purposes, the news media obtained the data through a Freedom of Information Act request and ranked hospitals from the best to worst. HCFA officials continued to release the data until 1993, when they stopped the practice, citing problems with the reliability of their methods for adjusting the data to account for the influence of patient characteristics on the outcomes.

In the mid-1980s, health policy experts advised corporate purchasers that health care costs could be contained if purchasers considered both cost

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<sup>212</sup>Health Care: Employers and Individual Consumers Want Additional Information on Quality (GAO/HEHS-95-201, Sept. 29, 1995).

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and quality of care information when they made their health care purchases. Early efforts by corporate purchasers, however, progressed slowly as providers and purchasers tried to agree on what performance indicators would be useful.

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## Report Cards Developed

Increasingly, state and federal officials advocated publication of quality of care results, believing that such data could help contain health care expenditures.<sup>213</sup> Both health plans and governmental entities have started to inform the public about the quality of care hospitals and health plans furnish. Summaries of hospital and health plan performance, often referred to as “report cards,” are being developed and published. For example, Pennsylvania, New York, and California have published report cards about hospital services provided in their states.

In 1993, the Pennsylvania Health Care Cost Containment Council published the Hospital Effectiveness Report on care provided in 175 Pennsylvania hospitals for each of 53 diagnostic categories during 1991. For each of the 175 hospitals, this report provided data about the number of patients admitted, average severity of illness of those patients when admitted, percentage of patients aged 65 and older, actual and expected number of deaths and complications, average length of stay, and average charge per patient.

In addition, health plans, providers, and corporate purchasers working under the auspices of the National Committee for Quality Assurance (NCQA) have been developing and promoting the use of standardized performance measures. NCQA developed a consensus list of performance measures—the Health Plan Employer Data and Information Set (HEDIS)—that could be used by corporate purchasers to assess health plan value. Released in 1993, HEDIS 2.0 includes over 60 indicators that describe performance in five areas—quality, access and patient satisfaction, membership and utilization, finance, and health plan management activities. HEDIS 2.0 indicators measure health plans’ process and structure. Developers did not include indicators that directly measure the longer term results or outcomes of care. They believed that (1) outcomes measurement was not yet an established field of study and (2) many outcomes may not have been meaningful until a lengthy period had elapsed after an intervention.

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<sup>213</sup>Health Care Reform: “Report Cards” Are Useful but Significant Issues Need to Be Addressed (GAO/HEHS-94-219, Sept. 29, 1994).

HEDIS developers expect to include outcome measures in future revisions. HEDIS 3.0, released in 1997, features measures that are less process oriented. Working with the developers, HCFA was able to add the functional status of enrollees over age 65 as a measure of the effectiveness of care. This will be HEDIS' first outcome measure that will track and measure functional status over time. HCFA now requires Medicare managed care plans to use HEDIS to facilitate comparison of plan performance and to hold plans accountable for the care they provide.

In addition, HCFA has other efforts under way to develop outcome measures. First, it is working with the Foundation for Accountability (FACCT) to develop quality outcome measures for depression, breast cancer, and diabetes.<sup>214</sup> Second, HCFA and HHS' Assistant Secretary for Planning and Evaluation recently contracted with the RAND Corporation, a nonprofit research organization, to refine and test three sets of outcome measures to be implemented in 1998. Finally, HCFA plans to administer, through an independent vendor, a uniform Medicare beneficiary survey—the Consumer Assessment of Health Plans Study—to enrollees in Medicare managed care plans.

Although significant efforts to develop and implement outcome measures have taken place, a former HCFA Administrator said that getting potential users to use outcome measures has been more difficult than anticipated. In her view, however, it is only a matter of time before such measures are widely used.<sup>215</sup>

Just as purchasers are slow to adopt outcome measures, so too are hospitals slow to use outcome measures to improve quality. A 1991 evaluation of 31 hospitals that were using the same outcomes measurement system found that the system alone does not create hospital accountability. Specifically, the evaluation found that 14 (45 percent) of the hospitals were using outcome measures solely to maintain the status quo. The goal of such hospitals was to be within the norm and hope that the changing marketplace would not affect them. The evaluation found that another 35 percent of the hospitals were using outcome measures to achieve financial success rather than financial survival. Administrators at these hospitals were using outcomes information internally to improve resource consumption and to ensure that quality remained within the

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<sup>214</sup>FACCT is an organization with representatives from large employers, consumer groups, and government whose primary purpose is to promote the use of a common set of patient-oriented outcome measures.

<sup>215</sup>"Promoting Quality: A Public Policy View," *Health Affairs*, Vol. 16, No. 3 (1997), pp. 77-82.

norms. The evaluation found that only 20 percent of the hospitals made quality their top priority and presented outcomes information, including both clinical and cost data, to physicians for comparison.

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## VA Is Aggressively Developing Outcome Measures

VA, like HCFA and the private sector, is aggressively developing and using outcome measures. VA expects outcome measures to help it demonstrate the quality and value of its services, assess new and existing technologies, educate patients, improve provider-customer relations, and assess the effects of changes under way in the VA health care system.

Many of VA's efforts are outlined in a March 1997 primer, Using Outcomes to Improve Health Care Decision Making, prepared by VA's Management Decision and Research Center. The primer identifies several ways in which VA is using outcomes measurement. First, it is developing and using outcome measures as part of the performance contracts between VA central office and VISN directors. VA expects such performance measures to ultimately allow comparison of medical centers within VISNS, among VISNS, and with similar medical centers nationwide. VA also expects to develop performance measures that will permit comparisons of VA and non-VA providers. As part of this effort, VA is developing new methodologies to adjust for differences among patients to facilitate such comparisons.

VA also expects to use the results of outcome measures in developing, revising, and distributing national clinical guidelines. The primer identifies a number of outcomes research projects being conducted by VA facilities that could be used for such purposes. These efforts include

- identifying key variables that could be used to assess the quality of care for patients with hypertension, diabetes, and chronic obstructive pulmonary disease;
- studying the appropriateness and necessity of cardiac catheterization, coronary angioplasty, and coronary artery bypass graft surgery to determine the appropriateness of their use;
- examining the necessity of surgery for aneurysms that are not large or symptomatic;
- studying, in collaboration with the National Cancer Institute, the effects on patient health status and overall costs of alternative treatments for prostate cancer; and
- studying how the organization and processes of a cardiac services unit are affecting outcomes in open-heart surgery.

VA also envisions use of outcome measures to establish performance monitoring systems and mechanisms for distributing best practices systemwide. Finally, VA plans to explore the use of report cards, especially for chronic diseases. VA is discussing with NCQA, which oversees the development and updating of HEDIS, the possibility of developing and applying measures that assess processes of care similar to those in HEDIS.

One of the outcome measures VA currently uses is its chronic disease index, intended to assess the quality of services provided to outpatients in high-volume/high-cost diagnostic categories such as diabetes and hypertension. The individual disease-specific measures in the index determine the degree to which VA is following nationally recognized clinical guidelines. VA's first assessment using the chronic disease index, completed in 1996, found compliance with the guidelines to be 46 percent. VA established a goal to increase compliance to 95 percent in fiscal year 1998.

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## **Hospitals Increasingly Provide Services in Outpatient Departments**

Changes in how hospitals are paid have created financial incentives for community hospitals to admit a patient later or release a patient sooner than medically necessary. Community hospitals have increasingly established separate outpatient departments and shifted many diagnostic and other tests to these departments to avoid unnecessary days of care for elective admissions. Similarly, hospitals often avoid admitting patients altogether by providing services in outpatient departments.

For many years, VA lagged behind the private sector in shifting care to outpatient settings in part because its resource allocation methods rewarded hospitals for higher inpatient use. During the past several years, however, VA has aggressively sought to shift more care to alternative settings as reflected in the 20-percent decrease in bed-days of care (BDOC) in fiscal year 1996.

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## **Why Community Hospitals Shift Services to Outpatient Settings**

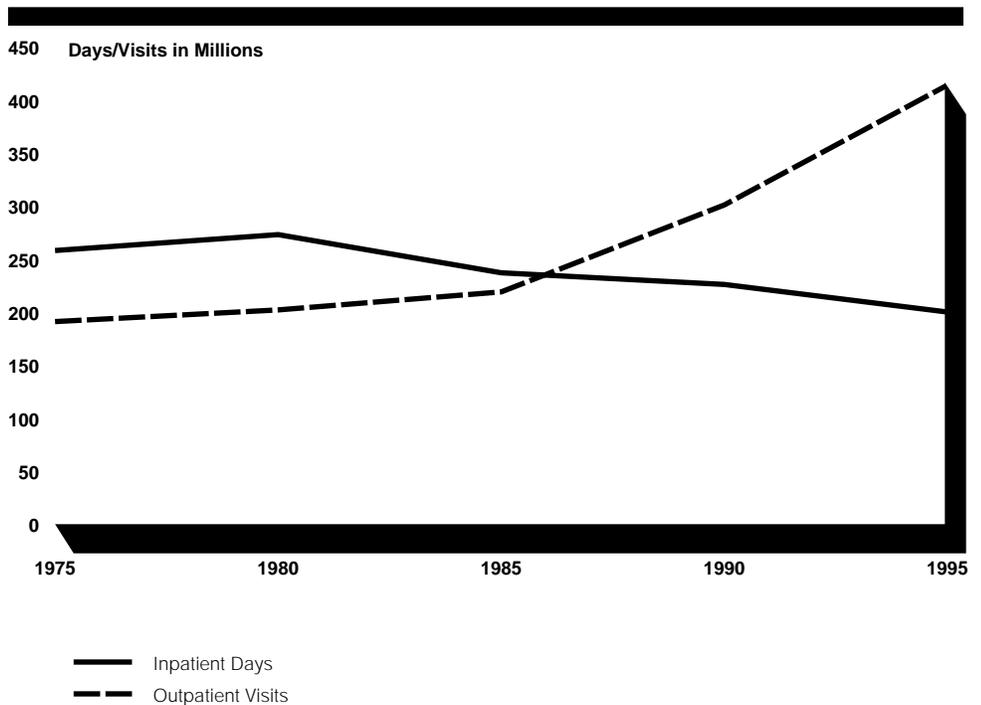
The 1986 Annual Report of the Prospective Payment Assessment Commission noted that hospitals may shift services previously performed on an inpatient basis to alternative settings to maximize profits. It noted that hospitals can generate additional profits by providing care in outpatient settings such as outpatient clinics and surgery departments, emergi-centers, dialysis centers, and diagnostic centers. It also noted that this strategy is particularly attractive for vertically integrated hospitals

because it allows them to not only reduce the length of inpatient stays, but also capture at least some of the revenues from a patient from preadmission through postdischarge care.<sup>216</sup>

**Growth in Hospital  
 Outpatient Care**

Outpatient departments in community hospitals have grown significantly since the 1983 introduction of Medicare’s prospective payment system and the growth of managed care during the 1980s and 1990s. After increasing slightly from 1975 to 1985, the number of visits to hospital outpatient departments nearly doubled between 1985 and 1995. During the same period, the number of days of inpatient hospital care steadily declined (see fig. 11.1).

**Figure 11.1: Changes in Community Hospital Inpatient Days and Outpatient Visits, 1975-95**



The Prospective Payment Assessment Commission reported that since fiscal year 1983, Medicare expenditures for outpatient services, excluding those for physician services, have risen an average of 14 percent annually,

<sup>216</sup>Medicare Prospective Payment and the American Health Care System: Report to the Congress, Prospective Payment Assessment Commission (Washington, D.C.: Feb. 1986).

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reaching \$16.3 billion in fiscal year 1995. An estimated 70 percent of those payments were to hospitals for services provided in outpatient departments.<sup>217</sup>

The Commission noted that payment for hospital outpatient services under Medicare is fragmented and provides little incentive for providing care in the most efficient way. According to the Commission, most services are paid on the basis of costs or charges, meaning that lower costs or charges would mean correspondingly lower payments.

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## Preadmission Testing

One reaction of hospitals to Medicare's prospective payment system and other limits on hospital payments was to provide as many services to patients as possible on an outpatient basis before admission. This is because hospitals could obtain separate payment for every outpatient test and procedure; if they waited until after admitting the patient to perform the tests, they would have to absorb the costs of such services. Services shifted to outpatient settings include both testing and laboratory work and patient education. Medicare subsequently changed its rules for inpatient prospective payment to include tests and laboratory work performed within 72 hours of admission.

Nevertheless, hospitals still find it more cost-effective to perform as many tests and as much patient education on an outpatient basis as possible. Following are programs established by community hospitals to increase preadmission testing and education:

- The Hospital Center at Orange, New Jersey, developed a preadmission testing program that includes laboratory work, electrocardiograms, social and rehabilitative service referrals, patient education, and a nursing assessment. The hospital uses specially trained registered nurses to conduct the preadmission testing. The testing program has reduced costs, increased patient and physician satisfaction, and decreased idle time for both patients and staff.<sup>218</sup>
- Sarasota Memorial Hospital, in Florida, developed a pre-anesthesia collaborative care track to address problems in preparing patients for surgery. Under the program, the registered nurse anesthesia coordinator ensures that appropriate clinical data are available to avoid last-minute

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<sup>217</sup>Report and Recommendations to the Congress, Prospective Payment Assessment Commission (Washington, D.C.: Mar. 1, 1997).

<sup>218</sup>M.E. Clyne and M. Forlenza, "Consumer Focused Preadmission Testing: A Paradigm Shift," *Journal of Nursing Care Quality*, Vol. 11, No. 3 (1997), pp. 9-15.

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delays and cancellations of scheduled surgical procedures. Delays in performing surgery resulting from the unavailability of needed clinical data are costly to hospitals and distressing to patients.<sup>219</sup>

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**Treatments More  
Frequently Provided on an  
Outpatient Basis**

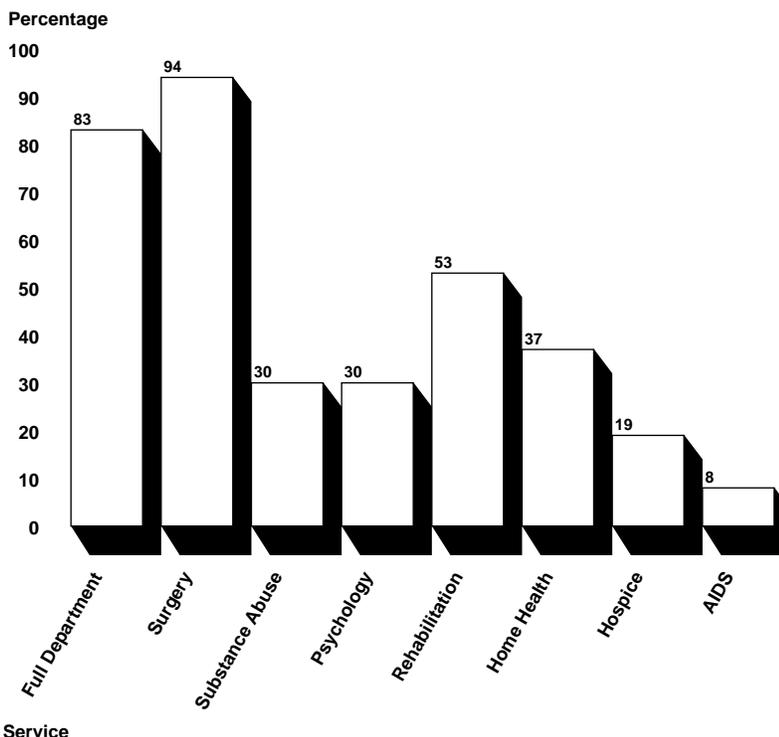
Just as prospective payment gave community hospitals incentives to perform tests and laboratory work on an outpatient basis before scheduled hospital admissions, managed care and preadmission certification programs encouraged hospitals to avoid admitting patients altogether who could safely be treated as outpatients. Community hospitals established outpatient surgery, chemotherapy, renal dialysis, and diagnostic testing programs to shift care to outpatient settings.

According to the Health Insurance Association of America (HIAA), by 1993, 83 percent of community hospitals had outpatient departments providing outpatient surgery, examination, diagnosis, and treatment for a variety of nonemergency medical conditions. HIAA notes that hospitals now offer more procedures and treatments on an outpatient basis than in the past and that occupancy in community hospitals continues to decrease in part because of this trend. In addition to traditional medical/surgical care, by 1993 community hospitals were offering a variety of other outpatient services, including substance abuse treatment, AIDS diagnosis and treatment, psychological services, and rehabilitation. (See fig. 11.2.)

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<sup>219</sup>H.L. Swanson and D.M. Scheb, "The Role of the Anesthesia Coordinator in Preadmission Testing," *AORN Journal*, Vol. 64, No. 5 (1996), pp. 776-80.

**Figure 11.2: Percentage of Community Hospitals Offering Selected Outpatient Services, 1993**



Source: HIAA, *Source Book of Health Insurance Data*, 1995.

**VA Initially Slow to Shift Care to Outpatient Settings but Has Set Ambitious Goals**

VA, without the financial incentives of community hospitals, was initially slow to shift care to outpatient settings. VA has long had authority to (1) conduct preadmission tests and provide postdischarge care on an outpatient basis (1960) and (2) provide outpatient care to any veteran if doing so would obviate the need for inpatient care (1973). Studies by the VA Inspector General, VA researchers, and us have found, however, that VA had not effectively used this authority to shift more care to outpatient settings. During the past several years, VA has increasingly focused on providing care in more cost-effective outpatient settings.

**Increased Outpatient Demand Linked to Expanded Eligibility and New Clinics**

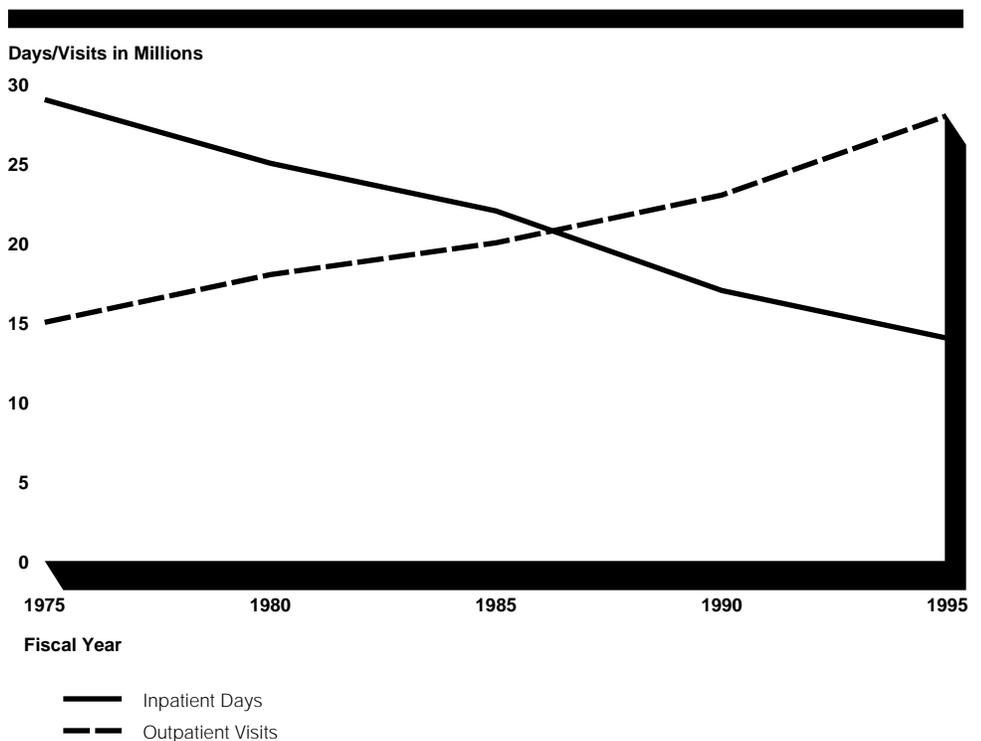
VA hospitals, like community hospitals, have had steadily increasing outpatient workloads and correspondingly decreasing inpatient hospital-days of care. Much of VA's increase in outpatient demand, however, can be attributed to eligibility expansions and opening of new clinics rather than shifting care from inpatient to outpatient settings.

**Chapter 11**  
**Changes in Monitoring and Delivering**  
**Hospital Patient Care**

In its fiscal year 1975 annual report, VA noted the relationship between the “progressive expansion of legislation expanding the availability of outpatient services and increased outpatient workload.” Among the eligibility expansions occurring between 1960 and 1975 were actions to authorize (1) pre- and posthospital care for treating nonservice-connected conditions (1960) and (2) outpatient treatment to obviate the need for hospitalization (1973). Workload at VA outpatient clinics increased from about 2 million to 12 million visits during the 15-year period.

Just as these eligibility expansions increased outpatient workload, VA efforts to improve the accessibility of VA care resulted in more demand for outpatient care. Between 1980 and 1995, the number of VA outpatient clinics increased from 222 to 565, including many mobile clinics that bring outpatient care closer to veterans in rural areas. Between 1980 and 1995, outpatient visits provided by VA clinics increased from 18 million to 27.5 million as inpatient days of care were steadily decreasing (see fig. 11.3).

**Figure 11.3: Changes in VA Hospital Inpatient Days of Care and Outpatient Visits, 1975-95**



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**Studies Find Much of VA's  
Inpatient Hospital Care to Be  
Non-Acute**

As previously discussed, as recently as the early 1990s, the VA Inspector General was reporting that much of the surgery performed in VA hospitals on an inpatient basis could have been performed on an outpatient basis if VA had established outpatient surgery capability at its medical centers. Similarly, studies by VA researchers consistently found that over 40 percent of the days of care in VA hospitals were non-acute. For example, a 1991 VA-funded study of admissions to VA acute medical and surgical bed sections estimated that 43 percent (+ or -3 percent) of admissions were non-acute.<sup>220</sup>

Under the study, non-acute admissions in the 50 randomly selected VA hospitals ranged from 25 to 72 percent. The study found that the most common reason for non-acute medical admissions was that care could have been performed on an outpatient basis. All of the surgical admissions determined to be non-acute were found to (1) be procedures that VA had determined could be done on an outpatient basis and (2) lack documented risk factors indicating a need for inpatient care. The study concluded that, on the basis of medical necessity, a large proportion of acute medical/surgical care in VA medical centers could be shifted to outpatient and long-term care settings.

Among the reasons the study cited for the high rate of non-acute admissions were

- the absence of financial incentives for VA hospitals to shift care to outpatient settings;
- the absence of formal mechanisms, such as mandatory preadmission review, to control non-acute admissions; and
- VA's significant social mission that may influence use of inpatient resources.

In a separate article, the same authors estimated that 48 percent (+ or -2 percent) of the days of care at the 136 VA medical centers providing acute medical and surgical care were non-acute, ranging from 38 to 72 percent.<sup>221</sup> Yet another study, this one published in 1993, found that (1) 47 percent of the admissions and 45 percent of the days of care in VA

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<sup>220</sup>Brenda Booth and others, "Nonacute Inpatient Admissions to Department of Veterans Affairs Medical Centers," *Medical Care*, Vol. 29, No. 8, Supplement (1991), pp. AS40-50.

<sup>221</sup>Booth and others, "Nonacute Days of Care Within Department of Veterans Affairs Medical Centers," *Medical Care*, pp. AS40-50.

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**VA Initiates Actions to Shift  
More Care to Outpatient Sites**

medical wards were non-acute and (2) 64 percent of surgical admissions and 34 percent of days of care in VA surgical wards were non-acute.<sup>222</sup>

The Under Secretary for Health's 1996 Prescription for Change identified a series of planned actions to shift more of VA's care from hospital to outpatient settings. These actions include

- increasing VA's outpatient capacity to accommodate the workload shifted from inpatient to outpatient settings;
- requiring each network to develop hospital admission, utilization, and length of stay criteria;
- requiring each network to implement preadmission screening programs;
- increasing outpatient surgery and diagnostic procedure capacity and utilization; and
- increasing temporary lodging and residential care capabilities to accommodate patients needing housing but not acute hospital care while being diagnosed or treated.

Many of these actions, such as establishing preadmission screening programs, temporary lodging, and outpatient surgery programs, address the specific problems identified in the above-mentioned studies.

VA established performance measures to gauge its progress in implementing some of the actions identified in its Prescription. For example, its fiscal year 1996 performance measures for VISN directors set the expectation that at least 50 percent of surgeries and other invasive procedures would be performed on an outpatient basis; to be considered exceptional, 65 percent or more of surgeries would have to be performed on an outpatient basis.<sup>223</sup> All but eight VISNs met the minimum requirement for fully successful performance; VA determined that each of the eight had made statistically significant improvement.

Another performance measure required VISNs to reduce their BDOC by 20 percent during fiscal year 1996. Although seven VISNs did not meet the goal, all had made statistically significant progress. Three VISNs—4 (Pittsburgh), 5 (Baltimore), and 7 (Atlanta)—reported 29-percent reductions in BDOC.

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<sup>222</sup>Charles B. Smith, "Pilot Study of ISD\* Measurement of Appropriateness of Bed Utilization," Health Services Research and Development Project, SDR #91-010 (Washington, D.C.: June 16, 1993).

<sup>223</sup>In fiscal year 1992, less than 5 percent of VA surgical and invasive procedures were performed on an outpatient basis. VA reported that the percentage of such procedures done on an outpatient basis had increased to 39 percent by Sept. 1995.

Finally, the performance measures required all VISNS to establish, by September 30, 1996, (1) temporary lodging capacity to accommodate 10 patients, (2) a VISN-wide preadmission screening program, (3) admission and discharge planning programs, and (4) a telephone liaison program. VA reported that all VISNS have complied with these requirements.

In its 1997 performance measures, VA revised its performance measure for the percentage of surgeries and invasive procedures performed in an outpatient setting to link the goal to HCFA data. To be assessed as fully successful, a VISN must perform 65 percent of the surgeries and diagnostic procedures that HCFA will reimburse in outpatient settings in such settings. In its assessment of mid-year performance for 1997, VA reported that 10 VISNS had met or exceeded the goal. All VISNS, however, improved from fiscal year 1996.

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## Hospitals Are Increasingly Discharging Patients to Other Care Settings

Just as prospective payment encouraged hospitals to reduce the length of patient stays by performing tests and patient education on an outpatient basis before admission, it provided incentives for community hospitals to discharge patients sooner to other care settings such as home health and nursing home care.

The 1986 Annual Report of the Prospective Payment Review Commission noted that hospitals may shift services previously performed on an inpatient basis to alternative settings such as nursing homes, other long-term care facilities, and home health care. The Commission also noted that some cases requiring extra days of care may be transferred to another acute care hospital. It noted that such transfers may lower the quality of care and lead to higher costs. VA researchers found in a 1990 study that the number of transfers from community hospitals to VA hospitals increased substantially following implementation of the Medicare prospective payment system. The study suggested that some of the savings attributed to prospective payment may simply have been a shifting of costs from Medicare to the VA system.<sup>224</sup>

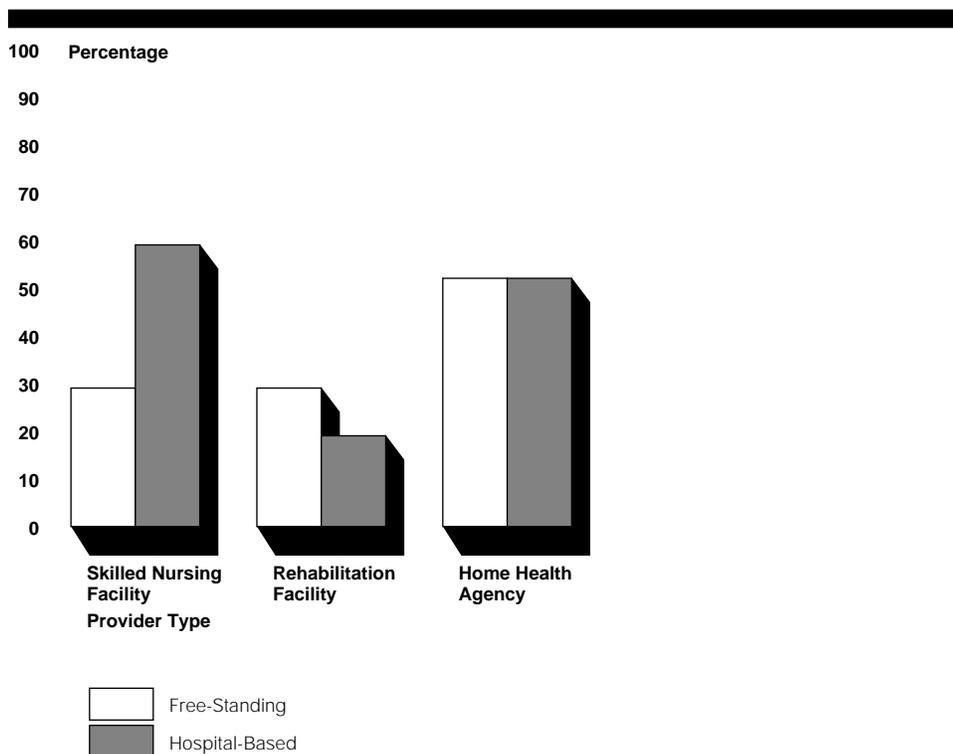
As previously discussed, hospitals are expanding into the post-acute care market. From 1991 to 1995, the number of Medicare-certified, hospital-based skilled nursing facilities increased 59 percent, hospital-based rehabilitation facilities increased 19 percent, and hospital-based home

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<sup>224</sup>J. Hurley, D. Linz, and E. Swint, "Assessing the Effects of the Medicare Prospective Payment System on the Demand for VA Inpatient Services: An Examination of Transfers and Discharges of Problem Patients," Health Services Research, Vol. 25, No. 1 (1990), pp. 239-55.

health agencies increased 52 percent. The number of free-standing facilities grew similarly (see fig. 11.4).

**Figure 11.4: Percentage Increase in Post-Acute Care Facilities, 1991-95**



The Prospective Payment Assessment Commission reported that Medicare payments for post-acute care skyrocketed between 1988 and 1994. In 1988, post-acute care accounted for only about 8 percent of Medicare part A payments; by 1994, they accounted for 25 percent. Although growth of post-acute payments has since slowed, payments to these providers are growing twice as fast as total part A spending.<sup>225</sup> The Commission noted that many services now provided in outpatient and post-acute settings were previously provided in acute hospitals. It also noted, however, that several other factors, including medical advances and changing practice

<sup>225</sup>Report and Recommendations to the Congress, Prospective Payment Assessment Commission.

patterns, also affect the increased demand for post-acute services. We made similar observations in a December 1996 report.<sup>226</sup>

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### VA Is Also Discharging Patients to Alternative Settings

As discussed, VA hospitals lagged behind community hospitals in shifting patients from inpatient to post-acute care settings even though such settings have long been a part of the VA health care system. The Under Secretary for Health's Prescription for Change identifies a series of planned actions to discharge patients sooner to other, more cost-effective settings. These actions include

- requiring each network to develop utilization and length of stay criteria;
- requiring each network to implement discharge planning programs;
- expanding VA's hospital-based home care program to include home intravenous therapy, total parenteral nutrition, and other services;
- expanding VA's continuum of clinical service settings so that patient care can be provided in the most cost-effective clinically appropriate setting; and
- expanding use of noninstitutional long-term care when clinically appropriate and financially sound.

None of VA's fiscal year 1996 or 1997 performance measures, however, specifically addressed increased use of post-acute care as an alternative to inpatient hospital care. Nor did VISN plans address the subject.

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### Issues VA Needs to Address Concerning Changes in Its Patient Care Monitoring and Delivery

Our work identified several issues and challenges concerning VA's efforts to monitor patient care and shift care to alternative settings. First, regarding efforts to develop and implement clinical guidelines, little information is available either in VA or the private sector on the extent to which physicians and other caregivers are following clinical guidelines and to what effect. In addition, VA's development and evaluation of clinical guidelines rely heavily on successful completion of efforts to improve its management information and financial management systems. Thus, VA, like the private sector, faces significant challenges, in developing clinical guidelines, evaluating their effectiveness, and ensuring their appropriate use.

The second major challenge is in developing and using outcome measures. For example, outcome measures will probably have little effect on hospital

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<sup>226</sup>Skilled Nursing Facilities: Approval Process for Certain Services May Result in Higher Medicare Costs (GAO/HEHS-97-18, Dec. 20, 1996).

operations and individual provider performance without VA's effectively distributing the results of assessments and monitoring corrective actions. Similarly, the effectiveness of outcome measures will depend heavily on VA's ability to identify and develop meaningful ways to compare VA and other health care providers and programs as well as VA facilities and providers. VA must take care, however, to ensure that the results portrayed by outcome measures reflect differences in performance rather than differences in the populations studied. Effective case mix comparisons are, however, difficult to develop.

One of VA's initial efforts to develop outcome measures is its performance measures for VISN directors. These measures are process oriented, however, such as the number of surgeries shifted to outpatient settings and the reduction of BDOC, rather than outcome oriented. As discussed in chapter 6, VA's 1997 performance measures present a view of VISN efficiency that conflicts with that portrayed by VERA. For example, VA began setting its goals for reducing BDOC on the basis of Medicare days of care per 1,000 beneficiaries by census division. Under this performance measure, VERA identified four of the seven VISNs required to reduce BDOC by 20 percent or more as comparatively more efficient VISNs. The VISN required to reduce BDOC by the greatest percentage—39 percent—was determined under VERA to qualify for one of the larger increases in funding on the basis of its perceived efficiency.

Similarly, another performance measure set VISN-specific goals for increasing the number of mandatory care category users. Generally, however, the VISNs needing the smallest increases in new users to meet their goals were those receiving the largest increases in funding under VERA.

Because of the apparent inconsistencies between the performance measures and VERA analyses, VA faces a significant challenge in determining (1) the underlying causes of variation in the rates of hospital use and (2) to what extent the variation can be reduced without jeopardizing patient care. An important part of such an assessment is developing baseline data on each VA facility. VA studies show that although all VA hospitals studied had significant amounts of non-acute care, the percentages varied from about 25 percent to over 70 percent. Baseline data on VA's surgery programs showing the percentages of surgeries needed to be done on an inpatient basis would provide a sound basis for establishing goals for reducing inpatient surgeries. Setting performance measures without such baseline data could require some facilities to jeopardize

patient care to meet the goals, while other facilities could meet the goals and still provide extensive non-acute care. VA is gathering the types of baseline data that could be used to establish facility-specific performance measures through its preadmission screening program.

A third challenge VA faces is in evaluating the effectiveness of VA initiatives, such as establishing temporary lodging in VA hospitals, in reducing costs. For example, little is known about how much it costs VA to provide temporary lodging because such initiatives are recent. VISNS and individual hospitals face significant challenges in determining when it would be less expensive to purchase care from a hospital or outpatient clinic closer to a veteran's home rather than pay for additional nights of lodging to provide care at a VA facility.

Although the temporary lodging program should be less expensive than admitting a patient earlier or keeping a patient in a hospital longer than medically necessary, providing lodging in a hospital using VA hospital staff may not always be the lowest cost alternative. In arranging for temporary lodging, VA could explore many other alternatives, including using nearby commercial lodging and hiring an outside contractor to operate a temporary lodging unit.

The use of temporary lodging also raises several policy issues. For example, to what extent should veterans, rather than the government, be expected to pay for temporary lodging incident to direct patient care? To the extent that providing free lodging encourages longer and more frequent stays, it could offset the savings achieved by using fewer hospital beds. Similarly, to what extent should temporary lodging be made available to family members? Finally, should temporary lodging be provided to veterans traveling significant distances for outpatient services?

Neither performance measures nor VISN strategic plans focus on efforts to shift care to post-acute settings when medically appropriate. The effectiveness of such actions depends on many factors such as

- the adequacy of discharge planning efforts,
- efforts to ensure that patients are not discharged before medically appropriate,
- the extent to which patients receive appropriate follow-on care, and

- the extent to which the cost of home health or other post-acute care services exceed the cost that would have been incurred through continued institutional care.

The overall effect of VA efforts depends as well on the extent to which VA facilities shift the costs of post-acute care to other payers such as the Medicare home health program. To the extent that such shifts occur, higher costs under Medicare and Medicaid will offset any savings VA achieves through efficiencies.

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# Changes in Teaching Hospitals' Medical Education Mission

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Teaching hospitals' medical education missions have changed significantly.<sup>227</sup> Until recently, both nonfederal and VA teaching hospitals had steadily increased their use of medical residents partly because residents were a lower cost labor source. Because of increasing concern that the growing number of medical residents contributes to the oversupply of physicians and increased health care costs, the Congress has provided financial incentives to hospitals to reduce the number of residency positions. Both nonfederal and VA teaching hospitals are also changing the focus of their residency programs to increase the number of primary care residencies in response to the growth of managed care. Finally, nonfederal teaching hospitals are offering significant discounts to managed care plans; VA hospitals, however, are not.

Several issues and challenges surround VA's future role in medical education. For example, should financial incentives similar to those provided to non-VA teaching hospitals through the Balanced Budget Act of 1997 be provided to VA to encourage reductions in residency positions? Furthermore, how does the declining demand for VA hospital care affect the viability of the medical education program? Finally, VA is likely to find it increasingly difficult to assert its independence from its affiliated medical schools as tough decisions about the future of hospitals and residency programs are debated.

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## What Is Graduate Medical Education?

Graduate medical education (GME) refers to the period following the completion of medical school in which physicians, as residents, receive further training in fields such as family practice, general surgery, or anesthesiology. GME takes place in federal (including VA) and nonfederal teaching hospitals. Although over 1,000 U.S. hospitals had at least one teaching program in 1996,<sup>228</sup> about 80 percent of residents train in large tertiary care hospitals belonging to the Council of Teaching Hospitals.<sup>229</sup> In 1996, the Council had about 400 member hospitals.

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<sup>227</sup>Teaching hospitals have one or more graduate medical education (GME) programs approved by the Accreditation Council on Graduate Medical Education or the American Osteopathic Association.

<sup>228</sup>Medicare and the American Health Care System Report to the Congress, Prospective Payment Assessment Commission (Washington, D.C.: June 1996).

<sup>229</sup>Physician Payment Review Commission Annual Report to the Congress, Physician Payment Review Commission (Washington, D.C.: 1992).

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## Medicare Is the Largest Source of GME Financing

Nonfederal teaching hospitals pay for GME through a combination of inpatient revenues (both hospital payments and faculty physician fees) and a complex mix of federal and state government funds. The federal government is the largest single source of financing for GME through the Medicare program and through its support of residencies in VA and DOD hospitals.<sup>230</sup>

From its inception in 1965, the Medicare program has reimbursed teaching hospitals for its share of the costs of training interns and residents. When Medicare adopted its prospective payment system in 1983, it developed new policies. Medicare now recognizes the costs of GME under two mechanisms: direct medical education payments and an indirect medical education adjustment to prospective payment rates.

GME's direct costs include residents' stipends, supervising faculty salaries, administrative expenses, and institutional overhead allocated to residency programs. Hospitals receive additional payments to cover Medicare's share of these direct costs.

In addition to payments for direct costs, teaching hospitals receive an indirect hospital-specific percentage adjustment (based on the ratio of interns and residents per bed) to their total diagnosis-related group payments to compensate them for their relatively higher costs. The adjustment has been a critical source of revenue for teaching hospitals, particularly those serving large low-income and uninsured populations.

In fiscal year 1991, Medicare paid approximately \$1.5 billion in direct GME payments and \$2.9 billion in indirect adjustments to prospective payment rates.<sup>231</sup> In fiscal year 1997, it is estimated that Medicare paid approximately \$2.5 billion in direct GME payments and \$4.6 billion in indirect adjustments to prospective payment rates.

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## VA Plays a Significant Role in Medical Education

Medical education is one of VA's four core missions. Since 1946, VA facilities have been authorized to enter into agreements with medical schools and their teaching hospitals. Under these agreements, VA hospitals provide training for medical residents and students and appoint medical

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<sup>230</sup>Private insurers also contribute toward the cost of GME, though not through direct payments. Teaching hospitals' charges to Blue Cross and commercial insurers often reflect GME's direct costs (for example, residents' stipends).

<sup>231</sup>Physician Payment Review Commission Annual Report to the Congress, Physician Payment Review Commission.

school faculty as VA staff physicians to supervise resident education and patient care. Over half of the nation's physicians received some of their training through VA programs.

In 1997, 130 VA facilities had affiliation agreements with one or more medical schools; 105 medical schools had affiliation agreements with the Veterans Health Administration (VHA). More than 34,000 medical residents and 21,000 medical students receive some of their training in VA facilities every year. VHA supports about 8,900 residency positions, about 8.7 percent of those in the United States. Almost one-third of U.S. residents rotate through VA in any given year.

In addition to training medical residents, VA is affiliated with schools of dentistry, optometry, podiatry, nursing, and other associated health professions. All told, VA was affiliated with over 1,000 educational institutions and provided all or some of the training provided to about 107,000 medical and other students in fiscal year 1996. About 95 percent of the associated health students being trained in VA facilities receive no compensation. Table 12.1 shows the number of residents and students rotating through VA and the number of paid VA positions in fiscal year 1996.

**Table 12.1: Number of Residents and Students Rotating Through VA Facilities, Fiscal Year 1996**

<b>Health profession</b>	<b>Number rotating through VA</b>	<b>Number of paid VA positions</b>
Physician residents and fellows	32,612	9,063
Medical students	20,011	0
Nursing students	27,194	0
Associated health residents and students	27,096	2,901
<b>Total</b>	<b>106,913</b>	<b>11,964</b>

## Teaching Hospitals Had Increased but Are Now Decreasing the Number of Medical Residents

Teaching hospitals, including those operated by VA, save money by using medical residents and other students as a lower cost supply of physicians, physician assistants, and nurse practitioners. For many years, both Medicare's hospital reimbursement policies and VA's stipends encouraged hospitals to expand the use of medical residents. Some health policy experts believe, however, that teaching hospitals' demands for medical residents are contributing to an oversupply of physicians and to higher health care costs. As a result, both Medicare and the VA health care system have acted to reduce the number of residency positions. Reducing the number of medical residents by substituting other health care personnel,

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however, is estimated to increase teaching hospitals' operating costs significantly.

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### **Medical Residents Provide a Low-Cost Source of Labor**

Medical residents long represented a low-cost source of labor for teaching hospitals because (1) residents work long hours in exchange for relatively small stipends to offset their living costs and (2) Medicare and other programs' reimbursement methods provide financial incentives to use residents to perform functions that could be done by physician assistants or nurse practitioners.

Medicare financing for direct GME creates an incentive for nonfederal hospitals to employ residents instead of highly skilled nonphysician practitioners or fully trained salaried physicians. Residents are expected to work long hours in exchange for a stipend that can largely be passed on to Medicare through direct GME payments. A nurse practitioner or physician assistant, in contrast, may be able to provide comparable service on a medical ward or in the operating room but commands a higher salary, works fewer hours, and does not generate additional Medicare payments.

Medicare makes both direct and indirect payments to hospitals on the basis of the number of residents they employ, making Medicare GME, in effect, an uncapped entitlement. In other words, Medicare pays hospitals for as many residents as they employ.<sup>232</sup>

The Congressional Budget Office estimated that Medicare paid teaching hospitals an average of \$88,000 per resident in 1993.<sup>233</sup> By increasing residents, hospitals may raise their total Medicare teaching payments by substantially more than the direct salary and benefit costs they incur. Residents also provide patient care services to hospitals; therefore, hospitals have a strong incentive to hire more of them.

Like the private sector, VA benefits financially because its residents represent a low-cost source of labor. For example, VA estimates that it pays residents stipends of \$34,000 a year compared with \$100,000 for a physician and \$60,000 for a nonphysician provider. The difference in cost per hour, however, is even greater because residents typically work 60 hours weekly compared with 40 hours for physicians and other providers.

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<sup>232</sup>Fitzhugh Mullan, "Powerful Hands: Making the Most of Graduate Medical Education," *Health Affairs*, Vol. 15, No. 2 (1996), pp. 249-53.

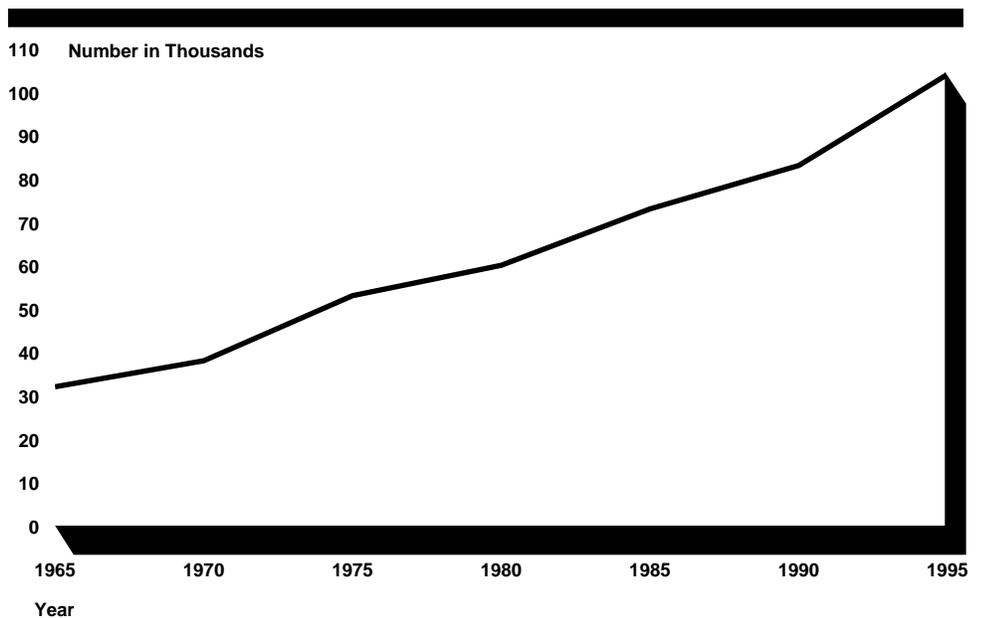
<sup>233</sup>*Medicare and Graduate Medical Education*, Congressional Budget Office (Washington, D.C.: Sept. 1995).

Unlike community hospitals, however, VA hospitals do not receive additional payments from Medicare to support their GME programs. VA does, however, through the Veterans Equitable Resource Allocation (VERA) system, allocate additional funds to its Veterans Integrated Service Networks (VISN) to compensate them for the higher costs of their medical education missions.

**Medical Residents More Than Doubled in 25 Years**

Due in part to Medicare's funding of the costs of GME programs, the total number of medical residents more than doubled between 1965 and 1990, from 31,898 to 82,902.<sup>234</sup> That growth has continued in the 1990s. The American Association of Medical Colleges reported 103,640 residents in the 1994-95 academic year.<sup>235</sup> (See fig. 12.1.)

**Figure 12.1: Growth in the Number of Medical Residents, 1965-95**



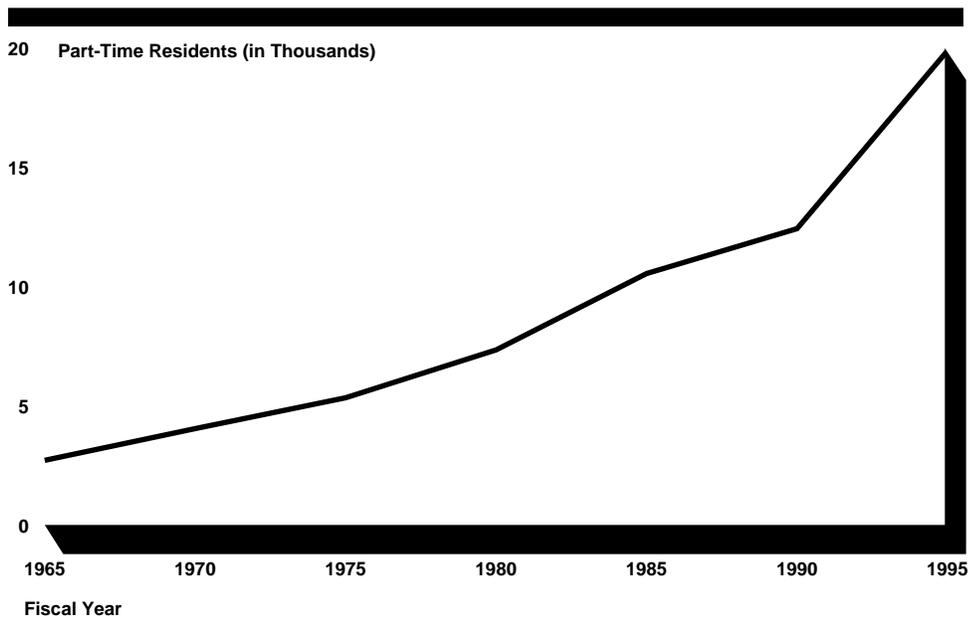
Source: Based on data from the Physician Payment Review Commission Annual Report to Congress, 1992 and the American Association of Medical Colleges.

<sup>234</sup>Physician Payment Review Commission Annual Report to the Congress, Physicians Payment Review Commission.

<sup>235</sup>Medicare and the American Health Care System Report to the Congress, Prospective Payment Assessment Commission.

VA hospitals also increased their use of medical residents. Between 1975 and 1995, the number of VA part-time residents increased 366 percent, from 5,329 to 19,872.<sup>236</sup> (See fig. 12.2.)

Figure 12.2: Increased Use of Part-Time Medical Residents in VA Medical Centers, 1975-95



Source: VA, Trend Data: Fiscal Years 1963-1987 and Trend Data: Fiscal Years 1970-1995.

Although the number of part-time residents rotating through VA has increased nearly 80 percent since 1987, VA's Residency Realignment Review Committee reported that the number of VA resident positions increased only 2.9 percent between 1987 and 1995. An official from VA's Office of Academic Affairs did not know the reason for the differences between the number of part-time VA residents at the end of the fiscal year and the number of paid residency positions. He suggested that some residents may not have been removed from the rolls at the end of their VA tour of duty.

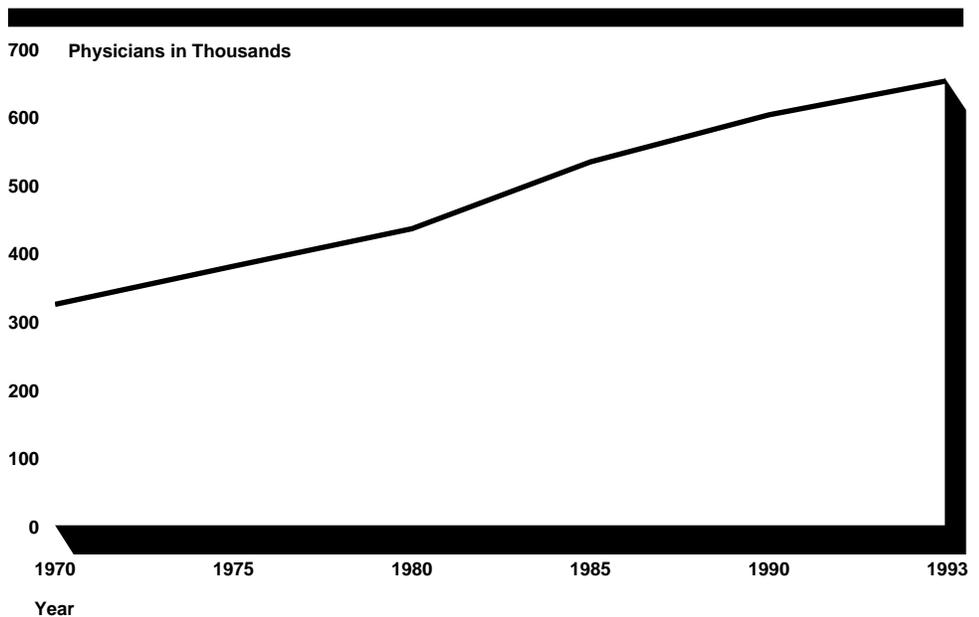
<sup>236</sup>Trend Data: Fiscal Years 1970-1995, National Center for Veteran Analysis and Statistics (Washington, D.C.).

**Demands for Medical Residents Viewed as Contributing to Oversupply of Physicians**

Teaching hospitals' demands for medical residents, according to some health policy experts, may have contributed to an oversupply of physicians. This oversupply is, in their view, a major factor in rising health care costs.

The number of active U.S. physicians more than doubled between 1970 and 1993. (See fig. 12.3.) Active physicians per 10,000 population increased from 15.7 to 25.1 during that period.<sup>237</sup>

**Figure 12.3: Active Physicians in the United States, 1970-93**



Source: HCFA, 1996 Data Compendium.

The Pew Health Professions Commission recommended dramatic reductions in the training of new doctors, including a reduction of 20 to 25 percent in the number of students entering U.S. medical schools.<sup>238</sup> Eliminating residency positions, however, would result in losing not only

<sup>237</sup>1996 Data Compendium, Health Care Financing Administration (HCFA), Bureau of Data Management and Strategy (Baltimore, Md.: Mar. 1996), p. 99.

<sup>238</sup>Critical Challenges: Revitalizing the Health Professions for the Twenty-First Century: The Third Report of the Pew Health Professions Commission, Pew Health Professions Commission (San Francisco: Dec. 1995).

the direct medical education payment, but also the indirect medical education payment, creating a major financial loss for teaching hospitals.

Similarly, the Council on Graduate Medical Education recommended an overall reduction in the nation's physician supply and the number of physicians in training. Reducing the number of medical residents would, however, force teaching hospitals to seek alternative professionals to substitute for providing the care that resident physicians now provide.

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### Replacing Medical Residents With Other Medical Personnel Entails Costs

Although some substitution is occurring now, teaching hospitals are concerned about the potential cost of increased substitution as the number of residents declines. Using nonphysician providers would mean employing a variety of providers at a higher cost than teaching hospitals have had to incur in the past by using medical residents.

An analysis of the potential cost of replacing residents with midlevel practitioners in New York City has highlighted the significant amount of money teaching hospitals have been able to save by using residents in the past. In New York state, residents' salaries were fully covered by federal and state direct medical education payments. Teaching hospitals in the state received \$2.9 billion in GME payments in 1995—roughly \$188,000 per resident.<sup>239</sup> Hospitals losing residency positions would thus not only lose those payments, but would also incur new costs to hire additional physicians, nurse practitioners, and physician assistants to perform their duties. The analysis estimated that, on average, hospitals would need to hire three midlevel practitioners to replace each resident. The salary costs of replacing all residents with midlevel practitioners were estimated to range from \$242 million to \$600 million.<sup>240</sup>

In a survey of teaching hospitals, 178 (62 percent) of the responding medical directors reported that they already used substitution involving physician assistants and nurse practitioners to some extent at their hospitals. They reported that they used substitution in a wide range of services, including surgery, primary care, and medical specialties. Almost

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<sup>239</sup>Stephen S. Mick and Shoou-Yih Daniel Lee, "The Safety-Net Role of International Medical Graduates," *Health Affairs*, Vol. 16, No. 4 (1997), pp. 144-9.

<sup>240</sup>Barbara A. Green and Tim Johnson, "Replacing Residents With Midlevel Practitioners: A New York City-Area Analysis," *Health Affairs Datawatch*, (Summer 1995), pp. 192-8.

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all survey respondents expressed satisfaction with the substitution, including physicians, nurses, residents, and patients.<sup>241</sup>

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### **The Congress, HCFA, and VA Act to Reduce Residency Positions**

Recent actions by the Congress, HCFA, and VA indicate that the number of residents will probably decline in the future. For example, the Balanced Budget Act of 1997 froze the number of residency positions Medicare will fund at a hospital at the number of full-time equivalent (FTE) interns and residents in the hospital in 1996.

New York hospitals sought and received from HCFA a program that rewards them for reducing residency positions. In February 1997, HCFA approved a demonstration project proposed by the Greater New York Hospital Association. Under the project, HCFA will provide incentive payments totaling \$400 million over the next 5 years to 42 New York teaching hospitals. The goal of the project is to reduce the number of residents trained by the 42 hospitals by up to 25 percent over the 5-year period.

The Balanced Budget Act of 1997 authorized similar incentive payments to hospitals in other states that participate in plans for voluntarily reducing the number of resident positions. Essentially, participating hospitals may receive "hold harmless" payments if they agree to reduce the number of residents by specified amounts. For example, a hospital with more than 750 residents would qualify for the incentive payments if it submitted to HCFA an acceptable plan to reduce the number of residents by 20 percent over a 5-year period. The hold harmless payments would decline over the 5-year period.

In late 1995, VA established a Residency Realignment Review Committee to make recommendations for possibly realigning VA's residency programs to ensure that VA's GME program meets VA's current and future needs. In its May 1996 report, the Committee recommended eliminating 250 residency positions in disciplines other than primary care and reallocating 750 positions from specialties to primary care. The Committee estimated that it would cost VA almost three times as much to replace a resident with a physician or nonphysician provider. The VISN strategic plans, however, contain little information on implementing the Committee's recommendations.

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<sup>241</sup>Roberta Riportella-Muller, Donald Libby, and David Kindig, "The Substitution of Physician Assistants and Nurse Practitioners for Physician Residents in Teaching Hospitals," *Health Affairs*, (Summer 1995), pp. 181-91.

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## Increased Hiring of Foreign Medical School Graduates

The growth in the number of medical residents between 1989 and 1995 can be attributed to increasing numbers of residency positions established for graduates of foreign medical schools. Residency positions for graduates of U.S. medical schools have actually declined since 1989. By 1996, graduates of foreign medical schools accounted for over one-fourth of residency positions. VA, like community hospitals, uses foreign medical school graduates extensively.

Between 1989 and 1995, the number of foreign medical school graduates in U.S. residency training programs more than doubled, from 12,259 to 24,982. During the same period, the number of U.S. medical school graduates in residency training declined slightly, from 73,071 to 71,053.<sup>242</sup>

To reduce the number of physicians, some policymakers are calling for using fewer foreign-trained physicians and for restrictions on their training. Efforts to restrict the arrival and impede the permanent residence of foreign-trained physicians are under way. For example, the Pew Health Professions Commission and the Institute of Medicine issued high-profile statements about reshaping the physician workforce by using fewer foreign-trained physicians. More recently, the Association of American Medical Colleges, the American Medical Association (AMA), and other national professional associations issued a consensus statement calling for restrictions on training.<sup>243</sup>

Others, however, caution that limiting the number of foreign medical school residency positions could reduce services in medically underserved areas. Although the nation has a surplus of physicians, some communities have had a chronic physician shortage. Hospitals in such communities have used residency programs and the associated Medicare GME funds to attract and pay resident physicians for essentially providing clinical care.<sup>244</sup>

In some cases, hospitals in poor communities do not have teaching programs attractive enough to U.S. medical students. Therefore, the communities have hired foreign medical graduates willing to provide care to uninsured individuals. In such instances, Medicare GME payments have helped communities address significant physician shortages. Some have expressed concern that limiting Medicare GME payments or the use of

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<sup>242</sup>Mick and Lee, "The Safety-Net Role of International Medical Graduates," *Health Affairs*, pp. 141-49.

<sup>243</sup>Mick and Lee, "The Safety-Net Role of International Medical Graduates," *Health Affairs*, pp. 141-49.

<sup>244</sup>Fitzhugh Mullan, "Powerful Hands: Making the Most of Graduate Medical Education," *Health Affairs*, pp. 249-53.

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foreign medical residents might adversely affect the ability of such communities to meet their health care needs.<sup>245</sup>

VA officials estimate that 18 to 20 percent of its residents graduate from foreign medical schools. According to VA officials, VA does not have a specific policy on using foreign medical school graduates; it tries to recruit the best candidates regardless of where they attended school. VA officials also indicated, however, that VA hires foreign medical graduates because the supply of U.S. medical school graduates does not meet its demand for first-year resident positions. U.S. medical schools supply only about 100 graduates for every 140 jobs VA has available.

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## **Teaching Hospitals Shift Toward Primary Care Residencies**

The increased emphasis on managed care has fostered an increased demand for primary care physicians. Meanwhile, as more of the diagnosis and care are provided in outpatient settings, teaching hospitals have increasingly recognized that physicians need to obtain some of their training in outpatient care settings rather than hospitals. Recent changes in Medicare payment policies have encouraged increased training of primary care residents and authorized training in outpatient settings. VA is both increasing the percentage of its residency positions in primary care and providing more of its training in outpatient care sites.

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## **Growth of Managed Care Increases Demand for Primary Care Physicians**

The growth of HMOs and other managed care plans has generated increased demand for physicians trained in primary care. As in private-sector managed care plans, VA's efforts to restructure its health care system are increasing demand for primary care physicians. Like the private sector, VA has too many specialists and too few primary care physicians. The director of one VA medical center told us that VA needs a ratio of 60 percent generalists to 40 percent specialists but has a ratio of about 20 percent generalists to 80 percent specialists.

Consistent with the increased demand for primary care physicians, one recent study reported that the number of jobs advertised for physician specialists has declined considerably over the past 5 years with the exception of pediatric specialists. The number of jobs advertised for internal medicine specialists declined most dramatically—by 75 percent since 1990. The study found that four times as many jobs were advertised for specialists in 1990 as for generalists. Only 5 years later, however, the

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<sup>245</sup>Mick and Lee, "The Safety-Net Role of International Medical Graduates," *Health Affairs*, pp. 141-49.

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ratio of advertised positions for specialists compared with those for generalists dropped to 1 to 8.<sup>246</sup>

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**Actions Taken by the  
Congress and VA to  
Produce More Primary  
Care Physicians**

Both the Congress and VA have acted to increase the number of physicians trained in primary care. After the Physician Payment Review Commission reported in 1992 that the share of residents in generalist fields was dropping while medical specialties were constituting a larger proportion of residents,<sup>247</sup> the Congress made changes in Medicare payments for GME that discouraged excessive specialty residencies. Specifically, the Omnibus Budget Reconciliation Act (OBRA) of 1993 created separate hospital-specific payment rates for primary care and nonprimary care residents. The law permitted rates for primary care (and obstetrics and gynecology) residents to be adjusted on the basis of the consumer price index, while freezing rates for other residents in fiscal years 1994 and 1995.<sup>248</sup>

Similarly, VA's Office of Academic Affairs started a program to increase training in primary care. As a result, the number of VA residency positions in primary care increased from 2,920 in 1992 to 3,306 in 1995. In addition, the Residency Realignment Review Committee, in recommending a 250-position decrease in the number of VA-funded residency positions, indicated that the reductions should come from disciplines other than primary care. The Committee also recommended that 750 residency positions be shifted from specialties to primary care. It estimated that implementing the recommendations would increase the percentage of VA residency positions in primary care from 34 percent in 1987 to 49 percent upon completion of the phased implementation in 2001.

Among the approaches VA is using to increase training in primary care is the Primary Care Education (PRIME) program. Created in 1993 by the Office of Academic Affairs, PRIME funds trainee awards to VA facilities providing primary and managed care to veterans using a multidisciplinary team approach. In academic year 1996-97, PRIME included 445 medical resident

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<sup>246</sup>Sarena D. Seifer, Barbara Troupin, and Gordon D. Rubinfeld, "Changes in Marketplace Demand for Physicians: A Study of Medical Journal Recruitment Advertisements," *JAMA*, Vol. 276, No. 9 (1996), pp. 695-9.

<sup>247</sup>Physician Payment Review Commission Annual Report to the Congress, Physician Payment Review Commission.

<sup>248</sup>OBRA 1993 also reduced payments for specialty residents by counting all residents beyond their initial residency period as half of an FTE. The special treatment of geriatric residencies was retained and extended to preventive care residencies. Under the new weighing, specialty residents in fields such as cardiology are counted as half an FTE throughout their training.

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positions at 80 sites and almost 1,000 associated health trainee positions. Most of the residency positions were in internal medicine.

VISN strategic plans have generally contained no substantive discussion of plans to increase training of primary care physicians.

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## **Inpatient Training Declining in Importance**

As the focus of health care shifts from hospitals to physicians' offices and outpatient clinics, some of the training provided to medical residents needs to be shifted to such settings. Before the enactment of the Balanced Budget Act of 1997, however, Medicare payment policies discouraged teaching hospitals from supporting such shifts. In contrast, VA has long provided medical education through its outpatient clinics.

The importance of training medical residents in an outpatient setting is increasing for several reasons. First, diagnosis and treatment—critical components of medical education—are increasingly provided in outpatient settings. As a result, patients now admitted to hospitals tend to have more complex and acute needs than in the past, and more patients are admitted to hospitals just for specialized procedures. Second, because lengths of stay are shorter, residents have less time to think through a clinical plan and establish rapport with their patients.<sup>249</sup>

Although inpatient training remains a critical part of medical education, the Physician Payment Review Commission has expressed concern that residents have too few opportunities to learn about outpatient care, such as how to (1) provide a continuum of care that includes health promotion and preventive medicine, (2) manage chronic disease, (3) decide when hospitalization is necessary, (4) care for patients after discharge, and (5) develop personal relationships with patients and their families. The Commission noted that the technical skill, judgment, and processes of medical decision-making required to provide these services are important to physicians both in primary care and specialty care practices.

The Commission also noted that the financing of GME primarily through inpatient sites has obstructed changing training sites. Considerably less financing has been available for training in outpatient sites, and compensation for outpatient faculty is recognized only if the hospital incurs all or substantially all of the costs of training. This discouraged expansion of training to group practices, nursing homes, and other

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<sup>249</sup>Physician Payment Review Commission Annual Report to the Congress, Physician Payment Review Commission.

nontraditional sites. Furthermore, even residency programs that sought to expand outpatient training programs in hospital-owned sites faced financial barriers because direct costs were based on 1984 costs rather than current costs. Finally, Medicare would not pay for indirect costs in nonhospital sites.

The Balanced Budget Act of 1997 authorized the Secretary of Health and Human Services to establish rules for payment to qualified nonhospital providers for their direct costs of medical education.<sup>250</sup> Nonhospital providers include federally qualified health centers, rural health clinics, and other providers the Secretary determines appropriate.

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## Teaching Hospitals Offer Deep Discounts to Managed Care Plans

Non-VA teaching hospitals, which typically have higher costs than other community hospitals, increasingly offer deep discounts to managed care plans. Before enactment of the Balanced Budget Act of 1997, however, teaching hospitals had no assurance that they would receive Medicare GME payments for care provided to managed care enrollees. This presents no problem for VA teaching hospitals, however, because VA receives a direct appropriation to cover the costs of its medical education program and has no contracts with managed care plans.

The trend toward managed care could effect significant changes in non-VA teaching hospitals' ability to fund their medical education missions. First, managed care organizations do not usually want to pay the higher costs associated with teaching hospitals. They typically negotiate deep discounts from teaching hospitals because the market has far more capacity than needed, and nonteaching hospitals can provide services at lower costs because they lack teaching and research missions. Second, as Medicare recipients increasingly enroll in HMOs, teaching hospitals may lose the direct Medicare GME payments. Although Medicare factors such payments into the capitation rates it pays HMOs, the HMOs have no obligation to pass those payments on to the teaching hospitals or, for that matter, to contract with the higher cost teaching hospitals.<sup>251</sup>

The Balanced Budget Act of 1997, however, requires HCFA to provide additional payments to hospitals for the direct costs of GME related to Medicare risk-contract managed care enrollees. The provision applies to services provided after December 31, 1997.

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<sup>250</sup>The costs must be incurred in operating an approved medical residency training program.

<sup>251</sup>John K. Iglehart, "Academic Medical Centers Enter the Market: The Case of Philadelphia," *The New England Journal of Medicine*, Vol. 333, No. 15 (1995), pp. 1019-24.

Unlike private-sector hospitals, VA hospitals have, until recently, been unable to sell services or negotiate prices with HMOs and other managed care plans. Historically, VA facilities have been permitted to sell hospital and other services in only a few situations. Other than sharing agreements with DOD and other federal hospitals, VA has been limited to the sale of specialized medical resources to health care facilities, such as hospitals or clinics, medical schools, and certain research centers. The Veterans' Health Care Eligibility Reform Act of 1996, however, expanded the types of providers and services with whom VA may contract for care services. VA may sell patient care services to both public and private entities, including managed care plans. In addition, VA may now negotiate prices for services sold to HMOs and other managed care plans. These provisions apply mainly to sales of services to be provided to nonveterans because services provided to veterans with private health insurers are still governed by separate medical care cost-recovery provisions of the law.

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## **VA Faces Issues Concerning the Direction of Its Medical Education Mission**

Medical education has played a vital role in improving the quality of care in VA hospitals for over 50 years. Similarly, VA has played an important part in training a large proportion of the nation's physicians. With a growing number of physicians, however, and a steadily declining veteran population, the Congress and the administration face difficult decisions about the future of affiliation agreements. For example, should VA hospitals receive the same kinds of incentives to reduce the number of residency positions that the Congress provided non-VA hospitals through the Balanced Budget Act of 1997?

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## **Oversupply of Physicians Prompts Action**

Actions taken through the Balanced Budget Act of 1997 to reduce residency positions in teaching hospitals have significant implications for VA and its medical education mission. To the extent that teaching hospitals respond to incentives to significantly reduce their residency positions, VA and rural hospitals should be better able to compete for graduates of U.S. schools.

One way to lessen the effect of reducing residency positions on U.S. medical schools would be for teaching hospitals to target the reductions toward foreign medical school graduates. With fewer residency positions in non-VA teaching hospitals, VA might decide to use more of its available residency positions for graduates of U.S. medical schools.

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Although VA's Residency Realignment Review Committee recommended reducing the number of residency positions in VA hospitals, the planned reduction is much smaller than that sought from non-VA teaching hospitals. While non-VA hospitals are being encouraged to reduce residency positions by 20 to 25 percent by the year 2005, VA is planning a reduction of less than 3 percent in its residency positions.

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**Changes in VA Population**  
**Raise Issues**

Changes in the veteran population also affect VA's ability to support its medical education mission. Because the veteran population is both declining and aging, VA may no longer provide enough of a variety of patients to support its medical education mission. This same problem prompted Australia to open its veterans hospitals to nonveterans to broaden the patient mix and ultimately close or transfer hospitals over to the states or the private sector.

Of particular concern is the ability of VA hospitals to support surgical residencies. As previously discussed, surgical workloads have declined more than 50 percent. VA hospitals with inpatient surgery programs had an average of less than 25 beds occupied on any given day; many had fewer than 10 beds occupied. An important challenge facing VA and its affiliated medical schools is determining when to end a residency program. VA's Residency Realignment Review Committee began this process by recommending that 750 residency positions in specialties be converted to primary care residencies.

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**VA's Affiliations With**  
**Medical Schools Raise**  
**Issues**

Another important challenge facing VA is maintaining its independence from the affiliated medical schools for making decisions about the future of VA hospitals and their residency programs that are best for all stakeholders. Maintaining this independence is difficult because many medical school faculty and managers play decision-making roles at VA medical centers. Medical schools faced with decreasing residency positions in non-VA teaching hospitals could seek to increase such positions in VA hospitals rather than reduce the size of their teaching programs. VA Chiefs of Staff with dual appointments could find themselves in the difficult position of trying to support two opposite goals: the medical schools' goal to increase residency positions in VA to compensate for decreased positions in other hospitals and VA's own goal to reduce residency positions.

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**Chapter 12**  
**Changes in Teaching Hospitals' Medical**  
**Education Mission**

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The potential for conflict increases when decisions involve potential hospital closings. Because VA hospitals serve as major sources of support for residency positions for medical schools, the schools clearly have an interest in VA hospitals staying open. Although those interests must be considered, achieving the proper balance between VA's primary mission—serving the health care needs of veterans—and one of three other missions—support for medical education—will be difficult. VA must take care to prevent medical schools from overly influencing the future direction of its health care system.

# Teaching Hospitals Diversify Funding of Medical Research

Historically, both VA and non-VA teaching hospitals relied mainly on federal funds to support their medical research programs—VA on a separate research appropriation and non-VA hospitals on grants from the National Institutes of Health (NIH). As competition for these limited funds increases, however, teaching hospitals are diversifying their funding sources. Both VA and non-VA teaching hospitals are increasing efforts to obtain research funding from pharmaceutical and biomedical companies. Non-VA hospitals are also increasing the amount of research they conduct in areas of interest to managed care plans to attract contracts from those plans. VA already conducts such research but obtains funding from foundations and other federal agencies rather than from managed care plans.

The development of alternative funding streams for medical research raises several issues and challenges. For example, if academic medical centers reduce the amount of basic research they conduct to obtain additional funding from managed care plans and pharmaceutical companies, should VA do the same or fill the void by increasing its support for basic research? In addition, policy decisions will have to be made about (1) the extent to which the government shares in any profits resulting from collaborative research and (2) what agreement should be reached about delaying distribution of research findings. As VA develops multiple funding sources for its research programs, it will need strong internal control systems to prevent program abuse.

## NIH Is the Main Funding Source for Research

Historically, the federal government, through NIH, has supplied the most direct funding for both basic and applied research. NIH, the clearinghouse for federal medical research funding, in addition to conducting its own research, provides about 85 percent of its funds to teaching hospitals through research grants. In fiscal year 1996, NIH awarded about \$8.9 billion in research grants to both VA and non-VA teaching hospitals.

NIH research grants convey prestige because they are more competitive and the research proposals are reviewed by peers. NIH grants fund basic as well as applied research and place few restrictions on distributing research findings.<sup>252</sup>

Non-VA teaching hospitals receive research funding from NIH; however, they have several other research funding sources. These include industry- and foundation-sponsored research grants, internal cross-subsidies (such as use of surplus patient treatment income, tuition, and endowments), and

<sup>252</sup>Marilyn Werber Serafini, "Research for Hire," *National Journal*, (Mar. 30, 1996), pp. 704-8.

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third-party insurance payments to reimburse the cost of health care provided to patients participating in research protocols.<sup>253</sup>

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## **VA Research Funded Mainly Through VA Appropriations**

Medical research—both basic and applied—is one of VA’s four core missions. The current research program was established shortly after the end of World War II and has been included in VA’s authorizing legislation since the late 1950s.

Although VA hospitals, like other teaching hospitals, obtain NIH research grants, VA research is funded mainly by VA appropriations. Of the approximately \$923 million in budgetary resources VA had available for medical and prosthetic research in fiscal year 1996, \$591.4 million came from VA appropriations (\$256.7 million from the medical and prosthetic research appropriation and \$334.7 million in medical care support from the medical care appropriation). The remainder of VA research funds in fiscal year 1996 came from federal grants (mainly from NIH) totaling \$209.5 million, other grants (mainly from voluntary agencies) totaling \$105.9 million, and DOD reimbursements of \$16 million.

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## **Teaching Hospitals Find It Difficult to Maintain Historic Funding Sources**

Teaching hospitals are finding it increasingly difficult to maintain their historic funding sources for several reasons. First, they can no longer count on increases in federal research funds. Such funding grew at the rate of 8 to 10 percent annually during the late 1970s and early 1980s, while inflation in biomedical costs ranged between 4 and 5 percent. In fiscal year 1996, however, NIH funding grew by only 5.7 percent, and the Congress considered cutting NIH’s budget. In addition, some concern exists over future federal funding amid debate about the proper role of the federal government in funding medical research.

Second, managed care has made it more difficult for teaching hospitals to use profits from patient care to pay for medical research. According to the Association of American Medical Colleges, teaching hospitals are losing about \$1 billion a year due to managed care’s shift to use of lower cost community hospitals. To help prevent such losses, many teaching hospitals have cut the prices they charge HMOs and preferred provider organizations (PPO) and adopted intensive cost-reduction efforts. Obviously, lowered prices mean fewer resources for subsidizing research projects.

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<sup>253</sup>Robert E. Mechanic and Allen Dobson, “The Impact of Managed Care on Clinical Research: A Preliminary Investigation,” *Health Affairs*, Vol. 15, No. 3 (1996).

Third, teaching hospitals face increasing competition from contract research organizations.<sup>254</sup> Industry-sponsored medical research, which was mainly conducted by academic medical centers before 1980, is increasingly being conducted by for-profit contract research firms. The use of academic investigators to conduct industry-sponsored research trials dropped from 82 percent in 1989 to 68 percent in 1993.<sup>255</sup>

Fourth, the managed care industry has increasingly established its own research centers, drawing both public and private research dollars away from teaching hospitals. HMOs, which provide comprehensive services to a defined population in a real-life environment, can test the results of trials that were conducted in more controlled environments.

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## Teaching Hospitals Seek Funding From Pharmaceutical and Biomedical Companies

Teaching hospitals have increasingly turned to pharmaceutical and biomedical companies for funds for two reasons. First, the availability of federal research funds is becoming more uncertain. Second, in 1988 pharmaceutical companies spent an amount on research and development that exceeded that of the entire NIH budget.<sup>256</sup>

Private industry supports a growing portion of teaching hospitals' research. Private industry (39 percent) and NIH (38 percent) supported roughly the same percentage of medical research in 1984, according to the Association of American Medical Colleges. Ten years later, however, private industry supported over half (\$17 billion) of the \$33 billion spent on research, while NIH contributed 31 percent (\$10.2 billion).<sup>257,258</sup>

Some teaching hospitals are actively seeking to expand their use of private industry funds. For example, George Washington University now gets more than half of its funds for medical research from private industry. Similarly, Columbia University actively markets its research capabilities to

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<sup>254</sup>Mechanic and Dobson, "The Impact of Managed Care on Clinical Research: A Preliminary Investigation," *Health Affairs*, pp. 72-89.

<sup>255</sup>David A. Burnett, "Evolving Market Will Change Clinical Research," *Health Affairs*, Vol. 15, No. 3 (1996), pp. 90-2.

<sup>256</sup>Burnett, "Evolving Market Will Change Clinical Research," *Health Affairs*, pp. 90-2.

<sup>257</sup>Other federal agencies, including VA, contributed about 6 percent (\$1.98 billion), and private foundations and state and local governments contributed the balance.

<sup>258</sup>Serafini, "Research for Hire," *National Journal*, pp. 704-8.

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corporations,<sup>259</sup> and the University of California, San Francisco, created a special center to attract industry-supported research.<sup>260</sup>

One concern raised about involving pharmaceutical and biomedical companies in funding research at teaching hospitals is the potential delay in sharing research findings. Companies sometimes ask researchers to agree not to disclose the results of their research for as long as 10 years.<sup>261</sup> This allows them to develop and market their products for longer periods before their patents expire.

A second concern about relying on private-sector funding is pharmaceutical and biomedical companies' focus on clinical trials and applied research that can quickly lead to marketable new drugs and devices. This focus could, many researchers fear, reduce the amount of basic or fundamental research.<sup>262</sup>

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## **VA Is Also Seeking Alternative Research Funding Sources**

Like other teaching hospitals, VA is concerned about the future availability of federal funding for its research activities and is increasingly seeking alternative sources for funding research. In addition to obtaining more NIH funds, it is establishing nonprofit corporations to raise funds for research.

Like NIH funding, the growth in VA's medical and prosthetic research appropriation funding has slowed in the 1990s, growing at a rate of 2 to 5 percent per year, meaning little growth in funding after inflation. VA reports that research funding declined as a percentage of the overall medical care appropriation from 2.0 percent in 1980 to 1.2 percent in 1996. These figures do not, however, include funds VA obtained from other sources. Between 1990 and 1996, nonfederal research funding increased from about \$176 million to over \$315 million. (See fig. 13.1.)

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<sup>259</sup>Serafini, "Research for Hire," *National Journal*, pp. 704-8.

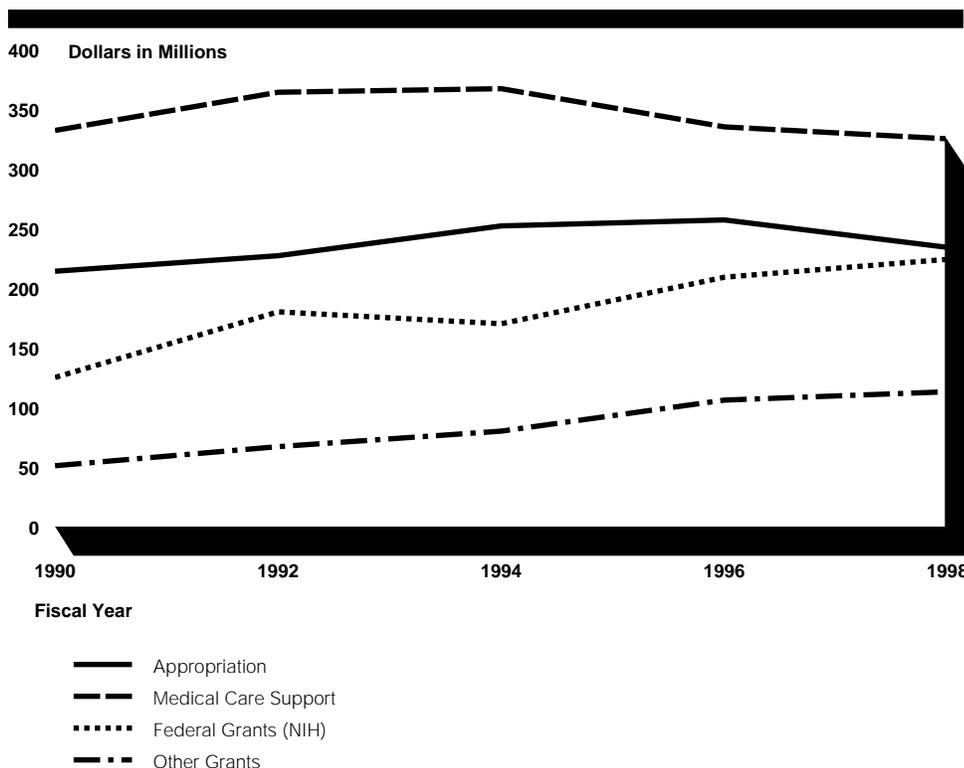
<sup>260</sup>Mechanic and Dobson, "The Impact of Managed Care on Clinical Research: A Preliminary Investigation," *Health Affairs*, pp. 72-89.

<sup>261</sup>Serafini, "Research for Hire," *National Journal*, pp. 704-8.

<sup>262</sup>Serafini, "Research for Hire," *National Journal*, pp. 704-8.

**Chapter 13**  
**Teaching Hospitals Diversify Funding of**  
**Medical Research**

**Figure 13.1: Changes in Major Sources of VA Research Funding, Fiscal Years 1990-96**



Note: Excludes DOD reimbursements, which were less than \$30 million each year.

In May 1988, the Congress authorized VA to establish nonprofit research corporations for a limited time period to provide an additional funding mechanism for VA-approved research (P.L. 100-322). Public Law 104-262 reauthorized the corporations through 2000. A March 1997 VA Office of Inspector General report identified 83 nonprofit research corporations.

VA reported to the Congress that contributions to the nonprofit research corporations were \$38 million in 1994 and \$63 million in 1996. An advantage provided by its nonprofit corporations is that they generally have low indirect costs, which ensures more resources for research. According to VA officials, the administrative overhead rates for VA's nonprofit corporations averaged 12.5 percent in 1995 compared with university and private foundation rates averaging 50 percent. Therefore, a

greater percentage of VA research funds may be available to actually support research and related activities.<sup>263</sup>

Several of the Veterans Integrated Service Network (VISN) strategic plans discuss efforts to establish additional nonprofit research corporations:

- VISN 8 (Bay Pines) has set a goal of increasing the total non-VA research funds by 10 percent by establishing nonprofit corporations. It currently has such corporations at its Bay Pines, Miami, and San Juan medical centers.
- VISN 17 (Dallas) established its third nonprofit research corporation in March 1996 to increase non-VA funding.
- VISN 4 (Pittsburgh) is exploring the possibility of establishing a nonprofit research corporation.
- VISN 6 (Durham) expects its main research effort to be overseeing and coordinating the operations of nonprofit research corporations.

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## **Collaborative Research With Managed Care Plans and Others**

Both university-based academic medical centers and VA are conducting collaborative research efforts with others. Academic medical centers are focusing on collaborative efforts with managed care plans, while VA is focusing on collaborative efforts with other government agencies and manufacturers of high-cost/high-tech equipment.

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## **Academic Medical Centers Focus on Collaborating With HMOs**

Academic medical centers are beginning to align their research agenda with that of the managed care industry. In the past, academic medical centers favored basic research and research on relatively rare diseases and therapies. HMOs, on the other hand, were more interested in applied research that identified the most cost-effective way to treat common, expensive, or high-risk conditions.<sup>264</sup> Because HMOs and other managed care plans have financial risk for their patients' care, they want to know which medical treatments are most cost-effective.<sup>265</sup>

To gain support for their research programs from managed care plans, academic medical centers are emphasizing cost-effectiveness and outcomes research and strengthening their ties with schools of public

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<sup>263</sup>Barbara F. West and Jeffrey Green, "Federal Law Current Issues in Medilegal Practice," *Federal Practitioner* (Nov. 1996), pp. 111-2.

<sup>264</sup>Charles M. Cutler, "Research Needs for Managed Care," *Health Affairs*, Vol. 15, No. 3 (1996), pp. 93-4.

<sup>265</sup>Cutler, "Research Needs for Managed Care," *Health Affairs*, pp. 93-4.

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health.<sup>266</sup> Consequently, managed care plans' health research centers are conducting collaborative projects with teaching hospitals. For example, Group Health Cooperative of Puget Sound collaborated with the University of Washington. Similarly, Prudential's Center for Health Care Research collaborated with the Harvard Medical School.<sup>267</sup>

According to some researchers, the full potential for collaborative efforts has not been realized because of mutual distrust. In their view, academic medical centers often see managed care plans as overly concerned with cost cutting, while managed care plans complain of teaching hospitals' academic arrogance.<sup>268</sup>

Researchers note that academic medical centers could benefit from access to managed care plans' enrolled populations and their information systems that identify and track patients with specific conditions for conducting research on outcomes of specific treatments. Similarly, academic medical centers could, they believe, offer managed care plans an unbiased research environment, access to trained investigators, and well-equipped research infrastructures. Finally, an affiliation with an academic medical center could give HMOs a marketing advantage for managed care plans by making it easier to attract enrollees.

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### VA Expanding Collaborative Efforts With Both Government and Nongovernment Entities

One of the key objectives in VA's Prescription for Change is expanding collaborative investigative efforts with both government and nongovernment entities. An official from VA's Office of Research told us he did not know of any such collaborative research efforts with managed care plans but that such efforts might be pursued by individual facilities or VISNS.

As a nationwide system, VA has the capability to design and implement large-scale cooperative trials. For example, in the 1950s, VA developed cooperative studies to investigate the effectiveness of therapies for treating tuberculosis. Similarly, it completed cooperative studies documenting the benefits of hypertension treatment and coronary artery bypass surgery. The Cooperative Studies program now has designated coordinating centers (comprising epidemiologists, biostatisticians, and data analysts) whose sole mission is to help investigators design and

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<sup>266</sup>Mechanic and Dobson, "The Impact of Managed Care on Clinical Research: A Preliminary Investigation," Health Affairs, pp. 72-89.

<sup>267</sup>Cutler, "Research Needs for Managed Care," Health Affairs, pp. 93-4.

<sup>268</sup>Mechanic and Dobson, "The Impact of Managed Care on Clinical Research: A Preliminary Investigation," Health Affairs, pp. 72-89.

implement multicenter studies of clinical and health services interventions. Some examples of this research are studies of angina, symptomatic human immunodeficiency virus infection, and clinically localized prostate cancer.<sup>269</sup>

VA's ability to do nationwide studies helps it develop collaborative efforts. For example, VA established a Diabetes Research Initiative with the Juvenile Diabetes Foundation: For a 5-year period, VA and the Foundation will each contribute \$7.5 million to fund VA diabetes research centers of excellence.

In addition, VA signed a memorandum of understanding to plan future collaborative research efforts with the Agency for Health Care Policy and Research and the University Health Systems Consortium. Finally, VA's Prescription for Change indicates that it plans to actively pursue collaborative research efforts with manufacturers of high-cost/high-technology equipment.

None of the VISN plans has identified plans to conduct collaborative efforts with managed care plans. Three VISN strategic plans did, however, identify planned actions that might make VA research programs more attractive to managed care plans:

- VISN 1 (Boston) has a Research Advisory Council responsible for building stronger linkages between research efforts and clinical practice. The Council is also responsible for identifying additional revenue streams to support research.
- VISN 17 (Dallas) will emphasize research consistent with national trends toward primary care, systems analysis, outcomes research, and development of clinical guidelines. The network convened a Research and Development Subcommittee to, among other things, promote collaborative research.
- VISN 18 (Phoenix) has a major collaborative research project to search for a breast cancer vaccine involving the Amarillo, Texas, VA medical center, Pantex plant (Department of Energy), and Duke University.

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<sup>269</sup>Elliott S. Fisher and H. Gilbert Welch, "The Future of the Department of Veterans Affairs Health Care System," JAMA, Vol. 273, No. 8 (1995), pp. 651-5.

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## **VA Faces Many Issues in Developing Alternative Research Funding Streams**

VA faces many challenges and policy decisions as it seeks to develop alternative funding streams for medical research. For example, as a matter of policy, to what extent should the government share in the financial benefits resulting from new products or treatments developed through collaborative research efforts with drug and biomedical companies? Similarly, VA will have to make policy decisions about how research results are distributed and when they are publicized. Finally, VA will need to decide to what extent it should follow the lead of academic medical centers and seek collaborative research efforts with HMOs and other managed care plans.

VA has successfully developed alternative revenue streams to supplement its research appropriation. The proliferation of VA nonprofit research corporations and other sources of nonappropriated research funds, however, creates new challenges. For example, VA will need accounting systems and internal controls to track the many revenue streams supporting individual projects. Without such systems and controls, researchers might receive funding exceeding the project's cost. For example, accounting systems need to be able to determine whether a researcher receives a grant funding more than 100 percent of the researcher's time. Similarly, the systems and controls need to be able to ensure that teaching physicians do not inappropriately collect research funds from both VA and the medical school.

In addition to the direct appropriation for medical and prosthetic research, VA's research efforts also received funds from the medical care appropriation. VA reported receiving \$335 million from this additional appropriation in fiscal year 1996. Under the Veterans Equitable Resource Allocation (VERA) model, VA allocated \$399 million among VISNs for medical research support on the basis of the proportional amount of funded research reported by each VISN in fiscal year 1995. It is not clear, however, how the \$399 million will be allocated within the VISNs or the extent to which the higher patient care costs associated with VA's research mission will affect its ability to sell its excess capacity to managed care plans or others without offering discounts like those offered by some academic medical centers.

Another challenge facing VA and its hospitals is balancing the longer lengths of stay frequently associated with medical research with performance measures that call for significantly reducing bed-days of care. For example, should performance measures, like VERA, have adjustments

to allow for the more frequent admissions and longer lengths of stay for patients in research protocols?

Finally, the changing focus of academic medical centers' research efforts has important policy implications for VA research. If academic medical centers increasingly shift from supporting basic to applied research to attract additional research funds, should VA do the same? Or should VA fill the void created and increase its support for basic research?

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# Ownership and Other Changes Shift Hospitals' Focus From Uncompensated Care

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One action community hospitals reportedly take to improve profitability is reducing the amount of uncompensated care (defined as the sum of charity care and bad debt) they provide. Despite growing numbers of uninsured people, the amount of uncompensated care provided by community hospitals has reportedly declined in the 1990s. Many nonprofit hospitals are acting more like their for-profit competitors by seeking to reduce the amount of uncompensated and charity care they provide and focusing on attracting paying customers. Others are converting to for-profit status or selling out to for-profit chains. As a result, some believe that the burden of providing uncompensated care has increasingly shifted to public, and particularly public teaching, hospitals. As increasing numbers of public hospitals convert to nonprofit or for-profit ownership, will the health care safety net shrink even more?

On average, VA serves a larger proportion of uninsured people than even public teaching hospitals. Many of VA's restructuring efforts, however, create incentives for Veterans Integrated Service Networks (VISN) and individual VA facilities to model for-profit health plans and hospitals and focus less on VA's traditional safety net mission. In addition, VA, like many nonprofit hospitals, has established strategic goals that focus on increasing market share rather than meeting the health care needs of uninsured veterans. The apparent changes in focus of both community and VA hospitals raise significant issues about the future direction of the VA health care system. For example, to what extent should VA use its excess capacity to target the market segment—low-income and uninsured people—that many for-profit and nonprofit hospitals are apparently abandoning? Who should pay for such services? Similarly, to what extent should VA's strategic goals focus specifically on its safety net mission and improving the health status of uninsured veterans?

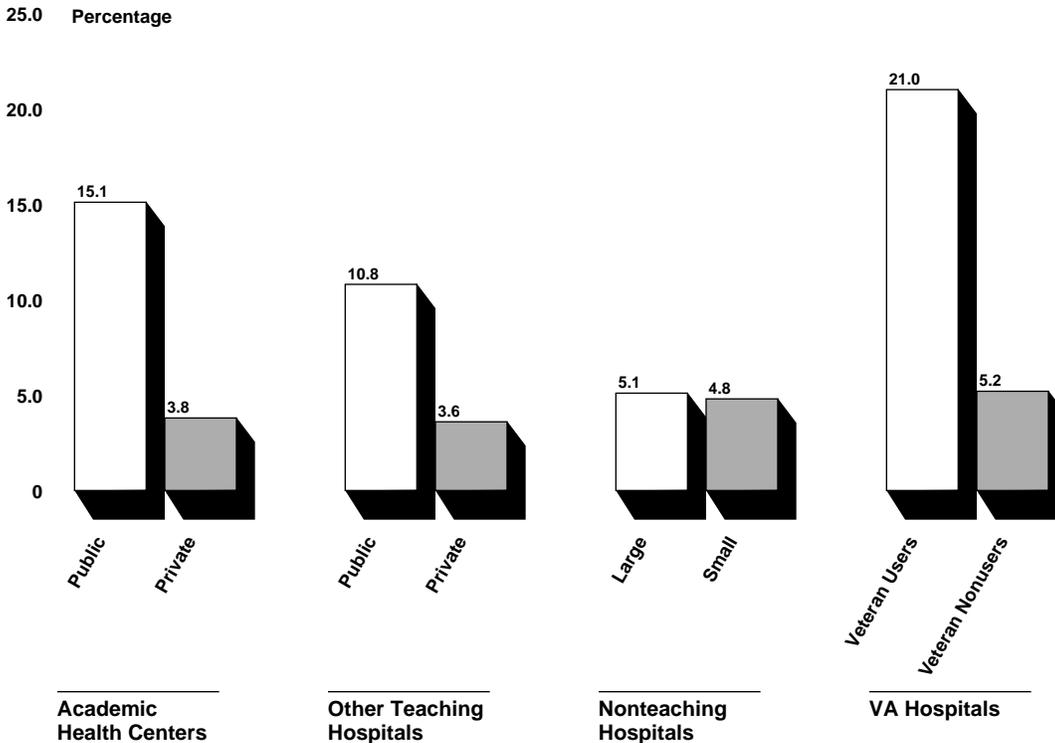
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## Public Teaching Hospitals Provide Disproportionate Share of Care for the Uninsured

The burden of serving patients with no health insurance falls disproportionately on VA and public teaching hospitals. About 21 percent of veterans using the VA health care system have no public or private health insurance compared with about 5 percent of patients using nonteaching hospitals. Similarly, public teaching hospitals serve a percentage of hospital patients who have no insurance that is three to four times higher than that served by private academic medical centers. (See fig. 14.1.)

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**Figure 14.1: Percentage of Patient Population Without Public or Private Health Insurance, by Type of Hospital, 1994**



Note: VA data are from 1992 and reflect system users rather than hospital users.

Sources: James Reuter and Darrell Gaskin, "Academic Health Centers in Competitive Markets," *Health Affairs*, Vol. 16, No. 4 (1997). Based on data from the Institute for Health Care Research and Policy, Georgetown University Medical Center.

Nancy J. Wilson and Kenneth W. Kizer, "The VA Health Care System: An Unrecognized National Safety Net," *Health Affairs*, Vol. 16, No. 4 (1997).

**Public Hospitals**  
**Provide**  
**Disproportionate**  
**Share of**  
**Uncompensated Care**

Public and particularly public teaching hospitals provide disproportionate and increasing amounts of uncompensated care, according to many studies. For example, urban public hospitals are reported to provide one-third of the nation's uncompensated care, even though they only have about one-sixth of the hospital market. Between 1990 and 1994, their burden of uncompensated care increased. First, their percentage of total costs devoted to uncompensated care increased from 11.8 to 12.8 percent.

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Second, public hospitals accounted for 36.8 percent of total hospital uncompensated care in 1994, up from 33.4 percent in 1990.<sup>270</sup>

Among public hospitals, major teaching hospitals' share of uncompensated care is reportedly three times larger than their share of the hospital market. In 1994, almost 20 percent of their expenses were reportedly devoted to providing uncompensated care.<sup>271</sup>

Although public hospitals provide a disproportionate share of uncompensated care, private-sector hospitals still provide most uncompensated care. Private hospitals, however, vary widely in the amount of uncompensated care they reportedly provide. For example, about 240 private hospitals reported uncompensated care burdens averaging 15 percent of total operating expenses in 1994. The remaining approximately 3,600 private hospitals reported uncompensated care burdens averaging 8 percent or less of operating expenses.

These findings are consistent with our 1990 analysis of the role of nonprofit hospitals in providing uncompensated care.<sup>272,273</sup> Government-owned hospitals provided a disproportionate amount of the uncompensated care in each of the five states in our review. Both nonprofit and for-profit hospitals provided a smaller share of the state's uncompensated care than they provided of general hospital services. Moreover, the burden of uncompensated care was not distributed equally among the nonprofit hospitals in the five states. Large urban teaching hospitals had a greater share of the uncompensated care expense than did other nonprofit hospitals.

Generally, the nonprofit hospitals with the lowest rates of uncompensated care also served fewer Medicaid patients and had higher profit margins than did the large urban teaching hospitals providing most of the uncompensated care. In other words, the nonprofit hospitals with the most resources for financing uncompensated care were often those providing the least amount of such care.

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<sup>270</sup>Peter J. Cunningham and Ha T. Tu, "A Changing Picture of Uncompensated Care," *Health Affairs*, Vol. 16, No. 4 (1997), 167-75.

<sup>271</sup>Joyce M. Mann and others, "A Profile of Uncompensated Hospital Care, 1983-1995," *Health Affairs*, Vol. 16, No. 4 (1997), pp. 223-32.

<sup>272</sup>Nonprofit Hospitals: Better Standards Needed for Tax Exemption (GAO/HRD-90-84, May 30, 1990).

<sup>273</sup>According to the American Hospital Association's 1996/1997 Hospital Statistics, private nonprofit hospitals constitute almost 60 percent of community hospitals. In contrast, investor-owned, for-profit hospitals account for less than 15 percent of community hospitals.

About 15 percent of the nonprofit hospitals we studied reported providing uncompensated care valued at less than the benefits of their federal and state income tax exemption. Excluding bad debt and examining only the provision of charity care, however, revealed that 57 percent of the nonprofit hospitals in our study provided charity care valued at less than the benefits of their tax liability.<sup>274</sup>

Another study reported an apparent correlation between market penetration of managed care plans and decreased levels of uncompensated care.<sup>275</sup> Hospitals in metropolitan statistical areas where managed care plans had captured large shares of the health care market tended to provide less uncompensated care.

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## **Strategic Goals of Many Nonprofit Hospitals Exclude Serving the Medically Indigent**

A hospital's goals and policies influence the amount of uncompensated care it provides. In the five communities we visited during our 1990 study, the strategic goals of some nonprofit hospitals excluded the health needs of the poor or underserved in their communities. Instead, the goals most often focused on increasing the hospitals' share of patients in their market area, resembling the goals of investor-owned institutions. Other goals concerned maintaining the hospitals' financial viability, improving their competitive positions, expanding services and facilities, or developing employee skills and personnel practices. Furthermore, physician staffing and charity admission policies discouraged admission of those unable to pay, except in emergency cases.

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## **Nonprofit Hospitals in Some Communities Discourage Indigent Care**

In communities without a government-owned or major teaching hospital, uncompensated care costs present problems in providing services to the indigent and could eventually cause service gaps for entire communities. In two of the communities we visited for our 1990 study, the uncompensated care costs were relatively high, and the nonprofit hospitals providing most of this care were seeking ways to reduce these costs. For example, hospitals in San Diego were trying to restrict their indigent care expenses. One nonprofit hospital that traditionally treated indigent patients was investing in a new facility in a suburb to increase its

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<sup>274</sup>For a hospital to qualify for tax-exempt status under section 501(c)(3) of the Internal Revenue Code, it must be organized and operated for charitable purposes. For hospitals, the Internal Revenue Service (IRS) has defined "charitable purposes" as providing a benefit to the community. Nonprofit hospitals need not provide a specified amount of uncompensated or charity care to qualify for exempt status. However, IRS considers various factors, such as whether the hospital provides medical care to Medicaid and charity patients, in determining whether a hospital provides a benefit to the community.

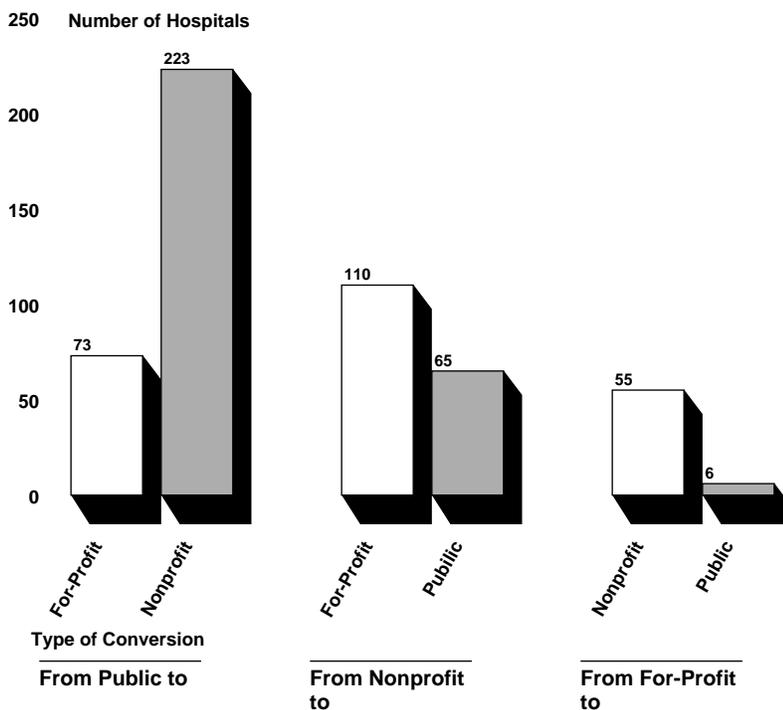
<sup>275</sup>Mann and others, "A Profile of Uncompensated Hospital Care, 1983-1995," *Health Affairs*, pp. 223-32.

market share of patients able to pay. Another nonprofit hospital planned to downgrade its emergency room, closing it to ambulance traffic to reduce its indigent care workload.

## Hospitals' Changing Ownership Could Affect Future Provision of Indigent Care

Of the 5,768 hospitals operating in 1990, about 9 percent (532) had changed ownership during the preceding decade. Ownership changes continued in the 1990s; 3 percent of the hospitals operating in 1993 had changed ownership since 1990. Over half of the ownership changes between 1980 and 1990 involved converting public hospitals to nonprofit or for-profit status (see fig. 14.2). Because public hospitals serve a higher proportion of uninsured patients than either private nonprofit or for-profit hospitals, this raises concerns about the future availability of charity care in the affected communities.

**Figure 14.2: Hospital Ownership Conversions, 1980-90**



Note: Excludes hospitals converted between 1980 and 1990 but no longer operating in 1990.

Source: Jack Needleman, Deborah J. Chollet, and Jo Ann Lamphere, "Hospital Conversion Trends," *Health Affairs*, Vol. 16, No. 2 (1997).

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## Public Hospitals Are Converting to Nonprofit or For-Profit Ownership

Public hospitals have been converting to nonprofit or for-profit ownership. Between 1980 and 1990, more than 15 percent of public hospitals changed control, most often (75 percent) to nonprofit status. Another 3 percent of public hospitals changed control between 1990 and 1993 and 88 percent, to nonprofit status.<sup>276</sup> Conversions of nonprofit and for-profit hospitals to public hospitals partially offset conversions of public hospitals to nonprofit status.

The unwillingness of local governments and communities to provide continued tax support for public hospitals reportedly played a major role in the conversions. Conversions were also seen as a way to free the hospitals from government procurement and hiring rules.<sup>277</sup>

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## Nonprofit and For-Profit Hospitals Are Changing Ownership

In addition, nonprofit hospitals have had many ownership changes, but the overall number of nonprofit hospitals increased between 1990 and 1993 mainly because of the conversion of public hospitals to nonprofit hospitals. Between 1980 and 1990, 175 nonprofit hospitals converted to either for-profit (110) or public (65) ownership. The rate of conversion of nonprofit hospitals increased between 1990 and 1993.

Hospitals are converting to for-profit status because of concerns about their future. Policy analysts have identified several reasons for hospital ownership conversions:

- Conversions can provide nonprofit hospitals access to the capital they need to restructure operations.
- Nonprofit hospitals may seek to improve efficiency through merger or acquisition.
- Weaker hospitals, faced with closure, may see sale of their assets to or a joint venture with a for-profit firm as the best option for survival.
- Nonprofit hospitals may convert to for-profit status to avoid regulatory constraints placed on nonprofits limiting their flexibility in compensating executives, staff, and partners.
- Personal financial gain may motivate the decisions of the insiders of some nonprofit hospitals to sell or convert to for-profit status.<sup>278</sup>

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<sup>276</sup>Jack Needleman, Deborah J. Chollet, and Jo Ann Lamphere, "Hospital Conversion Trends," *Health Affairs*, Vol. 16, No. 2 (1997), pp. 187-95.

<sup>277</sup>Needleman, Chollet, and Lamphere, "Hospital Conversion Trends," *Health Affairs*, pp. 187-95.

<sup>278</sup>Gary Clayton, Judith Feder, David Shactman, and Stuart Altman, "Public Policy Issues in Nonprofit Conversions: An Overview," *Health Affairs*, Vol. 16, No. 2 (1997).

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In addition, some for-profit hospitals are also changing ownership. Conversions of for-profit hospitals to nonprofit or public ownership accounted for only 11 percent of conversions between 1980 and 1990 but 31 percent of conversions between 1990 and 1993. Some believe such conversions may reflect increased concern about the long-term commitment of for-profit owners to the health care needs of the community.<sup>279</sup>

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## **VA Restructuring Efforts Create Incentives for VA Facilities Similar to Those of For-Profit Providers**

VA's restructuring efforts create many of the same types of incentives for VISNs and individual hospitals to reduce services to veterans with no health insurance that have resulted in less charity and uncompensated care in nonprofit and for-profit hospitals. And, like many nonprofit hospitals, VA has established strategic goals focused more on increasing market share than on fulfilling its safety net mission.

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## **VA Has Incentives to Reduce Services to Some Veterans**

This year, VA sought and obtained approval to retain nonappropriated revenues generated through recoveries from private health insurance and collection of veteran copayments.<sup>280</sup> VA essentially sought to divide the veteran population into two distinct groups: nonrevenue-generating veterans and revenue-generating veterans. This latter group has several potential target populations for VA: lower income veterans with private health insurance; higher income veterans subject to copayments but with no health insurance; and higher income, privately insured veterans subject to copayments. The last group has the least need for VA services but represents the greatest revenue-generating potential because VA can generate revenues from both insurance and copayments.

Allowing VA to retain recoveries from private health insurance and copayments creates an incentive for VA to market its services to attract revenue-generating rather than nonrevenue-generating veterans. This incentive could affect several aspects of VA services, including where VA decides to locate new community-based outpatient clinics (CBOC). For example, VA recently proposed locating a CBOC in a homeless shelter that it expects could attract 2,040 new users in need of VA's safety net and

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<sup>279</sup>Needleman, Chollet, and Lamphere, "Hospital Conversion Trends," *Health Affairs*, pp. 187-95.

<sup>280</sup>It also sought, but did not receive, authority to bill and retain recoveries from Medicare for services provided to higher income Medicare-eligible veterans.

therefore not likely to generate revenue. In contrast, VA has also proposed opening a clinic in one of the country's more affluent counties. Although the clinic is intended to improve access for current users, VA also expects it to attract patients who could ultimately generate revenue.

Similarly, VA's new resource allocation method, the Veterans Equitable Resource Allocation System (VERA), could lead VISNS and individual facilities to act more like for-profit HMOs. VA developed VERA in response to Public Law 104-204, which directed VA to prepare a resource allocation system that would ensure similar access to VA care for veterans who have similar economic status and eligibility priority. The system, which VA began implementing in April 1997, is based on calculations of the cost per veteran user in each VISN. VISNS that have the highest costs per veteran user will lose funds; VISNS with the lowest costs per veteran user will get additional funds.<sup>281</sup>

VERA creates both positive and negative incentives. On the positive side, it moves toward creating the kinds of incentives needed to increase efficiency that HMOs have long had. On the negative side, it creates the kinds of incentives HMOs have to (1) focus marketing efforts on attracting the types of users who use fewer health care services, such as younger veterans, and, conversely, (2) make continued use of VA services unattractive or unavailable to veterans with extensive health care needs. HMOs are often criticized for their efforts to attract and retain users with minimal health care needs.

These negative incentives could be heightened in the VA system because, unlike HMOs, the VISNS have no contractual obligation to provide comprehensive care to any veteran, making it easier for VA facilities to artificially increase efficiency by providing less intensive services or attracting healthier users. On the other hand, also unlike most for-profit HMOs, VA physicians have no financial stake in the care they provide. Because VA physicians receive a salary, they would not personally gain by reducing the amount of services they provide. Nevertheless, VERA and the retention of third-party recoveries could provide VISNS and individual facilities financial incentives to focus marketing efforts on veterans most likely to use fewer services and those not likely to generate additional payments.

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<sup>281</sup> Adjustments are included for the higher labor costs in some VISNs and for differences in the costs of medical education, research, equipment, and nonrecurring maintenance.

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## VA's Strategic Goals Focus on Increasing Market Share

VA's strategic goals for its health care system, like those of many nonprofit and for-profit hospitals, focus on increasing market share rather than on improving the health status of service-connected or uninsured veterans. Specifically, under the broad goal to "improve the overall health care of veterans," VA's plan sets an objective to increase its number of users by 20 percent by 2003. It also sets a performance goal of increasing the number of Category A veterans (primarily veterans with service-connected disabilities or low incomes) by 500,000 and Category C veterans (primarily veterans with no service-connected disabilities and higher incomes) by 125,000 by 2003. The stated purpose of the increase in users is to "preserve the viability of the health care system" rather than to meet the health care needs of service-connected or uninsured veterans. Beyond setting a goal to serve more Category A veterans, VA does not differentiate between serving a service-connected veteran with no health insurance and a low-income veteran with health insurance. Although the Congress established specific priorities for enrolling veterans in the VA health care system, VA's strategic goals do not reflect those priorities.

VA also linked its strategic goal to enactment of the proposed legislation to allow it to retain recoveries from private health insurance and Medicare. It noted that it could treat a significantly larger number of veterans—up to 20 percent more—only if its medical care cost recovery and Medicare reimbursement proposals were enacted. Our review of VA's 1998 budget submission, however, found that to meet its revenue projections, VA would probably have to focus its marketing efforts on attracting veterans with fee-for-service private health insurance. In addition, VA proposes to collect about \$557 million from Medicare in 2002 for services provided to about 106,000 additional higher income veterans covered by Medicare. As stated, the Congress authorized VA to retain recoveries and collections from private health insurance and veterans' copayments but did not authorize VA to obtain recoveries from Medicare.

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## Issues VA Will Need to Address Concerning Its Safety Net Mission

The Administration and the Congress face difficult decisions concerning the future direction of VA's safety net mission and the role VA's hospitals should play in meeting the hospital care needs of the uninsured.

For example, one important decision facing VA is determining the extent to which it should use its expanded contracting authority to purchase hospital care for veterans, particularly those with service-connected disabilities or no health insurance who cannot get care from a VA hospital because of geographic inaccessibility.

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Many veterans cannot get needed health care because of the distance from their homes to a VA facility. Our analysis of 1992 National Survey of Veterans data estimated that fewer than half of the 159,000 veterans who did not obtain needed hospital care lived within 25 miles of a VA hospital. By comparison, we estimated that over 90 percent lived within 25 miles of a private-sector hospital. One option for improving the health status of such veterans would be for VA to use its expanded contracting authority to purchase hospital and other services for uninsured veterans that live far from a VA hospital.

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## Serving Uninsured Veterans

On average, the VA health care system provides a higher proportion of care to patients with no health insurance than any category of community hospital, including public teaching hospitals. Still, many veterans without health insurance have reported that they have not used VA health care services and that they have unmet health care needs.

In 1990, 9 out of 10 veterans reported having public or private health insurance. That meant, however, that about 2.6 million veterans had neither public nor private health insurance. Without a demonstrated ability to pay for care, individuals' access to health care is much more limited in the private sector, decreasing their ability to receive needed care. Lacking insurance, people often postpone obtaining care until their conditions become more serious and require more costly medical services.

In the past, most veterans who lacked insurance coverage could get needed hospital care through public programs and VA. Still, VA's 1992 National Survey of Veterans estimated that about 159,000 veterans could not get needed hospital care in 1992, and about 228,000 could not get needed outpatient services. By far, the most common reason veterans cited for not obtaining needed care was that they could not afford to pay for it.

So, if VA is to fulfill its safety net mission, it will have to ensure that VISNS and individual facilities do not react to incentives to generate revenue by reducing services to uninsured veterans and those with service-connected disabilities. Similarly, monitoring will be needed to ensure that facilities do not inappropriately bill insurers for services provided to service-connected veterans to generate additional revenues. Moreover, the incentive to target programs toward revenue-generating veterans is greatest if the facility providing the care retains the funds. Such an arrangement, however, would also provide the greatest incentive for operating an effective

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program. VA faces the challenge of identifying and applying the appropriate balance.

In addition, ownership conversions of public and nonprofit hospitals could affect the ability of low-income or uninsured veterans to obtain services from such hospitals. With community hospitals' support for the medically indigent apparently decreasing, should VA follow their lead? Or, should VA try to fill the void left by those providers? For example, veterans without health insurance often have families without health insurance. Should VA hospitals use their excess capacity to serve veterans' uninsured dependents? If so, how should such care be financed? For example, should recoveries from private health insurance be earmarked for use in providing services to the families of uninsured veterans?

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# Conclusions, Agency Comments, and Our Evaluation

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## Conclusions

Both VA and community hospitals are struggling to survive. Demand for hospital care, which increased for much of the century, has steadily declined since the 1980s in community hospitals and since the 1960s in VA hospitals. Although many factors have contributed to the declining demand, VA has been less affected by the effects of payment and other reforms than have community hospitals. Therefore, further reductions in use of VA hospitals are likely as VA tries to shift more of its care to outpatient and other more cost-effective settings. In addition, VA, unlike community hospitals, has a declining target population.

One of the most crucial decisions facing the Congress and the administration as they plan for the future of the veterans' health care system is the extent of effort that should be spent to preserve VA's direct delivery infrastructure and the process that should be followed to effect change.

VA, amid a massive restructuring of its health care system, has made efficiency improvements to the system. These actions have focused heavily on shifting patients from inpatient hospitals to outpatient and other more appropriate care settings—actions taken by community hospitals during the 1980s. The efforts' success, however, has further reduced the workload of VA hospitals, increasing the cost of serving the remaining patients and heightening the need to address the future of the hospitals. Because fixed costs are dispersed over fewer patients, the declining use of VA hospitals increases the cost of providing hospital care to remaining patients.

Community hospitals, also faced with declining workloads, have tried many approaches to reducing their costs, including increased use of part-time and intermittent employees and use of nurse extenders and other unlicensed assistive personnel. With the exception of efforts to integrate and consolidate patient care services and administrative functions of VA hospitals in close proximity, VA has not emphasized improving the efficiency of some hospital operations as much as community hospitals have. For example, VA could not pursue contracting for patient and nonpatient care services to the same extent as community hospitals.

Not everyone accepts all of the changes taking place in community hospitals, however. For example, some view the use of some patient-centered care with skepticism because they are concerned about hospitals' cutting costs by reducing nursing staff. Decisions will have to be

made about which community hospital initiatives VA should pursue and to what extent.

In fact, many of VA's actions to improve the efficiency of its health care system, such as the Veterans Equitable Resource Allocation (VERA) system and preadmission screening, come from private-sector initiatives. These actions differ, however, from their private-sector counterparts because they lack the same financial incentives and risks. Nonetheless, individuals differ about the appropriate risk that is assumed by individual providers. A provider's assuming too much risk or having too strong a financial incentive could adversely affect patient care. Too little risk, in contrast, could limit the effectiveness of the initiative. VA thus faces difficult decisions about the extent to which it should use financial incentives and risks to change practice patterns.

The reduced use of VA hospitals associated with efficiency improvements, coupled with the declining veteran population and continued enrollment growth in managed care plans, makes preserving VA hospitals exceedingly difficult. About 46 percent of the beds in VA hospitals have been closed, and over 80 percent of the remaining beds might become excess within the next 5 to 10 years if VA's efficiency improvement efforts succeed. This gives VA two basic options: attract significant numbers of new users or close hospitals.

VA's current efforts to attract new users, however, are unlikely to generate significant demand for hospital care. Its efforts legitimately focus more on improving the accessibility of outpatient care for veterans who live far from a VA clinic than on generating demand for VA hospital care. If VA hospitals are to remain exclusively for veterans, VA will have to attract a much larger and ever-increasing proportion of the veteran population.

Other countries, such as Australia, have opened their veterans hospitals to nonveterans to build workload. Allowing VA hospitals to treat more nonveterans could increase VA hospital use and broaden VA's patient mix, strengthening VA's medical education mission. Without better systems for determining the cost of care, however, such action could result in funds appropriated for veterans' health care being used to pay for care for nonveterans. In addition, if VA opened its hospitals to nonveterans, it would be expanding the areas in which it directly competes with private-sector hospitals in nearby communities. Essentially, every nonveteran coming into a VA hospital would be one fewer patient for a private-sector hospital. Thus, expanding VA's role in providing care to

nonveterans could further jeopardize the fiscal viability of private-sector hospitals.

If VA decides to compete directly with community hospitals for both veteran and nonveteran patients, then it will subsequently have to decide the extent to which it should adopt private-sector practices on advertising and adding amenities, areas on which VA, up to now, has not focused. Similarly, decisions would have to be made about whether to market services to managed care plans and, if so, how to price them to compete with community hospitals. Several factors, including its medical education and research missions, currently limit VA's ability to compete with community hospitals on the basis of price.

Closing some VA hospitals, on the other hand, could make more funds available for expanding the use of contract hospitals for providing services to veterans who have service-connected disabilities or lack public or private insurance and do not live near a VA hospital. Now, the cost of maintaining its hospitals limits VA's ability to meet the hospital care needs of some veterans with no public or private health insurance. This is because VA hospitals have more than enough capacity to serve all veterans seeking care, regardless of their finances. In other words, insured veterans living close to a VA hospital have better access to VA-supported care than do uninsured veterans who live far from a VA hospital. Maintaining VA hospitals in markets with declining demand could result in funds being used to pay for hospital care provided to veterans in the discretionary care category, while the hospital care needs of uninsured veterans in other areas are unmet. Other countries have successfully closed veterans hospitals, while improving veterans' access to hospital care by contracting with community hospitals.

The declining use of community hospitals and VA's vast purchasing power could allow VA, like HMOs and other managed care plans, to negotiate significant discounts from community hospitals. This could improve the accessibility of VA-supported hospital care for uninsured veterans and veterans with service-connected disabilities. Contracting could help improve the financial status of some community hospitals by increasing patient workload.

Because they serve a large proportion of uninsured and low-income patients, VA hospitals are more like public hospitals than either nonprofit or for-profit community hospitals. Many of the actions VA is taking, however, threaten to divert it from its traditional safety net mission to

more directly competing with community hospitals for revenue-generating patients. Therefore, the Congress and VA have important decisions to make about the extent to which VA should focus its strategic goals on its safety net role.

Finally, medical education has played a vital role in improving the quality of care in VA hospitals for over 50 years. Similarly, VA has played an important part in training a large proportion of the nation's physicians. With a growing surplus of physicians, however, and a steadily declining veteran population, the Congress and VA face difficult decisions about the future of affiliation agreements. For example, should VA hospitals receive the same kinds of incentives to reduce the number of residency positions they support that the Congress provided non-VA hospitals through the Balanced Budget Act?

Decisions about the future of VA hospitals, whether it be to close hospitals or open them to nonveterans, have significant implications for veterans, VA employees, affiliated medical schools, community hospitals, and taxpayers. It is therefore important that the Congress and the administration have available sufficient information to properly weigh the potential effects of VA health care system infrastructure changes on all affected stakeholders.

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## VA Comments and Our Evaluation

In a letter dated March 5, 1998, VA's Assistant Secretary for Policy and Planning said that this report extensively assesses the VA health care system from its inception to the present and accurately depicts the dynamic reengineering of the Veterans Health Administration (VHA) into the type of organization necessary to ensure that VA patients receive the care they need. The letter states that VA considers the report a valuable tool for helping the Department as it develops strategic initiatives to provide seamless health care services to veterans.

VA stated that although it may agree with the issues and challenges identified in the report, it does not necessarily agree with the report's conclusions on VA's approach to the issues, the effect of continued reengineering on veterans, and the direction of VA's health care system. Our report, VA stated, often focuses on issues from past reports that VA believes are either no longer relevant, have been resolved, or are already being addressed in conjunction with its reengineering program. This, in VA's opinion, leads the report to conclusions about the future that are not certain and that the Department is not prepared to acknowledge as the

only or most probable ones. Our report is intended to identify and analyze the implications of different approaches to restructuring the veterans health care program, not to draw conclusions about the direction of the program. We believe our focus on issues raised in past reports is appropriate both for documenting the progress VA has made in its restructuring efforts and the lessons learned along the way.

VA also contends that many of the issues we cite as not being addressed in the first submission of Veterans Integrated Service Network (VISN) plans are addressed in VHA's guidance for the plans submitted in October 1997 and that future versions of the guidance will continue to address these issues and others.

We recognize that the VISN plans we reviewed were the networks' first attempt at developing strategic/business plans. We reviewed the plans in detail, however, because efforts to obtain information from VA's central office yielded few specifics on the extent to which VA was implementing initiatives like those of many community hospitals. Our review of the plans was linked to VA's guidance on preparing the plans and to the Under Secretary's Prescription for Change. Our review, however, was not intended to criticize VA's efforts to develop strategic plans. Nor are we suggesting that VA should necessarily adopt all of the community hospital initiatives. VA stated that the current national health care climate, as our report acknowledges, remains unsettled, and VA's vision of future health care delivery scenarios is based on trends that continue to emerge. This report, VA stated, clarifies that VA is at a watershed and that among the issues pertinent to the future of both VA and non-VA health care are (1) how VA can best provide services to an aging population with multiple health care needs and function as a safety net provider, (2) whether VA should continue to provide services directly, and (3) how new technologies will affect VA health care.

In addition, VA indicated that it agrees that recent and proposed changes in VA and other programs make the future demand for both VA and non-VA hospital care uncertain. It noted that outpatient care, coupled with intensive care services, is a probable future model of U.S. health care. According to VA, it is therefore logical that in the future both VA and non-VA hospitals will change and some may close. VA agreed with our observation that decisions about whether to close or consolidate hospitals or services, change missions, sell excess capacity, or identify enhanced uses of excess space will require that the effect on all stakeholders (veterans, VA

employees, community hospitals, medical schools, and individual communities) be fully considered without undue political influence.

VA also stated that because VHA is in the midst of reengineering the health care system, significant uncertainty and ultimately no clear answers exist to the many questions this report raises. According to VA, improving its information and financial systems will be critical to answering these questions and will enable VA to demonstrate good value not only in cost, but also in quality, service, patients' functional status, accessibility, and satisfaction. VA stated that by (1) following through with the transformation already occurring in its infrastructure and processes; (2) continuing to improve its strategic planning and resource allocation; and (3) implementing and monitoring clinical guidelines, performance measures, and outcomes, it will be able to successfully address these questions and other stakeholders' needs.

Regarding its safety net mission, VA said that it disagrees with our contention that eligibility reform and changes in contracting and resource allocation will cause VA to focus less on serving service-connected veterans and on its safety net role regarding low-income or uninsured veterans and enhance marketing to high-income, insured veterans. VA stated that contrary to the impression left by this report, approximately 95 percent of VA patients are veterans who meet congressional mandates for care, including veterans with service-connected disabilities and those with no service-connected disabilities who have the lowest incomes and poorest insurance coverage. According to VA, VERA focuses not simply on dollars per user but on dollars per mandatory user. The report does not contend that VA will focus less on serving service-connected veterans or its safety net role regarding low-income or uninsured veterans. We recognize that VA's strategic goals and performance measures call for increasing VA's market share of mandatory veterans. Even some veterans within the mandatory care group, however, have a greater need for or more right to care than others. First, veterans seeking care for service-connected disabilities should have the highest priority for care. Similarly, lower income veterans who lack other health care options, such as public or private health insurance, have a greater need for VA health care services than other veterans. We are concerned that VERA and the new medical care cost recovery provisions could at least in the short term provide financial incentives for individual facility managers to focus on serving revenue-generating veterans—those with higher incomes or private health insurance—rather than veterans with service-connected disabilities or no health insurance. We are also concerned about the extent to which VA can

recover its costs for treating nonmandatory veterans to permit it to maintain or increase services to mandatory veterans.

In addition, unless VA improves its medical facilities' determination of which care category—mandatory or discretionary—a veteran is placed in, it will be difficult to accurately determine whom VA is serving. A discrepancy continues to exist between the care categories assigned by VA medical facilities, which, according to VA, report that less than 5 percent of both inpatient and outpatient users were discretionary in fiscal year 1995 and our prior work, which found that about 15 percent of the veterans using VA facilities who have no service-connected disabilities have sufficiently high incomes that would place them in the lowest priority category under the new patient enrollment system.

Additional VA comments and technical corrections have been incorporated in this report as appropriate. See appendix X for a copy of VA's comments.

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# Population, Community Hospital Beds, and Average Daily Census by State and Census Division

This appendix contains information on the number of community hospital beds and average daily census (ADC) of community hospital patients per 1,000 population for each state and census division. It is based on information in the American Hospital Association's 1996 Hospital Statistics and the Bureau of the Census' Statistical Abstract of the United States, 1996. Some totals may not add due to rounding.

**Table I.1: Summary of Population, Community Hospital Beds, and ADC by Census Division, 1995**

Census division	Population (in thousands)	Beds	Beds per 1,000	ADC	ADC per 1,000
New England	13,313	38,293	2.9	26,250	2.0
Middle Atlantic	38,153	152,305	4.0	114,310	3.0
South Atlantic	46,994	154,828	3.3	97,382	2.1
East North Central	43,456	145,737	3.4	88,132	2.0
East South Central	16,066	66,882	4.2	39,907	2.5
West North Central	18,348	79,249	4.3	46,943	2.6
West South Central	28,828	97,930	3.4	53,974	1.9
Mountain	15,644	40,215	2.6	23,429	1.5
Pacific	41,952	97,297	2.3	57,976	1.4
<b>U.S. total</b>	<b>262,754</b>	<b>872,736</b>	<b>3.3</b>	<b>548,303</b>	<b>2.1</b>

**Table I.2: Population, Community Hospital Beds, and ADC in New England States, 1995**

State	Population (in thousands)	Beds	Beds per 1,000	ADC	ADC per 1,000
Connecticut	3,275	7,518	2.3	5,461	1.7
Maine	1,241	4,011	3.2	2,590	2.1
Massachusetts	6,074	18,860	3.1	13,027	2.1
New Hampshire	1,148	3,375	2.9	2,065	1.8
Rhode Island	990	2,718	2.8	1,844	1.9
Vermont	585	1,811	3.1	1,263	2.2
<b>Total</b>	<b>13,313</b>	<b>38,293</b>	<b>Not applicable</b>	<b>26,250</b>	<b>Not applicable</b>

**Table I.3: Population, Community Hospital Beds, and ADC in Middle Atlantic States, 1995**

State	Population (in thousands)	Beds	Beds per 1,000	ADC	ADC per 1,000
New Jersey	7,945	29,863	3.8	21,407	2.7
New York	18,136	73,908	4.1	59,078	3.3
Pennsylvania	12,072	48,534	4.0	33,825	2.8
<b>Total</b>	<b>38,153</b>	<b>152,305</b>	<b>Not applicable</b>	<b>114,310</b>	<b>Not applicable</b>

**Appendix I  
Population, Community Hospital Beds, and  
Average Daily Census by State and Census  
Division**

**Table I.4: Population, Community Hospital Beds, and ADC in South Atlantic States, 1995**

State	Population (in thousands)	Beds	Beds per 1,000	ADC	ADC per 1,000
Delaware	717	1,865	2.6	1,511	2.1
District of Columbia	554	3,806	6.9	2,720	4.9
Florida	14,166	49,690	3.5	29,416	2.1
Georgia	7,201	26,124	3.7	15,785	2.2
Maryland	5,042	12,607	2.5	8,794	1.7
North Carolina	7,195	22,729	3.2	15,483	2.2
South Carolina	3,673	11,307	3.1	7,250	2.0
Virginia	6,618	18,579	2.8	11,540	1.7
West Virginia	1,828	8,121	4.4	4,883	2.7
<b>Total</b>	<b>46,994</b>	<b>154,828</b>	<b>Not applicable</b>	<b>97,382</b>	<b>Not applicable</b>

**Table I.5: Population, Community Hospital Beds, and ADC in East North Central States, 1995**

State	Population (in thousands)	Beds	Beds per 1,000	ADC	ADC per 1,000
Illinois	11,830	41,964	3.5	25,056	2.1
Indiana	5,803	19,362	3.3	11,265	1.9
Michigan	9,549	29,636	3.1	19,300	2.0
Ohio	11,151	37,766	3.4	22,188	2.0
Wisconsin	5,123	17,009	3.3	10,323	2.0
<b>Total</b>	<b>43,456</b>	<b>145,737</b>	<b>Not applicable</b>	<b>88,132</b>	<b>Not applicable</b>

**Table I.6: Population, Community Hospital Beds, and ADC in East South Central States, 1995**

State	Population (in thousands)	Beds	Beds per 1,000	ADC	ADC per 1,000
Alabama	4,253	18,252	4.3	10,753	2.5
Kentucky	3,860	15,131	3.9	8,968	2.3
Mississippi	2,697	12,590	4.7	7,673	2.8
Tennessee	5,256	20,909	4.0	12,513	2.4
<b>Total</b>	<b>16,066</b>	<b>66,882</b>	<b>Not applicable</b>	<b>39,907</b>	<b>Not applicable</b>

**Appendix I  
Population, Community Hospital Beds, and  
Average Daily Census by State and Census  
Division**

**Table I.7: Population, Community Hospital Beds, and ADC in West North Central States, 1995**

State	Population (in thousands)	Beds	Beds per 1,000	ADC	ADC per 1,000
Iowa	2,842	12,615	4.4	7,075	2.5
Kansas	2,565	10,761	4.2	5,733	2.3
Minnesota	4,610	17,367	3.8	11,338	2.5
Missouri	5,324	21,851	4.1	12,612	2.4
Nebraska	1,637	7,851	4.8	4,478	2.7
North Dakota	641	4,168	6.5	2,744	4.3
South Dakota	729	4,636	6.4	2,963	4.1
<b>Total</b>	<b>18,348</b>	<b>79,249</b>	<b>Not applicable</b>	<b>46,943</b>	<b>Not applicable</b>

**Table I.8: Population, Community Hospital Beds, and ADC in West South Central States, 1995**

State	Population (in thousands)	Beds	Beds per 1,000	ADC	ADC per 1,000
Arkansas	2,484	10,144	4.1	6,017	2.4
Louisiana	4,342	19,146	4.4	10,698	2.5
Oklahoma	3,278	11,462	3.5	6,068	1.9
Texas	18,724	57,178	3.1	31,191	1.7
<b>Total</b>	<b>28,828</b>	<b>97,930</b>	<b>Not applicable</b>	<b>53,974</b>	<b>Not applicable</b>

**Table I.9: Population, Community Hospital Beds, and ADC in Mountain States, 1995**

State	Population (in thousands)	Beds	Beds per 1,000	ADC	ADC per 1,000
Arizona	4,218	9,852	2.3	5,558	1.3
Colorado	3,747	9,258	2.5	5,426	1.4
Idaho	1,163	3,383	2.9	2,095	1.8
Montana	870	4,225	4.9	2,734	3.2
Nevada	1,530	3,600	2.4	2,237	1.5
New Mexico	1,685	3,675	2.2	2,128	1.3
Utah	1,951	4,184	2.1	2,192	1.1
Wyoming	480	2,038	4.2	1,059	2.2
<b>Total</b>	<b>15,644</b>	<b>40,215</b>	<b>Not applicable</b>	<b>23,429</b>	<b>Not applicable</b>

**Appendix I  
Population, Community Hospital Beds, and  
Average Daily Census by State and Census  
Division**

**Table I.10: Population, Community  
Hospital Beds, and ADC in Pacific  
States, 1995**

<b>State</b>	<b>Population (in thousands)</b>	<b>Beds</b>	<b>Beds per 1,000</b>	<b>ADC</b>	<b>ADC per 1,000</b>
Alaska	604	1,270	2.1	667	1.1
California	31,589	75,016	2.4	45,060	1.4
Hawaii	1,187	3,030	2.6	2,414	2.0
Oregon	3,141	7,161	2.3	3,783	1.2
Washington	5,431	10,820	2.0	6,052	1.1
<b>Total</b>	<b>41,952</b>	<b>97,297</b>	<b>Not applicable</b>	<b>57,976</b>	<b>Not applicable</b>

# Market Penetration of Health Maintenance and Preferred Provider Organizations

This appendix contains information on the market penetration of HMOs and preferred provider organizations (PPO) by census division and state.

**Table II.1: HMO and PPO Market Shares by Census Division, 1994**

Census division	1994 population (in thousands)	HMO market share	PPO market share	Total HMO and PPO market share
New England	13,264	27.6	5.7	33.3
Middle Atlantic	38,118	21.9	9.0	30.9
South Atlantic	46,379	14.8	14.8	29.6
East North Central	43,193	18.0	16.8	34.8
West North Central	18,215	14.2	21.1	35.3
East South Central	15,894	10.9	22.5	33.4
West South Central	28,439	8.6	22.3	30.9
Mountain	15,233	21.6	19.2	40.8
Pacific	41,614	34.6	23.0	57.6
<b>Total</b>	<b>260,349</b>	<b>Not applicable</b>	<b>Not applicable</b>	<b>Not applicable</b>

Source: Health Insurance Association of America (HIAA), Source Book of Health Insurance Data, 1996.

**Table II.2: HMO and PPO Market Shares in New England States, 1994**

State	HMO members	HMO market share	PPO members	PPO market share	Total HMO and PPO market share
Connecticut	897,013	27.4	151,790	4.6	32.0
Maine	76,453	6.2	9,374	0.8	7.0
Massachusetts	2,130,655	35.2	458,712	7.6	42.8
New Hampshire	194,779	17.0	36,899	3.3	20.3
Rhode Island	288,853	28.8	96,269	9.6	38.4
Vermont	73,349	12.6	1,832	0.3	12.9
<b>Total</b>	<b>3,661,102</b>	<b>Not applicable</b>	<b>754,876</b>	<b>Not applicable</b>	<b>Not applicable</b>

Source: HIAA, Source Book of Health Insurance Data, 1996.

**Appendix II  
Market Penetration of Health Maintenance  
and Preferred Provider Organizations**

**Table II.3: HMO and PPO Market Shares in Middle Atlantic States, 1994**

State	HMO members	HMO market share	PPO members	PPO market share	Total HMO and PPO market share
New Jersey	1,343,407	16.9	1,033,625	13.1	30.0
New York	4,418,550	24.3	707,893	3.8	28.1
Pennsylvania	2,590,938	21.5	1,671,562	13.8	35.3
<b>Total</b>	<b>8,352,895</b>	<b>Not applicable</b>	<b>3,413,080</b>	<b>Not applicable</b>	<b>Not applicable</b>

Source: HIAA, Source Book of Health Insurance Data, 1996.

**Table II.4: HMO and PPO Market Shares in South Atlantic States, 1994**

State	HMO members	HMO market share	PPO members	PPO market share	Total HMO and PPO market share
Delaware	145,822	20.5	8,754	1.2	21.7
District of Columbia	144,723	25.6	57,771	12.6	38.2
Florida	2,828,854	20.1	3,039,137	22.2	42.3
Georgia	624,750	8.8	923,543	13.3	22.1
Maryland	1,818,824	36.2	1,043,793	21.1	57.3
North Carolina	594,173	8.3	784,023	11.2	19.5
South Carolina	155,437	4.2	422,353	11.6	15.8
Virginia	554,834	8.4	514,958	7.9	16.3
West Virginia	0	0.0	78,011	4.2	4.2
<b>Total</b>	<b>6,867,477</b>	<b>Not applicable</b>	<b>6,872,343</b>	<b>Not applicable</b>	<b>Not applicable</b>

Source: HIAA, Source Book of Health Insurance Data, 1996.

**Table II.5: HMO and PPO Market Shares in East North Central States, 1994**

State	HMO members	HMO market share	PPO members	PPO market share	Total HMO and PPO market share
Illinois	1,996,750	16.9	2,852,985	24.4	41.3
Indiana	424,753	7.4	911,003	15.9	23.3
Michigan	1,925,811	20.2	735,796	7.7	27.9
Ohio	2,139,094	19.2	2,190,132	19.7	38.9
Wisconsin	1,285,252	24.2	566,195	11.2	35.4
<b>Total</b>	<b>7,771,660</b>	<b>Not applicable</b>	<b>7,256,111</b>	<b>Not applicable</b>	<b>Not applicable</b>

Source: HIAA, Source Book of Health Insurance Data, 1996.

**Appendix II  
Market Penetration of Health Maintenance  
and Preferred Provider Organizations**

**Table II.6: HMO and PPO Market Shares in East South Central States, 1994**

State	HMO members	HMO market share	PPO members	PPO market share	Total HMO and PPO market share
Alabama	418,128	10.0	1,447,382	34.5	44.5
Kentucky	465,658	12.1	441,403	11.6	23.7
Mississippi	7,283	0.3	60,407	22.8	23.1
Tennessee	844,599	16.2	1,625,072	31.8	48.0
<b>Total</b>	<b>1,735,668</b>	<b>Not applicable</b>	<b>3,574,264</b>	<b>Not applicable</b>	<b>Not applicable</b>

Source: HIAA, Source Book of Health Insurance Data, 1996.

**Table II.7: HMO and PPO Market Shares in West North Central States, 1994**

State	HMO members	HMO market share	PPO members	PPO market share	Total HMO and PPO market share
Iowa	117,307	4.1	251,762	8.9	13.0
Kansas	278,703	10.9	381,090	15.1	26.0
Minnesota	1,221,896	26.6	1,490,398	32.9	59.5
Missouri	778,625	14.7	1,177,764	22.5	37.2
Nebraska	155,173	9.5	533,509	33.2	42.7
North Dakota	7,263	1.1	0	0.0	1.1
South Dakota	20,968	2.9	11,281	1.6	4.5
<b>Total</b>	<b>2,579,935</b>	<b>Not applicable</b>	<b>3,845,804</b>	<b>Not applicable</b>	<b>Not applicable</b>

Source: HIAA, Source Book of Health Insurance Data, 1996.

**Table II.8: HMO and PPO Market Shares in West South Central States, 1994**

State	HMO members	HMO market share	PPO members	PPO market share	Total HMO and PPO market share
Arkansas	92,929	3.8	62,082	2.5	6.3
Louisiana	304,203	7.0	685,860	15.5	22.5
Oklahoma	238,266	7.3	416,815	12.9	20.2
Texas	1,796,610	9.7	5,180,483	28.7	38.4
<b>Total</b>	<b>2,432,008</b>	<b>Not applicable</b>	<b>6,345,240</b>	<b>Not applicable</b>	<b>Not applicable</b>

Source: HIAA, Source Book of Health Insurance Data, 1996.

**Appendix II  
Market Penetration of Health Maintenance  
and Preferred Provider Organizations**

**Table II.9: HMO and PPO Market Shares in Mountain States, 1994**

<b>State</b>	<b>HMO members</b>	<b>HMO market share</b>	<b>PPO members</b>	<b>PPO market share</b>	<b>Total HMO and PPO market share</b>
Arizona	1,483,481	35.8	650,372	16.5	52.3
Colorado	904,740	24.4	1,816,605	50.9	75.3
Idaho	13,283	1.2	2,735	0.2	1.4
Montana	13,364	1.5	1,776	0.2	1.7
Nevada	219,890	14.7	256,919	18.5	33.2
New Mexico	290,451	17.4	38,436	2.4	19.8
Utah	370,975	19.2	160,948	8.6	27.8
Wyoming	0	0.0	0	0.0	0.0
<b>Total</b>	<b>3,296,184</b>	<b>Not applicable</b>	<b>2,927,791</b>	<b>Not applicable</b>	<b>Not applicable</b>

Source: HIAA, Source Book of Health Insurance Data, 1996.

**Table II.10: HMO and PPO Market Shares in Pacific States, 1994**

<b>State</b>	<b>HMO members</b>	<b>HMO market share</b>	<b>PPO members</b>	<b>PPO market share</b>	<b>Total HMO and PPO market share</b>
Alaska	0	0.0	17,977	3.1	3.1
California	12,093,270	38.3	7,309,847	23.4	61.7
Hawaii	274,702	23.2	476,921	40.7	63.9
Oregon	1,165,658	37.5	474,455	15.6	53.1
Washington	884,388	16.4	1,283,936	24.1	40.5
<b>Total</b>	<b>14,418,018</b>	<b>Not applicable</b>	<b>9,563,136</b>	<b>Not applicable</b>	<b>Not applicable</b>

Source: HIAA, Source Book of Health Insurance Data, 1996.

# Estimates of Current Community Hospital Excess Capacity Under the Target Occupancy Rate Approach

This appendix contains estimates of the amount of excess community hospital capacity using the target occupancy rate approach, with a target occupancy of 85 percent. It is based on information in the American Hospital Association's (AHA) 1996 Hospital Statistics.

To determine excess capacity, we followed a two-step process. First, we determined how many beds would be needed to support the average daily census (ADC) with an 85-percent occupancy rate ( $ADC/.85$ ). We then subtracted the resulting estimate of beds needed from the AHA-reported number of beds.<sup>282</sup> Some numbers may not add due to rounding.

**Table III.1: Estimates of Excess Community Hospital Capacity at 85-Percent Occupancy by Census Division, 1995**

Census division	Beds	ADC	Excess capacity	
			Beds	Percent
New England	38,293	26,250	7,411	19.4
Middle Atlantic	152,305	114,310	17,822	11.7
South Atlantic	154,828	97,382	40,262	26.0
East North Central	145,737	88,132	42,052	28.9
East South Central	66,882	39,907	19,933	29.8
West North Central	79,249	46,943	24,021	30.3
West South Central	97,930	53,974	34,433	35.2
Mountain	40,215	23,429	12,651	31.5
Pacific	97,297	57,976	29,089	29.9
<b>U.S. total</b>	<b>872,736</b>	<b>548,303</b>	<b>227,674</b>	<b>26.1</b>

**Table III.2: Estimates of Excess Community Hospital Capacity at 85-Percent Occupancy in New England States, 1995**

State	Beds	ADC	Excess capacity	
			Beds	Percent
Connecticut	7,518	5,461	1,093	14.5
Maine	4,011	2,590	964	24.0
Massachusetts	18,860	13,027	3,534	18.7
New Hampshire	3,375	2,065	946	28.0
Rhode Island	2,718	1,844	549	20.2
Vermont	1,811	1,263	325	17.9
<b>Total</b>	<b>38,293</b>	<b>26,250</b>	<b>7,411</b>	<b>Not applicable</b>

<sup>282</sup>We assumed that the AHA-reported beds represent operating rather than licensed beds.

**Appendix III  
Estimates of Current Community Hospital  
Excess Capacity Under the Target  
Occupancy Rate Approach**

**Table III.3: Estimates of Excess Community Hospital Capacity at 85-Percent Occupancy in Middle Atlantic States, 1995**

State	Beds	ADC	Excess capacity	
			Beds	Percent
New Jersey	29,863	21,407	4,678	15.7
New York	73,908	59,078	4,404	6.0
Pennsylvania	48,534	33,825	8,740	18.0
<b>Total</b>	<b>152,305</b>	<b>114,310</b>	<b>17,822</b>	<b>Not applicable</b>

**Table III.4: Estimates of Excess Community Hospital Capacity at 85-Percent Occupancy in South Atlantic States, 1995**

State	Beds	ADC	Excess capacity	
			Beds	Percent
Delaware	1,865	1,511	87	4.7
District of Columbia	3,806	2,720	606	15.9
Florida	49,690	29,416	15,083	30.4
Georgia	26,124	15,785	7,553	28.9
Maryland	12,607	8,794	2,261	17.9
North Carolina	22,729	15,483	4,514	19.9
South Carolina	11,307	7,250	2,778	24.6
Virginia	18,579	11,540	5,003	26.9
West Virginia	8,121	4,883	2,377	29.3
<b>Total</b>	<b>154,828</b>	<b>97,382</b>	<b>40,262</b>	<b>Not applicable</b>

**Table III.5: Estimates of Excess Community Hospital Capacity at 85-Percent Occupancy in East North Central States, 1995**

State	Beds	ADC	Excess capacity	
			Beds	Percent
Illinois	41,964	25,056	12,486	29.8
Indiana	19,362	11,265	6,109	31.6
Michigan	29,636	19,300	6,930	23.4
Ohio	37,766	22,188	11,662	30.9
Wisconsin	17,009	10,323	4,864	28.6
<b>Total</b>	<b>145,737</b>	<b>88,132</b>	<b>42,051</b>	<b>Not applicable</b>

**Table III.6: Estimates of Excess Community Hospital Capacity at 85-Percent Occupancy in East South Central States, 1995**

State	Beds	ADC	Excess capacity	
			Beds	Percent
Alabama	18,252	10,753	5,602	30.7
Kentucky	15,131	8,968	4,580	30.3
Mississippi	12,590	7,673	3,563	28.3
Tennessee	20,909	12,513	6,188	30.0
<b>Total</b>	<b>66,882</b>	<b>39,907</b>	<b>19,933</b>	<b>Not applicable</b>

**Appendix III**  
**Estimates of Current Community Hospital**  
**Excess Capacity Under the Target**  
**Occupancy Rate Approach**

**Table III.7: Estimates of Excess Community Hospital Capacity at 85-Percent Occupancy in West North Central States, 1995**

State	Beds	ADC	Excess capacity	
			Beds	Percent
Iowa	12,615	7,075	4,291	34.0
Kansas	10,761	5,733	4,016	37.3
Minnesota	17,367	11,338	4,028	23.2
Missouri	21,851	12,612	7,013	32.1
Nebraska	7,851	4,478	2,583	32.9
North Dakota	4,168	2,744	940	22.6
South Dakota	4,636	2,963	1,150	24.8
<b>Total</b>	<b>79,249</b>	<b>46,943</b>	<b>24,021</b>	<b>Not applicable</b>

**Table III.8: Estimates of Excess Community Hospital Capacity at 85-Percent Occupancy in West South Central States, 1995**

State	Beds	ADC	Excess capacity	
			Beds	Percent
Arkansas	10,144	6,017	3,065	30.2
Louisiana	19,146	10,698	6,561	34.3
Oklahoma	11,462	6,068	4,324	37.7
Texas	57,178	31,191	20,483	35.8
<b>Total</b>	<b>97,930</b>	<b>53,974</b>	<b>34,433</b>	<b>Not applicable</b>

**Table III.9: Estimates of Excess Community Hospital Capacity at 85-Percent Occupancy in Mountain States, 1995**

State	Beds	ADC	Excess capacity	
			Beds	Percent
Arizona	9,852	5,558	3,313	33.6
Colorado	9,258	5,426	2,875	31.0
Idaho	3,383	2,095	918	27.1
Montana	4,225	2,734	1,009	23.9
Nevada	3,600	2,237	968	26.9
New Mexico	3,675	2,128	1,171	31.9
Utah	4,184	2,192	1,605	38.4
Wyoming	2,038	1,059	792	38.9
<b>Total</b>	<b>40,215</b>	<b>23,429</b>	<b>12,651</b>	<b>Not applicable</b>

**Appendix III  
 Estimates of Current Community Hospital  
 Excess Capacity Under the Target  
 Occupancy Rate Approach**

**Table III.10: Estimates of Excess  
 Community Hospital Capacity at  
 85-Percent Occupancy in Pacific  
 States, 1995**

<b>State</b>	<b>Beds</b>	<b>ADC</b>	<b>Excess capacity</b>	
			<b>Beds</b>	<b>Percent</b>
Alaska	1,270	667	485	38.1
California	75,016	45,060	22,004	29.3
Hawaii	3,030	2,414	190	6.3
Oregon	7,161	3,783	2,710	37.8
Washington	10,820	6,052	3,700	34.2
<b>Total</b>	<b>97,297</b>	<b>57,976</b>	<b>29,089</b>	<b>Not applicable</b>

# Estimates of Excess Community Hospital Beds Based on Selected Target of Beds per 1,000 Population Based on 1995 Population

This appendix contains estimates of excess community hospital beds by state and census division using targets of one and two beds per 1,000 population. To develop the estimates, we determined the number of beds needed at the selected target (either the population divided by 1,000 or 500) and subtracted the result from the American Hospital Association's (AHA) reported beds.<sup>283</sup>

Current demand for community hospital care in some states is already below the level needed to support two beds per 1,000 population (an average daily census (ADC) of about 1.7 per 1,000 population). For the 11 states where current demand is below 1.7 beds per 1,000 population (see app. I),<sup>284</sup> we developed an adjusted estimate of excess capacity. Instead of using the two beds per 1,000 estimate, we substituted the estimate of current excess capacity derived under the target occupancy rate approach (see app. III). Numbers in the appendix may not add due to rounding.

**Table IV.1: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population by Census Division, 1995**

Census division	Population (in thousands)	Beds	Excess beds at a target of		
			1 bed per 1,000	2 beds per 1,000	2 beds per 1,000 w/ adjustment
New England	13,313	38,293	24,980	11,667	11,792
Middle Atlantic	38,153	152,305	114,152	75,999	75,999
South Atlantic	46,994	154,828	107,834	60,840	60,840
East North Central	43,456	145,737	102,281	58,825	58,825
East South Central	16,066	66,882	50,816	34,750	34,750
West North Central	18,348	79,249	60,901	42,553	42,553
West South Central	28,828	97,930	69,102	40,274	41,026
Mountain	15,644	40,215	24,571	8,927	14,551
Pacific	41,952	97,297	55,345	13,393	29,555
<b>U.S. total</b>	<b>262,754</b>	<b>872,736</b>	<b>609,982</b>	<b>347,228</b>	<b>369,891</b>

<sup>283</sup>We assumed that the AHA-reported beds represent operating rather than licensed beds.

<sup>284</sup>The 11 states are Alaska, Arizona, California, Colorado, Connecticut, Nevada, New Mexico, Oregon, Texas, Utah, and Washington. We did not make adjustments for Maryland and Virginia because those states have ADCs slightly above 1.7 per 1,000 population.

**Appendix IV  
Estimates of Excess Community Hospital  
Beds Based on Selected Target of Beds per  
1,000 Population Based on 1995 Population**

**Table IV.2: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in New England States, 1995**

State	Population (in thousands)	Beds	Excess beds at a target of		
			1 bed per 1,000	2 beds per 1,000	2 beds per 1,000 w/ adjustment
Connecticut	3,275	7,518	4,243	968	1,093
Maine	1,241	4,011	2,770	1,529	1,529
Massachusetts	6,074	18,860	12,786	6,712	6,712
New Hampshire	1,148	3,375	2,227	1,079	1,079
Rhode Island	990	2,718	1,728	738	738
Vermont	585	1,811	1,226	641	641
<b>Total</b>	<b>13,313</b>	<b>38,293</b>	<b>24,980</b>	<b>11,667</b>	<b>11,792</b>

**Table IV.3: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in Middle Atlantic States, 1995**

State	Population (in thousands)	Beds	Excess beds at a target of		
			1 bed per 1,000	2 beds per 1,000	2 beds per 1,000 w/ adjustment
New Jersey	7,945	29,863	21,918	13,973	13,973
New York	18,136	73,908	55,772	37,636	37,636
Pennsylvania	12,072	48,534	36,462	24,390	24,390
<b>Total</b>	<b>38,153</b>	<b>152,305</b>	<b>114,152</b>	<b>75,999</b>	<b>75,999</b>

**Table IV.4: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in South Atlantic States, 1995**

State	Population (in thousands)	Beds	Excess beds at a target of		
			1 bed per 1,000	2 beds per 1,000	2 beds per 1,000 w/ adjustment
Delaware	717	1,865	1,148	431	431
District of Columbia	554	3,806	3,252	2,698	2,698
Florida	14,166	49,690	35,524	21,358	21,358
Georgia	7,201	26,124	18,923	11,722	11,722
Maryland	5,042	12,607	7,565	2,523	2,523
North Carolina	7,195	22,729	15,534	8,339	8,339
South Carolina	3,673	11,307	7,634	3,961	3,961
Virginia	6,618	18,579	11,961	5,343	5,343
West Virginia	1,828	8,121	6,293	4,465	4,465
<b>Total</b>	<b>46,994</b>	<b>154,828</b>	<b>118,834</b>	<b>60,840</b>	<b>60,840</b>

**Appendix IV  
Estimates of Excess Community Hospital  
Beds Based on Selected Target of Beds per  
1,000 Population Based on 1995 Population**

**Table IV.5: Estimates of Excess  
Community Hospital Beds at Selected  
Targets per 1,000 Population in East  
North Central States, 1995**

State	Population (in thousands)	Beds	Excess beds at a target of		
			1 bed per 1,000	2 beds per 1,000	2 beds per 1,000 w/ adjustment
Illinois	11,830	41,964	30,134	18,304	18,304
Indiana	5,803	19,362	13,559	7,756	7,756
Michigan	9,549	29,636	20,087	10,538	10,538
Ohio	11,151	37,766	26,615	15,464	15,464
Wisconsin	5,123	17,009	11,886	6,763	6,763
<b>Total</b>	<b>43,456</b>	<b>145,737</b>	<b>102,281</b>	<b>58,825</b>	<b>58,825</b>

**Table IV.6: Estimates of Excess  
Community Hospital Beds at Selected  
Targets per 1,000 Population in East  
South Central States, 1995**

State	Population (in thousands)	Beds	Excess beds at a target of		
			1 bed per 1,000	2 beds per 1,000	2 beds per 1,000 w/ adjustment
Alabama	4,253	18,252	13,999	9,746	9,746
Kentucky	3,860	15,131	11,271	7,411	7,411
Mississippi	2,697	12,590	9,893	7,196	7,196
Tennessee	5,256	20,909	15,653	10,397	10,397
<b>Total</b>	<b>16,066</b>	<b>66,882</b>	<b>50,816</b>	<b>34,750</b>	<b>34,750</b>

**Table IV.7: Estimates of Excess  
Community Hospital Beds at Selected  
Targets per 1,000 Population in West  
North Central States, 1995**

State	Population (in thousands)	Beds	Excess beds at a target of		
			1 bed per 1,000	2 beds per 1,000	2 beds per 1,000 w/ adjustment
Iowa	2,842	12,615	9,773	6,931	6,931
Kansas	2,565	10,761	8,196	5,631	5,631
Minnesota	4,610	17,367	12,757	8,147	8,147
Missouri	5,324	21,851	16,527	11,203	11,203
Nebraska	1,637	7,851	6,214	4,577	4,577
North Dakota	641	4,168	3,527	2,886	2,886
South Dakota	729	4,636	3,907	3,178	3,178
<b>Total</b>	<b>18,348</b>	<b>79,249</b>	<b>60,901</b>	<b>42,553</b>	<b>42,553</b>

**Appendix IV**  
**Estimates of Excess Community Hospital**  
**Beds Based on Selected Target of Beds per**  
**1,000 Population Based on 1995 Population**

**Table IV.8: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in West South Central States, 1995**

State	Population (in thousands)	Beds	Excess beds at a target of		
			1 bed per 1,000	2 beds per 1,000	2 beds per 1,000 w/ adjustment
Arkansas	2,484	10,144	7,660	5,176	5,176
Louisiana	4,342	19,146	14,804	10,462	10,462
Oklahoma	3,278	11,462	8,184	4,906	4,906
Texas	18,724	57,178	38,454	19,730	20,482
<b>Total</b>	<b>28,828</b>	<b>97,930</b>	<b>69,102</b>	<b>40,274</b>	<b>41,026</b>

**Table IV.9: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in Mountain States, 1995**

State	Population (in thousands)	Beds	Excess beds at a target of		
			1 bed per 1,000	2 beds per 1,000	2 beds per 1,000 w/ adjustment
Arizona	4,218	9,852	5,634	1,416	3,313
Colorado	3,747	9,258	5,511	1,764	2,874
Idaho	1,163	3,383	2,220	1,057	1,057
Montana	870	4,225	3,355	2,485	2,485
Nevada	1,530	3,600	2,070	540	968
New Mexico	1,685	3,675	1,990	305	1,171
Utah	1,951	4,184	2,233	282	1,605
Wyoming	480	2,038	1,558	1,078	1,078
<b>Total</b>	<b>15,644</b>	<b>40,215</b>	<b>24,571</b>	<b>8,927</b>	<b>14,551</b>

**Table IV.10: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in Pacific States, 1995**

State	Population (in thousands)	Beds	Excess beds at a target of		
			1 bed per 1,000	2 beds per 1,000	2 beds per 1,000 w/ adjustment
Alaska	604	1,270	666	62	485
California	31,589	75,016	43,427	11,838	22,004
Hawaii	1,187	3,030	1,843	656	656
Oregon	3,141	7,161	4,020	879	2,710
Washington	5,431	10,820	5,389	-42	3,700
<b>Total</b>	<b>41,952</b>	<b>97,297</b>	<b>55,345</b>	<b>13,393</b>	<b>29,555</b>

# Estimates of Excess Community Hospital Beds Based on Selected Targets of Beds per 1,000 Population for Projected Population in 2010

This appendix contains estimates of excess community hospital beds by state and census division using targets of one and two beds per 1,000 projected population in 2010. To develop the estimates, we determined the number of beds needed at the selected target (either the projected population divided by 1,000 or 500) and subtracted the result from the American Hospital Association's reported community hospital beds in 1995.<sup>285</sup>

**Table V.1: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population by Census Division, 2010**

Census division	Population (in thousands)	Beds	Excess beds at a target of	
			1 bed per 1,000	2 beds per 1,000
New England	13,755	38,293	24,538	10,783
Middle Atlantic	39,546	152,305	112,759	73,213
South Atlantic	55,321	154,828	99,507	44,186
East North Central	46,259	145,737	99,478	53,219
East South Central	17,941	66,882	48,941	31,000
West North Central	20,074	79,249	59,175	39,101
West South Central	34,123	97,930	63,807	29,684
Mountain	19,093	40,215	21,122	2,029
Pacific	54,318	97,297	42,979	0
<b>U.S. total</b>	<b>300,430</b>	<b>872,736</b>	<b>572,306</b>	<b>271,876</b>

**Table V.2: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in New England States, 2010**

State	Population (in thousands)	Beds	Excess beds at a target of	
			1 bed per 1,000	2 beds per 1,000
Connecticut	3,412	7,518	4,106	694
Maine	1,309	4,011	2,702	1,393
Massachusetts	6,097	18,860	12,763	6,666
New Hampshire	1,280	3,375	2,095	815
Rhode Island	1,034	2,718	1,684	650
Vermont	623	1,811	1,188	565
<b>Total</b>	<b>13,755</b>	<b>38,293</b>	<b>24,538</b>	<b>10,783</b>

<sup>285</sup>We assumed that the AHA-reported beds represent operating rather than licensed beds.

**Appendix V**  
**Estimates of Excess Community Hospital**  
**Beds Based on Selected Targets of Beds per**  
**1,000 Population for Projected Population in**  
**2010**

**Table V.3: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in Middle Atlantic States, 2010**

State	Population (in thousands)	Beds	Excess beds at a target of	
			1 bed per 1,000	2 beds per 1,000
New Jersey	8,562	29,863	21,301	12,739
New York	18,546	73,908	55,362	36,816
Pennsylvania	12,438	48,534	36,096	23,658
<b>Total</b>	<b>39,546</b>	<b>152,305</b>	<b>112,759</b>	<b>73,213</b>

**Table V.4: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in South Atlantic States, 2010**

State	Population (in thousands)	Beds	Excess beds at a target of	
			1 bed per 1,000	2 beds per 1,000
Delaware	815	1,865	1,050	235
District of Columbia	577	3,806	3,229	2,652
Florida	17,372	49,690	32,318	14,946
Georgia	8,553	26,124	17,571	9,018
Maryland	5,782	12,607	6,825	1,043
North Carolina	8,341	22,729	14,388	6,047
South Carolina	4,311	11,307	6,996	2,685
Virginia	7,728	18,579	10,851	3,123
West Virginia	1,842	8,121	6,279	4,437
<b>Total</b>	<b>55,321</b>	<b>154,828</b>	<b>99,507</b>	<b>44,186</b>

**Table V.5: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in East North Central States, 2010**

State	Population (in thousands)	Beds	Excess beds at a target of	
			1 bed per 1,000	2 beds per 1,000
Illinois	12,652	41,964	29,312	16,660
Indiana	6,286	19,362	13,076	6,790
Michigan	10,033	29,636	19,603	9,570
Ohio	11,659	37,766	26,107	14,448
Wisconsin	5,629	17,009	11,380	5,751
<b>Total</b>	<b>46,259</b>	<b>145,737</b>	<b>99,478</b>	<b>53,219</b>

**Appendix V**  
**Estimates of Excess Community Hospital**  
**Beds Based on Selected Targets of Beds per**  
**1,000 Population for Projected Population in**  
**2010**

**Table V.6: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in East South Central States, 2010**

State	Population (in thousands)	Beds	Excess beds at a target of	
			1 bed per 1,000	2 beds per 1,000
Alabama	4,856	18,252	13,396	8,540
Kentucky	4,160	15,131	10,971	6,811
Mississippi	2,918	12,590	9,672	6,754
Tennessee	6,007	20,909	14,902	8,895
<b>Total</b>	<b>17,941</b>	<b>66,882</b>	<b>48,941</b>	<b>31,000</b>

**Table V.7: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in West North Central States, 2010**

State	Population (in thousands)	Beds	Excess beds at a target of	
			1 bed per 1,000	2 beds per 1,000
Iowa	2,981	12,615	9,634	6,653
Kansas	2,922	10,761	7,839	4,917
Minnesota	5,127	17,367	12,240	7,113
Missouri	5,760	21,851	16,091	10,331
Nebraska	1,793	7,851	6,058	4,265
North Dakota	676	4,168	3,492	2,816
South Dakota	815	4,636	3,821	3,006
<b>Total</b>	<b>20,074</b>	<b>79,249</b>	<b>59,175</b>	<b>39,101</b>

**Table V.8: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in West South Central States, 2010**

State	Population (in thousands)	Beds	Excess beds at a target of	
			1 bed per 1,000	2 beds per 1,000
Arkansas	2,782	10,144	7,362	4,580
Louisiana	4,808	19,146	14,338	9,530
Oklahoma	3,683	11,462	7,779	4,096
Texas	22,850	57,178	34,328	11,478
<b>Total</b>	<b>34,123</b>	<b>97,930</b>	<b>63,807</b>	<b>29,684</b>

**Appendix V**  
**Estimates of Excess Community Hospital**  
**Beds Based on Selected Targets of Beds per**  
**1,000 Population for Projected Population in**  
**2010**

**Table V.9: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in Mountain States, 2010**

State	Population (in thousands)	Beds	Excess beds at a target of	
			1 bed per 1,000	2 beds per 1,000
Arizona	5,074	9,852	4,778	0
Colorado	4,494	9,258	4,764	270
Idaho	1,454	3,383	1,929	475
Montana	996	4,225	3,229	2,233
Nevada	1,935	3,600	1,665	0
New Mexico	2,082	3,675	1,593	0
Utah	2,462	4,184	1,722	0
Wyoming	596	2,038	1,442	846
<b>Total</b>	<b>19,093</b>	<b>40,215</b>	<b>21,122</b>	<b>2,029</b>

**Table V.10: Estimates of Excess Community Hospital Beds at Selected Targets per 1,000 Population in Pacific States, 2010**

State	Population (in thousands)	Beds	Excess beds at a target of	
			1 bed per 1,000	2 beds per 1,000
Alaska	781	1,270	489	0
California	41,085	75,016	33,931	0
Hawaii	1,551	3,030	1,479	0
Oregon	3,876	7,161	3,285	0
Washington	7,025	10,820	3,795	0
<b>Total</b>	<b>54,318</b>	<b>97,297</b>	<b>42,979</b>	<b>0</b>

# Veteran Users, Operating Beds, and Average Daily Census by VISN in Fiscal Year 1995

This appendix contains information on the number of VA hospital beds and average daily census (ADC) per 1,000 VA health care system users for each Veterans Integrated Service Network (VISN). Data on hospital beds and ADC were obtained from VA's Summary of Medical Programs for fiscal year 1995. Data on unique veteran users were supplied by VA officials developing the Veterans Equitable Resource Allocation system. Some totals may not add due to rounding.

**Table VI.1: VA Hospital Operating Beds and ADC by VISN, Fiscal Year 1995**

VISN	Unique users (in thousands)	Operating beds	Beds per 1,000 users	ADC	ADC per 1,000 users
1 (Boston)	147	2,918	20	2,309	16
2 (Albany)	78	1,880	24	1,454	19
3 (Bronx)	146	3,789	26	3,055	21
4 (Pittsburgh)	136	3,215	24	2,474	18
5 (Baltimore)	81	1,708	21	1,262	16
6 (Durham)	147	2,622	18	1,985	14
7 (Atlanta)	163	3,395	21	2,584	16
8 (Bay Pines)	222	2,970	13	2,079	9
9 (Nashville)	135	2,729	20	2,023	15
10 (Cincinnati)	100	1,512	15	1,196	12
11 (Ann Arbor)	124	2,680	22	1,933	16
12 (Chicago)	137	2,956	22	2,185	16
13 (Minneapolis)	82	1,326	16	926	11
14 (Omaha)	57	973	17	690	12
15 (Kansas City)	120	2,054	17	1,509	13
16 (Jackson)	257	3,824	15	2,533	10
17 (Dallas)	128	2,327	18	1,562	12
18 (Phoenix)	144	1,371	10	907	6
19 (Denver)	77	1,231	16	824	11
20 (Portland)	124	1,456	12	941	8
21 (San Francisco)	123	1,601	13	1,115	9
22 (Long Beach)	162	2,248	14	1,457	9
<b>Total</b>	<b>2,890</b>	<b>50,785</b>	<b>18</b>	<b>37,003</b>	<b>13</b>

**Appendix VI  
 Veteran Users, Operating Beds, and Average  
 Daily Census by VISN in Fiscal Year 1995**

**Table VI.2: VA Surgical Beds and ADC  
 by VISN, Fiscal Year 1995**

<b>VISN</b>	<b>Unique users (in thousands)</b>	<b>Surgery beds</b>	<b>Beds per 1,000 users</b>	<b>ADC</b>	<b>ADC per 1,000 users</b>
1 (Boston)	147	346	2	252	2
2 (Albany)	78	218	3	129	2
3 (Bronx)	146	410	3	267	2
4 (Pittsburgh)	136	430	3	235	2
5 (Baltimore)	81	209	3	134	2
6 (Durham)	147	450	3	286	2
7 (Atlanta)	163	425	3	238	1
8 (Bay Pines)	222	637	3	381	2
9 (Nashville)	135	485	4	293	2
10 (Cincinnati)	100	192	2	139	1
11 (Ann Arbor)	124	306	2	178	1
12 (Chicago)	137	408	3	249	2
13 (Minneapolis)	82	246	3	146	2
14 (Omaha)	57	231	4	128	2
15 (Kansas City)	120	295	2	206	2
16 (Jackson)	257	707	3	453	2
17 (Dallas)	128	367	3	221	2
18 (Phoenix)	144	283	2	167	1
19 (Denver)	77	195	3	113	1
20 (Portland)	124	287	2	171	1
21 (San Francisco)	123	253	2	154	1
22 (Long Beach)	162	440	3	237	1
<b>Total</b>	<b>2,890</b>	<b>7,820</b>	<b>3</b>	<b>4,777</b>	<b>2</b>

**Appendix VI  
 Veteran Users, Operating Beds, and Average  
 Daily Census by VISN in Fiscal Year 1995**

**Table VI.3: VA Medical Beds and ADC  
 by VISN, Fiscal Year 1995**

<b>VISN</b>	<b>Unique users (in thousands)</b>	<b>Surgery beds</b>	<b>Beds per 1,000 users</b>	<b>ADC</b>	<b>ADC per 1,000 users</b>
1 (Boston)	147	1,296	9	1,006	7
2 (Albany)	78	1,108	14	896	11
3 (Bronx)	146	1,984	14	1,561	11
4 (Pittsburgh)	136	1,738	13	1,368	10
5 (Baltimore)	81	872	11	645	8
6 (Durham)	147	1,436	10	1,125	8
7 (Atlanta)	163	1,715	11	1,343	8
8 (Bay Pines)	222	1,540	7	1,157	5
9 (Nashville)	135	1,606	12	1,230	9
10 (Cincinnati)	100	743	7	539	5
11 (Ann Arbor)	124	1,291	10	906	7
12 (Chicago)	137	1,384	10	973	7
13 (Minneapolis)	82	570	7	401	5
14 (Omaha)	57	413	7	320	6
15 (Kansas City)	120	1,115	9	808	7
16 (Jackson)	257	2,014	8	1,270	5
17 (Dallas)	128	1,479	12	998	8
18 (Phoenix)	144	705	5	473	3
19 (Denver)	77	491	6	303	4
20 (Portland)	124	688	6	418	3
21 (San Francisco)	123	643	5	489	4
22 (Long Beach)	162	1,124	7	677	4
<b>Total</b>	<b>2,890</b>	<b>25,955</b>	<b>9</b>	<b>18,906</b>	<b>7</b>

**Appendix VI  
Veteran Users, Operating Beds, and Average  
Daily Census by VISN in Fiscal Year 1995**

**Table VI.4: VA Psychiatric Beds and  
ADC by VISN, Fiscal Year 1995**

<b>VISN</b>	<b>Unique users (in thousands)</b>	<b>Surgery beds</b>	<b>Beds per 1,000 users</b>	<b>ADC</b>	<b>ADC per 1,000 users</b>
1 (Boston)	147	1,276	9	1,051	7
2 (Albany)	78	554	7	429	6
3 (Bronx)	146	1,395	10	1,227	8
4 (Pittsburgh)	136	1,047	8	871	6
5 (Baltimore)	81	627	8	483	6
6 (Durham)	147	736	5	574	4
7 (Atlanta)	163	1,255	8	1,003	6
8 (Bay Pines)	222	793	4	541	2
9 (Nashville)	135	638	5	500	4
10 (Cincinnati)	100	577	6	518	5
11 (Ann Arbor)	124	1,083	9	849	7
12 (Chicago)	137	1,164	8	963	7
13 (Minneapolis)	82	510	6	379	5
14 (Omaha)	57	329	6	242	4
15 (Kansas City)	120	644	5	495	4
16 (Jackson)	257	1,103	4	810	3
17 (Dallas)	128	481	4	343	3
18 (Phoenix)	144	383	3	267	2
19 (Denver)	77	545	7	408	5
20 (Portland)	124	481	4	352	3
21 (San Francisco)	123	705	6	472	4
22 (Long Beach)	162	684	4	543	3
<b>Total</b>	<b>2,890</b>	<b>17,010</b>	<b>6</b>	<b>13,320</b>	<b>5</b>

# Comparison of VA and Community Hospital Utilization by Census Division

This appendix contains comparisons of the rate of use of VA and community hospitals by census division.<sup>286</sup> It shows the variation in VA beds and average daily census (ADC) per 1,000 veterans by Veterans Integrated Service Networks (VISN) compared with community beds and ADC per 1,000 population in the corresponding census division. The data are based on appendixes I and VI.

**Table VII.1: Comparison of Beds per 1,000 VA Users With Community Beds per 1,000 Population in Corresponding Census Divisions**

Census division	Beds per 1,000	VISN	Beds per 1,000 users
New England	2.9	1 (Boston)	20
Middle Atlantic	4.0	2 (Albany)	24
		3 (Bronx)	26
		4 (Pittsburgh)	24
South Atlantic	3.3	5 (Baltimore)	21
		6 (Durham)	18
		7 (Atlanta)	21
		8 (Bay Pines)	13
East North Central	3.4	10 (Cincinnati)	15
		11 (Ann Arbor)	22
		12 (Chicago)	22
East South Central	4.2	9 (Nashville)	20
West North Central	4.3	13 (Minneapolis)	16
		14 (Omaha)	17
		15 (Kansas City)	17
West South Central	3.4	16 (Jackson)	15
		17 (Dallas)	18
Mountain	2.6	18 (Phoenix)	10
		19 (Denver)	16
		20 (Portland)	12
Pacific	2.3	21 (San Francisco)	13
		22 (Long Beach)	14
		Average	3.3

<sup>286</sup>Some VISNs are divided between two or more census divisions. In such cases, we assigned the VISN to the census division that contained the largest portion of the VISN.

**Appendix VII  
Comparison of VA and Community Hospital  
Utilization by Census Division**

**Table VII.2: Comparison of ADC per 1,000 VA Users by VISN With ADC per 1,000 Population in Corresponding Census Divisions for VA and Community Hospitals**

<b>Census division</b>	<b>ADC per 1,000</b>	<b>VISN</b>	<b>ADC per 1,000</b>
New England	2.0	1 (Boston)	16
Middle Atlantic	3.0	2 (Albany)	19
		3 (Bronx)	21
		4 (Pittsburgh)	18
South Atlantic	2.1	5 (Baltimore)	16
		6 (Durham)	14
		7 (Atlanta)	16
East North Central	2.0	8 (Bay Pines)	9
		10 (Cincinnati )	12
		11 (Ann Arbor)	16
East South Central	2.5	12 (Chicago )	16
		9 (Nashville)	15
West North central	2.6	13 (Minneapolis)	11
		14 (Omaha)	12
		15 (Kansas City )	13
West South Central	1.9	16 (Jackson)	10
		17 (Dallas)	12
Mountain	1.5	18 (Phoenix)	6
		19 (Denver)	11
Pacific	1.4	20 (Portland)	8
		21 (San Francisco)	9
		22 (Long Beach)	9
Average	2.1	Average	13

# Estimates of Excess VA Hospital Beds

This appendix contains estimates of excess VA hospital beds under varying assumptions. To determine excess capacity under the target occupancy rate approach, we followed a two-step approach. First, we determined how many beds would be needed to support the average daily census (ADC) with an 85-percent occupancy rate (ADC/.85). We then subtracted the resulting estimate of beds needed from the VA-reported average number of operating beds in fiscal year 1995. (See table VIII.1.)

**Table VIII.1: Estimates of Excess VA Hospital Capacity at 85-Percent Occupancy by VISN, Fiscal Year 1995**

VISN	Operating beds	ADC	Beds needed at 85-percent occupancy	Excess capacity	
				Beds	Percent
1 (Boston)	2,918	2,309	2,716	202	6.9
2 (Albany)	1,880	1,454	1,711	169	9.0
3 (Bronx)	3,789	3,055	3,594	195	5.2
4 (Pittsburgh)	3,215	2,474	2,911	304	9.5
5 (Baltimore)	1,708	1,262	1,485	223	13.1
6 (Durham)	2,622	1,985	2,335	287	11.0
7 (Atlanta)	3,395	2,584	3,040	355	10.5
8 (Bay Pines)	2,970	2,079	2,446	524	17.6
9 (Nashville)	2,729	2,023	2,380	349	12.8
10 (Cincinnati)	1,512	1,196	1,407	105	7.0
11 (Ann Arbor)	2,680	1,933	2,274	406	15.2
12 (Chicago)	2,956	2,185	2,571	385	13.0
13 (Minneapolis)	1,326	926	1,089	237	17.9
14 (Omaha)	973	690	812	161	16.6
15 (Kansas City)	2,054	1,509	1,775	279	13.6
16 (Jackson)	3,824	2,533	2,980	844	22.1
17 (Dallas)	2,327	1,562	1,838	489	21.0
18 (Phoenix)	1,371	907	1,067	304	22.2
19 (Denver)	1,231	824	969	262	21.3
20 (Portland)	1,456	941	1,107	349	24.0
21 (San Francisco)	1,601	1,115	1,312	289	18.0
22 (Long Beach)	2,248	1,457	1,714	534	23.8
<b>Total</b>	<b>50,785</b>	<b>37,003</b>	<b>43,533</b>	<b>7,252</b>	<b>14.2</b>

To estimate the number of excess VA hospital beds under different assumptions of the extent of medically unnecessary care, we (1) multiplied the ADC by the percent of care assumed to be medically unnecessary, (2) subtracted the result from the ADC, (3) divided by .85 to

**Appendix VIII  
Estimates of Excess VA Hospital Beds**

adjust for the optimum occupancy rate, and (4) subtracted the result from operating beds. (See tables VIII.2 and VIII.3.)

**Table VIII.2: Estimates of VA Hospital Beds Needed With Adjustment for Medically Unnecessary Days of Care**

VISN	Operating beds	ADC	Beds needed by percent of care assumed to be medically unnecessary			
			10 percent	20 percent	30 percent	40 percent
1 (Boston)	2,918	2,309	2,445	2,173	1,902	1,630
2 (Albany)	1,880	1,454	1,540	1,368	1,197	1,026
3 (Bronx)	3,789	3,055	3,234	2,875	2,516	2,156
4 (Pittsburgh)	3,215	2,474	2,620	2,328	2,037	1,746
5 (Baltimore)	1,708	1,262	1,336	1,188	1,039	891
6 (Durham)	2,622	1,985	2,101	1,868	1,634	1,401
7 (Atlanta)	3,395	2,584	2,736	2,432	2,128	1,824
8 (Bay Pines)	2,970	2,079	2,201	1,957	1,712	1,468
9 (Nashville)	2,729	2,023	2,142	1,904	1,666	1,428
10 (Cincinnati)	1,512	1,196	1,265	1,126	985	844
11 (Ann Arbor)	2,680	1,933	2,047	1,819	1,592	1,364
12 (Chicago)	2,956	2,185	2,313	2,056	1,799	1,542
13 (Minneapolis)	1,326	926	980	872	763	654
14 (Omaha)	973	690	731	649	568	487
15 (Kansas City)	2,054	1,509	1,598	1,420	1,243	1,065
16 (Jackson)	3,824	2,533	2,682	2,384	2,086	1,788
17 (Dallas)	2,327	1,562	1,654	1,470	1,286	1,103
18 (Phoenix)	1,371	907	960	854	747	640
19 (Denver)	1,231	824	872	776	679	582
20 (Portland)	1,456	941	996	886	775	664
21 (San Francisco)	1,601	1,115	1,180	1,049	918	787
22 (Long Beach)	2,248	1,457	1,542	1,371	1,200	1,028
<b>Total</b>	<b>50,785</b>	<b>37,003</b>	<b>39,175</b>	<b>34,825</b>	<b>30,472</b>	<b>26,118</b>

**Appendix VIII  
Estimates of Excess VA Hospital Beds**

**Table VIII.3: Estimates of Excess VA Hospital Beds With Adjustment for Medically Unnecessary Days of Care**

VISN	Operating beds	Excess beds on the basis of medically unnecessary care of			
		10 percent	20 percent	30 percent	40 percent
1 (Boston)	2,918	473	745	1,016	1,288
2 (Albany)	1,880	340	512	683	854
3 (Bronx)	3,789	554	914	1,273	1,633
4 (Pittsburgh)	3,215	595	887	1,178	1,469
5 (Baltimore)	1,708	372	520	669	817
6 (Durham)	2,622	520	754	987	1,221
7 (Atlanta)	3,395	659	963	1,267	1,571
8 (Bay Pines)	2,970	769	1,013	1,258	1,502
9 (Nashville)	2,729	587	825	1,063	1,301
10 (Cincinnati)	1,512	246	386	527	668
11 (Ann Arbor)	2,680	633	861	1,088	1,316
12 (Chicago)	2,956	642	900	1,157	1,414
13 (Minneapolis)	1,326	346	454	563	672
14 (Omaha)	973	242	324	405	486
15 (Kansas City)	2,054	278	634	811	989
16 (Jackson)	3,824	1,142	1,440	1,738	2,036
17 (Dallas)	2,327	673	857	1,041	1,224
18 (Phoenix)	1,371	411	517	624	731
19 (Denver)	1,231	359	455	552	649
20 (Portland)	1,456	460	570	681	792
21 (San Francisco)	1,601	420	552	683	814
22 (Long Beach)	2,248	705	877	1,048	1,220
<b>Total</b>	<b>50,785</b>	<b>11,426</b>	<b>15,960</b>	<b>20,312</b>	<b>24,667</b>

To develop estimates of excess hospital beds under the target beds per 1,000 population approach we (1) selected three targets (2.5, 7, and 15 beds per 1,000 users) on the basis of actual VA hospital use rates, (2) multiplied the veteran users by the targets, and (3) subtracted the result from operating beds. (See table VIII.4.)

**Appendix VIII**  
**Estimates of Excess VA Hospital Beds**

**Table VIII.4: Estimates of Excess VA Hospital Beds Under Selected Targets of Beds per 1,000 Users**

VISN	Unique users (in thousands)	Operating beds	Excess target beds per 1,000 users at		
			2.5	7	15
1 (Boston)	147	2,918	2,550	1,889	713
2 (Albany)	78	1,880	1,685	1,334	710
3 (Bronx)	146	3,789	3,424	2,767	1,599
4 (Pittsburgh)	136	3,215	2,875	2,263	1,175
5 (Baltimore)	81	1,708	1,505	1,141	493
6 (Durham)	147	2,622	2,254	1,593	417
7 (Atlanta)	163	3,395	2,987	2,254	950
8 (Bay Pines)	222	2,970	2,415	1,416	0
9 (Nashville)	135	2,729	2,391	1,784	704
10 (Cincinnati)	100	1,512	1,262	812	12
11 (Ann Arbor)	124	2,680	2,370	1,812	820
12 (Chicago)	137	2,956	2,613	1,997	901
13 (Minneapolis)	82	1,326	1,121	752	96
14 (Omaha)	57	973	830	574	118
15 (Kansas City)	120	2,054	1,754	1,214	254
16 (Jackson)	257	3,824	3,181	2,025	0
17 (Dallas)	128	2,327	2,007	1,431	407
18 (Phoenix)	144	1,371	1,011	363	0
19 (Denver)	77	1,231	1,038	692	76
20 (Portland)	124	1,456	1,146	588	0
21 (San Francisco)	123	1,601	1,293	740	0
22 (Long Beach)	162	2,248	1,843	1,114	0
<b>Total</b>	<b>2,890</b>	<b>50,785</b>	<b>43,555</b>	<b>30,555</b>	<b>9,445</b>

# Changes in VA Operating Beds Between Fiscal Years 1995 and 1996

This appendix shows the reductions in average VA hospital operating beds between fiscal years 1995 and 1996. It is based on VA's Summary of Medical Programs.

**Table IX.1: Changes in Operating Beds by Veterans Integrated Service Network (VISN), Fiscal Years 1995-96**

<b>VISN</b>	<b>FY 1995 operating beds</b>	<b>FY 1996 operating beds</b>	<b>Difference</b>
1 (Boston)	2,918	2,560	358
2 (Albany)	1,880	1,713	167
3 (Bronx)	3,789	3,350	439
4 (Pittsburgh)	3,215	2,777	438
5 (Baltimore)	1,708	1,423	285
6 (Durham)	2,622	2,462	160
7 (Atlanta)	3,395	2,875	520
8 (Bay Pines)	2,970	2,735	235
9 (Nashville)	2,729	2,573	156
10 (Cincinnati)	1,512	1,453	59
11 (Ann Arbor)	2,680	2,571	109
12 (Chicago)	2,956	2,747	209
13 (Minneapolis)	1,326	1,155	171
14 (Omaha)	973	894	79
15 (Kansas City)	2,054	1,839	215
16 (Jackson)	3,824	3,278	546
17 (Dallas)	2,327	2,082	245
18 (Phoenix)	1,371	1,239	132
19 (Denver)	1,231	1,197	34
20 (Portland)	1,456	1,361	95
21 (San Francisco)	1,601	1,428	173
22 (Long Beach)	2,248	2,027	221
<b>Total</b>	<b>50,785</b>	<b>45,739</b>	<b>5,046</b>

# Comments From the Department of Veterans Affairs



DEPARTMENT OF VETERANS AFFAIRS  
ASSISTANT SECRETARY FOR POLICY AND PLANNING  
WASHINGTON DC 20420

MAR 5 1998

Mr. Stephen P. Backhus  
Director, Veterans' Affairs and Military  
Health Care Issues  
U. S. General Accounting Office  
441 G Street, NW  
Washington, DC 20548

Dear Mr. Backhus:

This is in response to your draft report, ***VA HOSPITALS: Issues and Challenges for the Future*** (GAO/HEHS-97-195). Your report provides an extensive assessment of the Department of Veterans Affairs' (VA) healthcare delivery system from its inception to the present and defines GAO's view of the future VA. Comprehensive in scope, it quite accurately depicts the dynamic reengineering of the Veterans Health Administration (VHA) into the type of organization necessary to ensure that VA patients receive the care they need.

As the report acknowledges, the current national healthcare climate remains unsettled, and VA's visions of future healthcare delivery system scenarios are based on emerging trends that continue to unfold. The report acknowledges that VA's healthcare system has changed dramatically in ways previously inconceivable. It also makes clear that VA is at a watershed. Among the issues pertinent to the future of both VA and non-VA healthcare are how can VA best provide services to an aging population having multiple healthcare needs, how can VA function as a safety net provider, should VA continue to provide services directly, and what is the impact of new technologies on VA healthcare.

Although we may agree with the issues and challenges you identify, we do not necessarily agree with your conclusions on how we are approaching those issues, the effect continued reengineering has on veterans, and the direction of VA's healthcare system. Your report often focuses on issues from past reports, which we believe are either no longer relevant, are resolved, or are already being addressed in conjunction with our reengineering program. For example, many of the issues GAO cites as not being addressed in the first submission of the Veterans Integrated Service Network (VISN) strategic plans are in fact included in the guidance for the plans now being submitted. Unfortunately, such focus leads to conclusions about the future that are not certain and that we are not prepared to acknowledge as the only and/or most

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**Appendix X  
Comments From the Department of  
Veterans Affairs**

2. Mr. Stephen P. Backhus

probable outcome. Successive iterations of the planning guidance will continue to address these as well as other issues that may emerge.

I consider your report to be a valuable reference tool as VA develops strategic initiatives that will transform an agency once steeped in tradition and characterized by fragmented delivery of benefits and services to one that provides seamless service to our nation's veterans. As we move into the next millenium, our new VA healthcare system will be one that leads in clinical treatment, medical education, award-winning medical research, and world class customer support. The enclosure amplifies our comments to your report and provides some needed technical corrections.

Thank you for the opportunity to comment on your report.

Sincerely,



for Dennis Duffy

Enclosure

Enclosure

DEPARTMENT OF VETERANS AFFAIRS COMMENTS  
TO GAO DRAFT REPORT  
***VA HOSPITALS: Issues and Challenges for the Future***  
(GAO/HEHS-97-195)

In keeping with our "One VA" posture, we have given the GAO draft report a broad review throughout the Department. This comprehensive report sweeps across the Department's primary business lines of veterans' healthcare and veterans' benefits.

For instance, the Veterans Health Administration (VHA) performs a major mission support function for the Veterans Benefits Administration (VBA) and its Compensation and Pension (C&P) Service by conducting C & P examinations. We conduct more than 375,000 such examinations annually. The veteran population that VA serves is characterized by a number of disabilities for which VA excels in treating. These include, war-induced psychological trauma, traumatic injury, especially due to gun shot wound, and conditions of aging. The clinical assessments that VBA needs in these areas for purposes of making determinations of service-connection may not be easily provided without the expertise VHA possesses. Currently, we are considering our options for improving this critical function, including testing contract exams. We are gathering critical data and information that will permit valid comparisons and evaluation of VA versus private exams, as well as alternative VA approaches.

GAO contends that eligibility reform and changes in contracting and resource allocation will cause VA to divert its focus on service-connected veterans and on our role as a safety net for low income or uninsured veterans, to focus on the marketing of VA services to high income insured veterans. VA disagrees with this contention. In fact, our strategic goals and performance measures focus on increasing our market share of these high priority veterans, including those needing a safety net. Since this inaccurate concept is a major factor behind many of GAO's conclusions on the future role of VA in the healthcare industry and on the continued viability of the VA system, it calls into question the validity of GAO's conclusions. Contrary to the impression given in GAO's report, approximately 95 percent of VHA patients are veterans who have the highest priority for care, including service-connected disabled veterans and non-service-connected veterans with the low incomes and poor insurance coverage. It is these veterans on which VERA focuses.

VA agrees with GAO that recent and proposed changes in VA and other programs make the future demand for VA hospital care uncertain. But, as evidenced in the report, the uncertainty about the demand for hospital services is true for all hospitals not just VA. Outpatient care, coupled with intensive care inpatient services is a probable future model for healthcare in the United States.

Enclosure

DEPARTMENT OF VETERANS AFFAIRS COMMENTS  
TO GAO DRAFT REPORT  
**VA HOSPITALS: *Issues and Challenges for the Future***  
(GAO/HEHS-97-195)  
(Continued)

Given this, it should be expected that VA hospitals, and most private and public hospitals, will change, and some may close. We also agree with GAO that decisions about closing/consolidating hospitals or services, changing missions, selling excess capacity or identifying enhanced uses for excess space should be made with full consideration of the effect on all stakeholders (e.g., veterans, VA employees, community hospitals, medical schools, and individual communities) without undue political influence.

VHA is in the midst of reengineering the healthcare system. There remains uncertainty, and it is folly to believe that there are precise answers to the many questions raised by GAO in this report. We do know that improving our information and financial systems will be critical to answering these questions and will enable us to demonstrate good value not only in terms of cost, but more importantly, in terms of patients' functional status, accessibility, and satisfaction. We believe that by following through with the transformation already occurring in our infrastructure and processes, with the continued improvements we will be making through successive iterations of our strategic plan and VERA, and in the implementation and monitoring of clinical guidelines, performance measures and outcomes, we will be able to successfully address these principles and our stakeholders' needs.

Technical Comments

- Executive Summary Several substantive issues discussed in the body of the report are not included in the Executive Summary. The Executive Summary is expected to present the critical highpoints of the report. To the extent that it does so, it is misleading and incomplete, and does not serve its purpose for the reader (or the author). We suggest some technical clarification is needed in the Executive Summary to this report.

- 1) The summary indicates that VA's strategy for attracting new users is the establishment of community based outpatient clinics (CBOCs). In fact, VA is establishing CBOCs to increase veterans' access to ambulatory health care. They will attract new users as well. Additional approaches that will attract new users require or will require legislation, e.g., Medicare subvention.

- 2) The Summary indicates that VA was slow to develop ambulatory surgery and other outpatient services due to the resource allocation method. No mention is made that legislation was, in many cases, required to move fully to

Enclosure

DEPARTMENT OF VETERANS AFFAIRS COMMENTS  
TO GAO DRAFT REPORT  
**VA HOSPITALS: *Issues and Challenges for the Future***  
(GAO/HEHS-97-195)  
(Continued)

ambulatory surgery and other outpatient services. During FY 1996, VA increased the percentage of funds expended on outpatient care by 17.7 percent to 33.6 percent of overall medical care expenditures.

- Data In addition, VA estimates third party collections and user fees for FY 1998 to be \$598 million as shown in the FY 1999 President's Budget, not \$737 million as indicated on page 107. Also, the FY 1997 President's Budget reports 391 outpatient clinics in 1995 not 565 as shown on page 270. Either footnotes should identify the data source or the figures should agree with the published President's Budget.
- Full Disclosure On page 84 of the report, GAO incompletely states that VERA adjustments were made to reflect differences in labor costs across geographic areas. Adjustments were also made for equipment, research, education and NRM costs.
- Charts Charts that provide comparisons should compare like items, like comparing apples to apples. Table 6.2 on page 125 compares the impact of VERA to hospital performance measures for FY 1997. The chart used in this comparison shows a one year impact of VERA. Funds were never allocated in this manner since the impact of VERA was more than a network could reasonably be expected to absorb in one year. Therefore, the full shift of resources is being phased-in over one to three years. The 1997 phase-in is shown on page 34 of the VERA Briefing Book. This 1997 phase-in should be used to compare to FY 1997 performance goals.

# GAO Contacts and Staff Acknowledgments

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## GAO Contacts

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**Appendix XI**  
**GAO Contacts and Staff Acknowledgments**

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**Appendix XI**  
**GAO Contacts and Staff Acknowledgments**

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**Appendix XI**  
**GAO Contacts and Staff Acknowledgments**

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# Related GAO Products

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VA Health Care: Status of Efforts to Improve Efficiency and Access  
(GAO/HEHS-98-48, Feb. 6, 1998).

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