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Report to Congressional Requesters

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VA HEALTH CARE

Allocation Changes Would Better Align Resources with Workload

GAO-02-338

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Abbreviations

DCG	Diagnostic Cost Group
VA	Department of Veterans Affairs
VERA	Veterans Equitable Resource Allocation

GAO
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, DC 20548

February 28, 2002

Congressional Requesters

The Department of Veterans Affairs (VA) spent about $21 billion for health care in fiscal year 2001 to treat about 3.8 million veterans—most of whom had service-connected disabilities or low incomes. Since fiscal year 1997, VA has used the Veterans Equitable Resource Allocation (VERA) system to allocate most of its medical care appropriation as part of its overall strategy to reform VA health care. As a health care payer, like the Medicare and Medicaid programs, VA faces the challenge of allocating resources to account for differences in patient workload treated, encourage efficiency, and ensure quality. As a direct provider, VA also operates a major health care system consisting of 22 regional health care networks that are at risk for budget shortfalls if the cost of providing care to veterans treated by the network is greater than available resources.

Our reviews of VERA in its first 2 years concluded that it was an important step forward in equitable resource allocation compared to the allocation practices it replaced.[1] Prior to VERA, VA allocated resources primarily on the basis of facilities' historical expenditures. By contrast, VERA was intended to equitably allocate health care resources, that is, allocate comparable resources to networks with comparable workloads. In turn, VA's networks have budget and management responsibilities that include allocating VERA resources to facilities, clinics, and programs within their networks and ensuring equity of access to appropriate health care services.

Congressional stakeholders have expressed concern as to whether VERA has been designed and implemented to allocate resources commensurate with workload. To address concerns you raised, this report (1) describes the effect VERA has had on network resource allocations and workloads, (2) assesses whether VERA's design is a reasonable approach to resource allocation, and (3) identifies weaknesses in VERA that may limit VA's ability to allocate comparable resources for comparable workloads. As agreed with your offices, we focused our work on VERA's allocation of

[1]U.S. General Accounting Office, *VA Health Care: Resource Allocation Has Improved, but Better Oversight Is Needed*, GAO/HEHS-97-178 (Washington, D.C.: September 17, 1997) and U.S. General Accounting Office, *VA Health Care: More Veterans Are Being Served, But Better Oversight Is Needed*, GAO/HEHS-98-226 (Washington, D.C.: August 28, 1998).

resources from headquarters to the networks but we did not examine the extent to which networks in turn allocate comparable resources for comparable workloads to their respective facilities and programs.

To examine these issues, we reviewed VA documents and consultants' reports on VERA's original design, proposed VERA changes, and actual VERA changes. We also interviewed VA headquarters officials and officials in 8 networks, conducted site visits in 5 networks, surveyed all 22 network directors, and interviewed VA and other public and private sector health care resource allocation experts. In addition, we analyzed changes in resources allocated among the 22 networks from fiscal year 1996 through 2001, changes in the number of veterans treated, and the effect of making adjustments to VERA. We also relied on our more than 10 years of work reviewing VA's resource allocation process in addition to other health care financing work.[2] For a complete description of our scope and methodology, see appendix I. Our work was performed from October 2000 through December 2001 in accordance with generally accepted government auditing standards.

Results in Brief

VERA has had a substantial impact on network resource allocations and workloads. First, VERA shifted resources among regions. VERA shifted approximately $921 million from networks located primarily in the northeast and midwest to networks located in the south and west in fiscal year 2001 compared to what allocations would have been without the implementation of VERA. Second, VERA, in concert with other VA initiatives, has provided an incentive for networks to serve more veterans. The number of veterans treated nationally in VA health care programs increased from 2.6 million to 3.8 million, an increase of 47 percent, from fiscal year 1996 through fiscal year 2001. All 22 networks contributed to this increase, including networks from which VERA shifted resources.

VERA's overall design is a reasonable approach to allocate resources commensurate with workloads. It provides a predetermined dollar amount per veteran served to each of VA's 22 health care networks. This amount varies depending upon factors beyond networks' control, namely the health care needs of the veteran served and certain local cost differences. This approach is designed to allocate resources commensurate with each network's workload in terms of veterans served and their health care

[2]See the Related GAO Products page at the end of this report.

needs. It also aims to hold networks accountable for efficient service provision by attempting to vary resource allocation only for costs beyond their control. To protect patients from the risk that a health care network cannot deliver needed services with the resources allocated, VERA includes a National Reserve Fund to provide supplemental resources to networks experiencing budget shortfalls.

Although VERA's design is a reasonable approach to resource allocation, we identified weaknesses in its implementation. First, VERA excludes about one fifth of VA's workload in determining each network's allocation. The excluded veterans are those with higher incomes who do not have service-connected disabilities. Second, VERA does not account for cost differences among networks resulting from variation in their patients' health care needs as well as it could. For example, VERA does not use enough categories to adjust for patient health care needs in order to adequately account for patient cost differences among networks. These two weaknesses compromise VERA's ability to allocate comparable resources for comparable workloads. Third, the process for providing supplemental resources to networks through VA's National Reserve Fund has not been used to analyze the extent to which the need for such resources is caused by potential problems in VERA's allocation, network inefficiency, or other factors. VA uses the National Reserve Fund to supplement networks' VERA allocations when they have difficulty operating within their available resources. The lack of information on why networks need assistance from the National Reserve Fund limits VA's ability to provide assurance that supplemental funding of networks is appropriate or to take corrective action.

We are recommending that VA correct weaknesses in VERA to better allocate comparable resources for comparable workloads. In addition, we are recommending that VA use the National Reserve Fund process to learn why networks need supplemental resources beyond their VERA allocations and take action to correct problems identified in this process.

In commenting on a draft of our report, VA agreed with our conclusions and concurred with our recommendations. However, pending completion of ongoing studies and further consideration, VA did not commit to specific actions and timelines for implementing our recommendations to correct weaknesses in VERA's implementation. VA's response also did not fully address our recommendation to improve the supplemental adjustment process. Delay in implementing our recommendations to make needed improvements to VERA means that approximately $200 million annually will not be allocated as well as they could be to align

resources with workloads. Moreover, until improvements are made in the supplemental funding process, VA will not be able to provide assurance that its supplemental funding of some networks is appropriate.

Background

VA policy is to allocate comparable resources for comparable workloads in its 22 health care networks as an important step in ensuring equitable access to care for the nation's veterans. To achieve this allocation in its national health care system, VA has used VERA since fiscal year 1997 to prospectively allocate resources to the networks. VERA allocates nearly 90 percent of VA's medical care appropriation in six categories: complex patient care, basic patient care, equipment, nonrecurring maintenance, education support, and research support.[3] Resources for the first four categories are allocated on the basis of patient workload and account for approximately 96 percent of the resources VERA allocates.[4] Allocations for education support and research support are based on workload measures specific to those activities within the VA health care system.

Developed in response to a legislative mandate,[5] VERA was designed to correct regional inequities in resource allocation created by shifts in the veteran population from the northeast and midwest to the south and west (see fig. 1) without a corresponding shift in resources.[6] The resources did not shift before VERA was implemented because resource allocation was based primarily on facilities' historical expenditures. VA expects that veteran population shifts from the northeast and midwest to the south and west will continue at least through 2020.

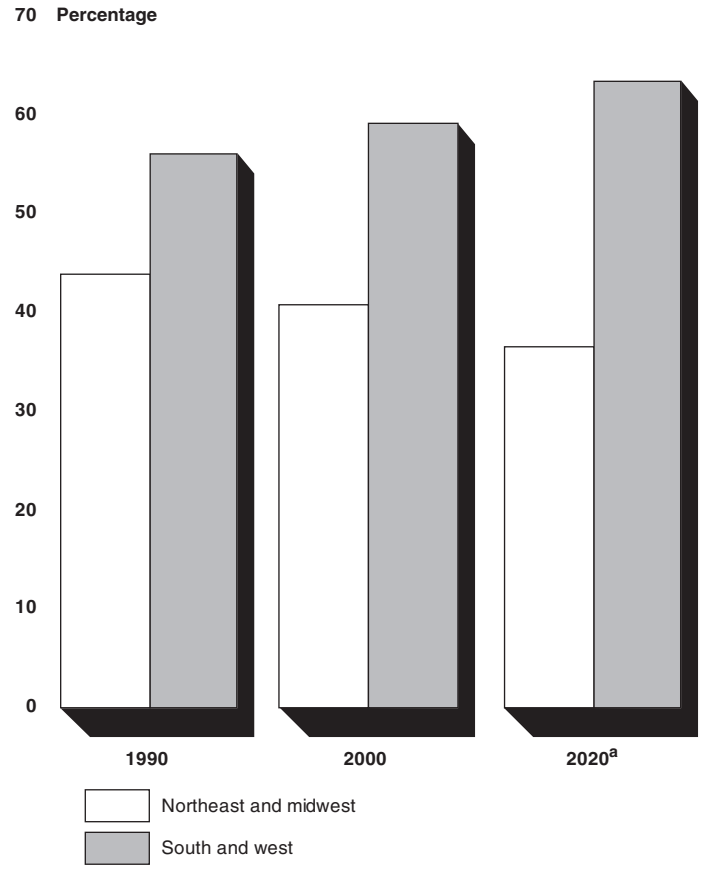
[3]Networks and their facilities also receive resources from the medical care appropriation not allocated through VERA for such things as prosthetics, homeless programs, and readjustment counseling. In addition, VA facilities' budgets include collections for insurance reimbursements, copayments, and deductibles for the care of some veterans.

[4]We examined these four categories in our analysis. We did not examine the education support and research support categories which constitute approximately 4 percent of VERA's allocation.

[5]The 1997 appropriation act for the Department of Veterans Affairs required VA to establish a plan to equitably allocate health care resources. Pub. L. No. 104-204, Section 429.

[6]We classified VA's 22 health care networks into geographic regions according to U.S. Census definitions.

Figure 1: Proportion of Veteran Population by Region, 1990 through 2020



[a]2020 numbers are projections.

Note: Veteran assignment to a particular region is based on the state of residence.

Source: GAO calculations based on VA data.

Two other major changes to VA health care provision accompanied the implementation of VERA as a result of the Veterans' Health Care Eligibility Reform Act of 1996. The first change was a major shift in VA health care delivery from an inpatient to an outpatient emphasis that was consistent with changes in health care delivery outside of VA. The act eliminated restrictions that previously prevented VA from treating some veterans in outpatient care settings, allowing VA to shift its focus from inpatient to outpatient care delivery. For example, VA no longer had to admit certain veterans to an inpatient setting to make them eligible for outpatient treatment or to receive prosthetic devices, such as crutches. As a result of eligibility reform, VA has been successful in shifting medical care to

outpatient settings by taking advantage of advances in medical technology and practices, such as laser, endoscopic surgery, and other less invasive surgical techniques. VA has also identified alternatives to inpatient care, such as home-based care, for many chronically ill patients. From fiscal year 1996 through fiscal year 2000, VA closed almost 24,000 acute inpatient beds, a 52 percent reduction systemwide. During this time period, VA's inpatient admissions decreased and outpatient visits increased from approximately 29 million to 40 million visits, a 36 percent increase systemwide.

The second change was the introduction of a veterans' enrollment system to manage access in relation to available resources due to the expected increase in demand on the VA system as a result of the new eligibility rules. As required by the act, VA established seven priority categories for enrollment. A higher priority for enrollment is given to veterans who have service-connected disabilities, lower incomes, or other statuses such as former prisoners of war. These higher priority enrollees are ranked in priority order from 1 through 6. The lowest enrollment priority is given to veterans not included in priorities 1 through 6, referred to as Priority 7 veterans. These veterans are primarily nonservice-connected veterans with higher incomes. The act requires VA to restrict enrollment consistent with these enrollment priorities if sufficient resources are not available to provide care that is timely and acceptable in quality to all priority categories. If needed, enrollment restrictions would begin with the lowest priority category. For, fiscal year 2002, VA has decided to continue enrolling veterans in all priority categories.

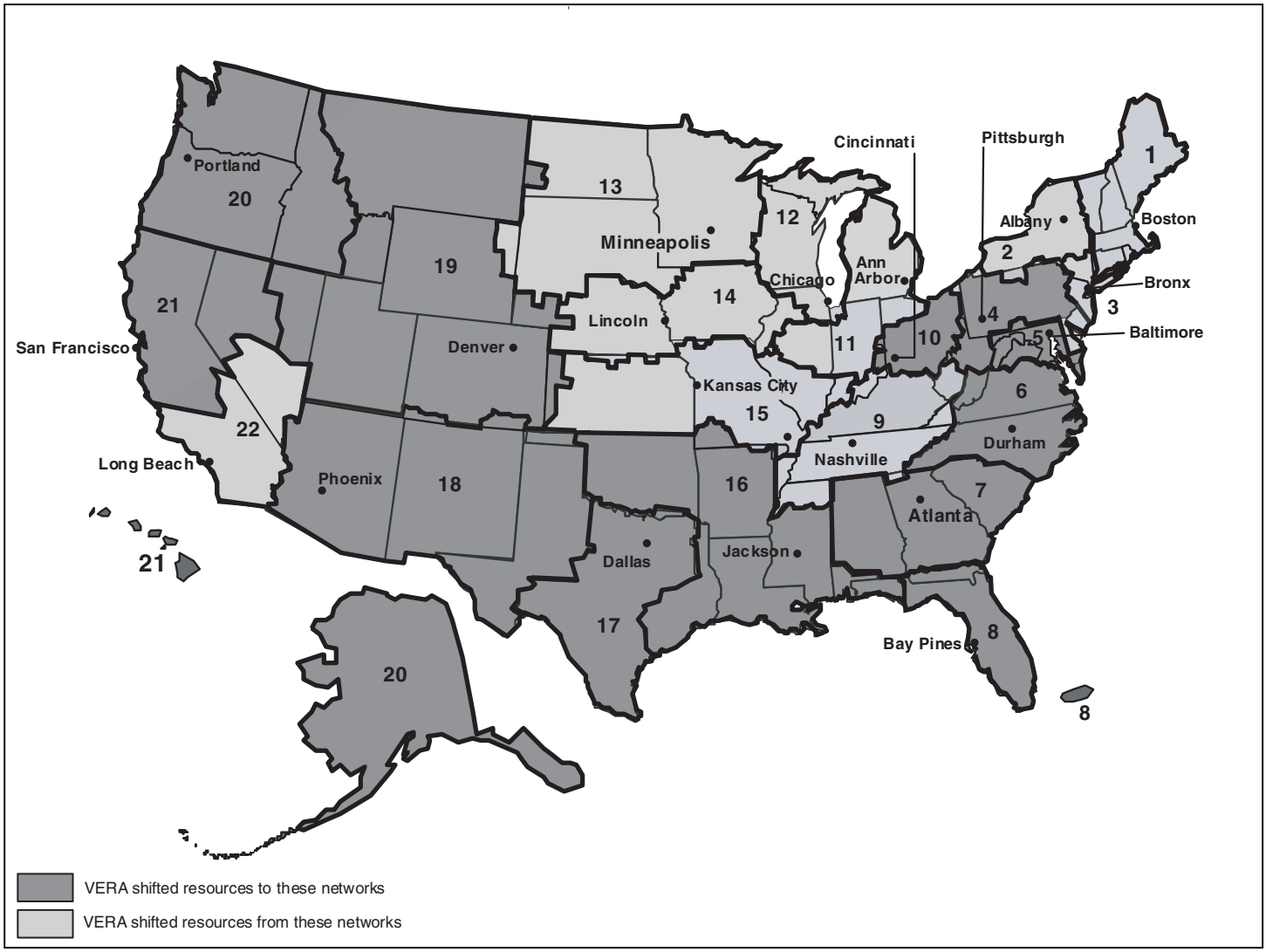
VERA Has Had A Substantial Effect on Network Resources and Workload

VERA has been a key part of VA's strategy to change its health care system. First, VERA shifted substantial resources among regions reflecting shifts in workload. Second, VERA, in concert with other VA initiatives, has provided an incentive for networks to serve more veterans.

VERA has shifted substantial resources from networks located primarily in the northeast and midwest to networks located in the south and west (see fig. 2). VERA shifted approximately $921 million among networks in fiscal year 2001 compared to what allocations would have been if networks received the same proportion of funding they received in fiscal year 1996, the year before VERA was implemented. This included additional resources Congress appropriated from fiscal year 1996 through fiscal year 2001. VERA shifted the most resources—approximately $198 million—to Network 8 (Bay Pines), and VERA shifted the most resources from Network 3 (Bronx)—approximately $322 million. The shift occurred

because VERA allocated resources based primarily on patient workload rather than continuing VA's prior process of incrementally funding facilities based on historical expenditures.

Figure 2: Resource Allocation Shifts Resulting from VERA from Fiscal Years 1996 through 2001



Note: To calculate the amount of resources shifted as a result of VERA, we assumed that networks would receive the same proportion of VA's allocations in fiscal year 2001 as they did in fiscal year 1996. We made this assumption because, prior to VERA, VA allocated resources on the basis of past expenditures.

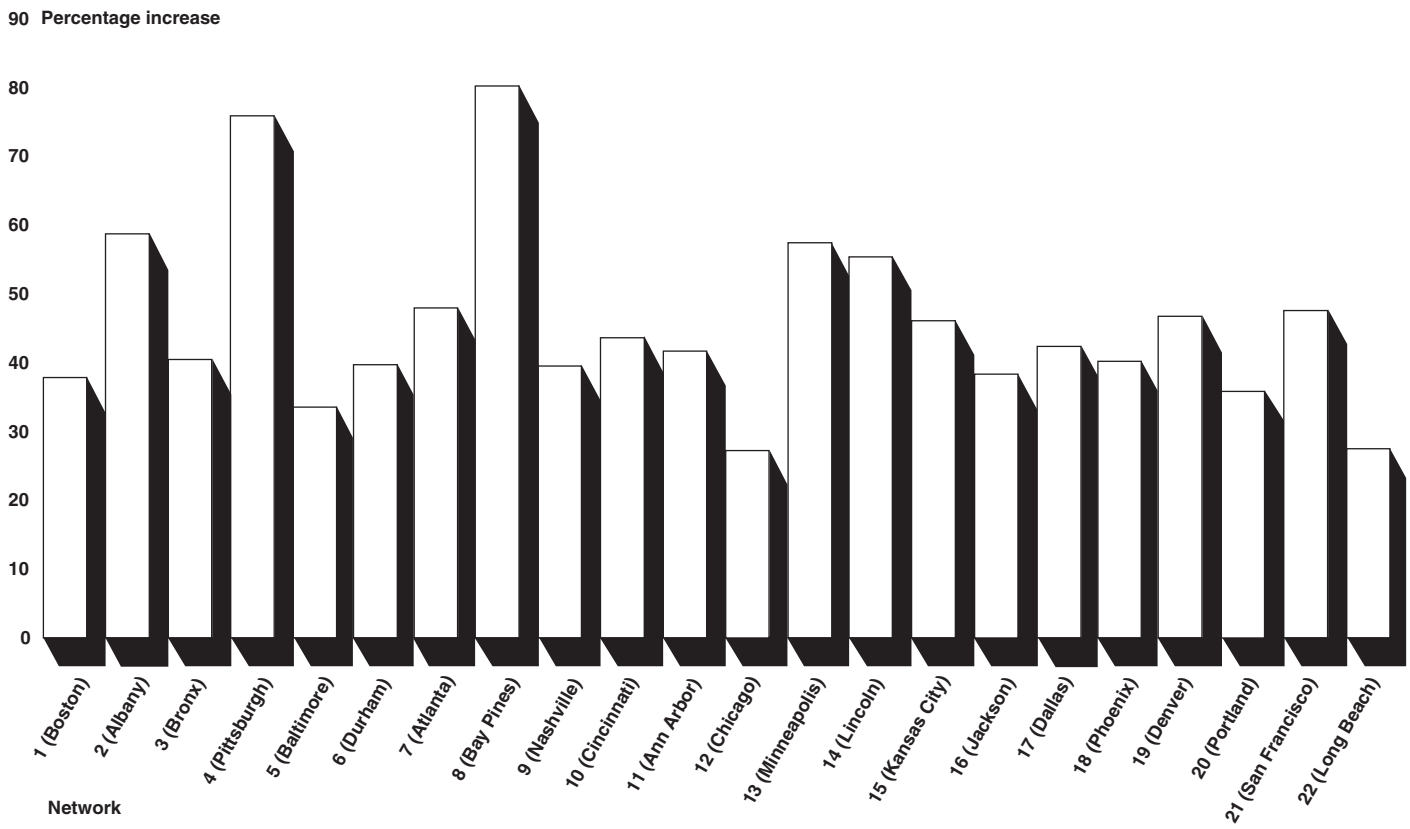
Source: GAO calculations from data in Department of Veterans Affairs, *Veterans Equitable Resource Allocation: Equity of Funding and Access to Care Across Networks* (Washington, D.C.: 2001), p. 34.

VERA's implementation resulted in 10 of VA's 22 networks receiving a smaller share of VA's medical care appropriation in fiscal year 2001 than in fiscal year 1996. However, because VA's total medical care appropriation rose 22 percent during this period, all but two of these networks received more resources in fiscal year 2001 than in fiscal year 1996. The two networks with fewer resources from fiscal year 1996 to 2001 were Network 1 (Boston) and Network 3 (Bronx), which experienced 1 percent and 10 percent declines, respectively.

VA has also used VERA as one component of a larger strategy to improve access to care by increasing the number of veterans treated.[7] Because VERA allocates resources based on workload, it provides incentives for networks to increase the number of veterans treated. The number of veterans treated nationally in VA, in all priority groups, increased from 2.6 million in fiscal year 1996, the year before VERA was implemented, to 3.8 million in fiscal year 2001, an increase of 47 percent. All 22 networks contributed to this increase (see fig. 3). This includes networks from which VERA shifted resources. VA's reduction in inpatient care, closure of acute care beds, shift in emphasis to less expensive outpatient care delivery, and a 22 percent increase in VA's annual medical care appropriation since fiscal year 1996 have provided additional capacity allowing networks to increase workloads.

[7]Eligibility Reform also added to the number of veterans enrolled to receive care. The number of enrolled veterans increased from 4.2 million in the first full year of enrollment in fiscal year 1999 to 6.0 million in fiscal year 2001.

Figure 3: Percentage Increase in Veterans Treated by Network, Fiscal Years 1996 through 2001



Source: GAO analysis of VA data.

VERA Provides A Reasonable Approach to Resource Allocation

VERA's design promotes the allocation of comparable resources for comparable workloads to VA's 22 health care networks consistent with principles used by other payers, such as the Medicare and Medicaid programs, and expert views on the design of payment systems.[8] VERA allocates resources based primarily on networks' patient workloads. To ensure the comparability of networks' resources with their workloads,

[8]For a discussion of payment system principles and implementation, see Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy* (Washington, D.C.: March 2001) and Nigel Rice and Peter C. Smith "Capitation and Risk Adjustment in Health Care Financing: An International Progress Report," *The Milbank Quarterly*, Volume 79, No. 1, 2001.

VERA adjusts these allocations for factors beyond networks' control, namely patient health care needs and certain local costs. By adjusting allocations only for costs beyond a network's control, VERA holds networks accountable for providing services efficiently. Also, VERA provides protection for patients from the risk that a health care network would not be able to provide services because its expenditures exceed available resources.

VERA allocates resources primarily on the basis of network patient workload. Each network receives an allocation based on a predetermined dollar amount per veteran served.[9] This is consistent with how other federal health care payers allocate resources to managed care plans to care for their patient workload. Because VERA uses workload to allocate resources, networks that have more patients generally receive more resources than networks that have fewer patients (see table 1). However, allocation adjustments result in some situations in which networks with fewer patients receive higher total and per patient allocations. For example, Network 3 (Bronx) received a larger VERA allocation in fiscal year 2001 than Network 9 (Nashville) even though Network 3 (Bronx) had a smaller workload. By receiving funding based on workload, VA's health care networks have an incentive to focus on aligning facilities and programs to attract patients rather than focusing on maintaining existing operations and infrastructure regardless of the number of patients served.

Table 1: VERA Patient Workload Compared to VERA Allocation, Fiscal Year 2001

Network (location)	Fiscal Year 2001 VERA patient workload	Fiscal Year 2001 VERA total allocation (in millions)	Fiscal Year 2001 VERA per patient allocation
16 (Jackson)	334,613	$1,447	$4,324
8 (Bay Pines)	299,242	1,365	4,563
7 (Atlanta)	218,084	1,021	4,680
22 (Long Beach)	216,060	1,051	4,866
4 (Pittsburgh)	213,482	947	4,437
6 (Durham)	185,511	849	4,579
9 (Nashville)	183,288	811	4,427
3 (Bronx)	173,512	921	5,306

[9]VERA allocated about $16.2 billion in fiscal year 2001 for basic care and complex care and $878 million for equipment and nonrecurring maintenance based on patient workload. In addition, VERA allocated about $688 million for research support and education support based on other workload measures.

Network (location)	Fiscal Year 2001 VERA patient workload	Fiscal Year 2001 VERA total allocation (in millions)	Fiscal Year 2001 VERA per patient allocation
17 (Dallas)	172,246	799	4,637
1 (Boston)	171,323	842	4,915
20 (Portland)	165,637	805	4,863
18 (Phoenix)	165,349	721	4,358
12 (Chicago)	164,776	886	5,374
21 (San Francisco)	164,540	900	5,471
11 (Ann Arbor)	157,358	758	4,816
15 (Kansas City)	151,016	681	4,512
10 (Cincinnati)	145,406	662	4,554
19 (Denver)	103,727	462	4,453
5 (Baltimore)	102,628	563	5,483
2 (Albany)	101,549	499	4,916
13 (Minneapolis)	94,941	453	4,771
14 (Lincoln)	68,012	303	4,455
VA systemwide	3,752,301	$17,746	$4,729

Source: Department of Veterans Affairs, *Veterans Equitable Resource Allocation: Equity of Funding and Access to Care Across Networks* (Washington, D.C.: 2001), pp. 27 and 64 and GAO calculations.

VERA seeks to ensure that comparable resources are allocated for comparable workloads by adjusting for differences in networks' patient health care needs and certain local costs in calculating networks' allocations. Without these adjustments, networks with justifiably higher costs could face pressure to compromise access to care or lower health care quality, while networks with lower costs could receive more resources than needed. To prevent this problem, VERA, like other federal health care payment systems, makes adjustments to its per patient allocations or capitation amounts.

VERA adjusts for patient health care needs—case mix—by first classifying patients into categories by overall level of health care need and then by setting capitation amounts for each of these patient categories. VERA classifies patients into one of three categories according to the level of health care needs and associated costs. The first category is complex care, which includes patients who generally require significant high-cost inpatient care as an integral part of their rehabilitation or functional maintenance, and is about 4 percent of VA's workload. This category includes most patients in VA's special disability programs such as those

with spinal cord injuries and serious mental illness.[10] The second category is basic vested care, which includes patients who have relatively routine health care needs and are principally cared for in an outpatient care setting. These patients—84 percent of VA's workload—rely primarily or completely on VA for meeting their health care needs, may require short-term inpatient admissions, and typically require significantly fewer resources than complex care patients. The third category is basic non-vested care which is 12 percent of VA's workload. This category includes patients who also have relatively routine health care needs but receive only part of their care through VA, are less costly to VA than basic vested patients, and have not undergone a comprehensive medical evaluation by a VA practitioner.

The adjustments to capitation amounts for each category reflect whether patients in a category are more or less costly than patients in another category. These adjustments, or case-mix weights, determine what proportion of VERA resources will be allocated to networks to care for patients in each case-mix category, such as complex care. As a result, VERA's patient case-mix adjustment provides more funding to networks with greater proportions of complex care patients. For example, if two networks have the same number of patients but one has more complex care patients, it will receive a greater allocation because the VERA case-mix weight for complex care is higher.

In addition, VERA adjusts for uncontrollable geographic price differences in the resources it allocates. These differences result primarily from variations in federal employee pay rates in different parts of the country. VERA makes this adjustment by applying a price adjustment factor to each network's allocation. The adjustment lowers the VERA allocation for networks located in lower cost areas and raises the allocation for networks located in higher cost areas. In fiscal year 2001, Network 8 (Bay Pines) had the largest decrease resulting from the geographic price adjustment— 2.8 percent. Network 21 (San Francisco) had the largest increase resulting from the geographic price adjustment— 6.3 percent. Through fiscal year 2001, this adjustment was for services provided only by VA employees. Beginning in fiscal year 2002, VA expanded the

[10]VA's special disability programs provide services to veterans disabled by spinal cord dysfunction, traumatic brain injury, blindness, amputations, serious mental illness, and post-traumatic stress disorder.

geographic price adjustment to all VERA allocations by including contract labor costs and contract nonlabor purchases, such as energy.

VERA's allocation of resources based on workload with adjustments only for costs beyond the networks' control aims to promote equity and efficiency. To promote equity, VERA adjusts network allocations by case mix and geographic price to standardize measures of workload and resources so that each network receives comparable allocations for comparable workloads. To create an efficiency incentive, VERA provides fixed capitation amounts for patient categories that are the same for each network and are intended to reflect VA's average costs instead of historical local costs. Using fixed capitation amounts is consistent with how other health care payers provide managed care plans with an incentive to operate efficiently by placing them at risk if their expenses exceed the payment amount.

VERA also provides protection of patients from the risk that a health care network would not be able to provide services because its expenditures exceed available resources. VERA does this annually through the National Reserve Fund which provides supplemental resources to networks when they have difficulty operating within their available resources. VA's National Reserve Fund is used to cover network requests for supplemental allocations over and above networks' annual VERA allocations and other sources of revenue. For fiscal years 1999 through 2001, VA has set the National Reserve Fund amount at $100 million using a combination of annual and carry-over funds. Since fiscal year 1999, resources distributed through the National Reserve Fund have averaged approximately 1 percent of total VERA allocations and supplemented VERA allocations in six networks.

VERA Changes Required to Better Align Resources With Workload

Although VERA's overall design is a reasonable approach to allocate resources, we identified weaknesses in its implementation. First, VERA's calculation to ensure the comparability of networks' resources with their workloads and their patient health care needs is not as accurate as it could be. Second, the process for providing supplemental resources through the National Reserve Fund process does not provide adequate information to determine the extent to which networks need supplemental funding as a result of potential problems in VERA, network inefficiency, or other factors.

VERA's Calculation of Networks' Workloads and Patient Health Care Needs Is Not as Accurate as It Could Be

VERA's calculation of networks' workloads excludes most higher income veterans without a service-connected disability—a growing proportion of VA's users. In addition, VERA does not account for variation in patients' health care needs and related costs among networks as accurately as it could.

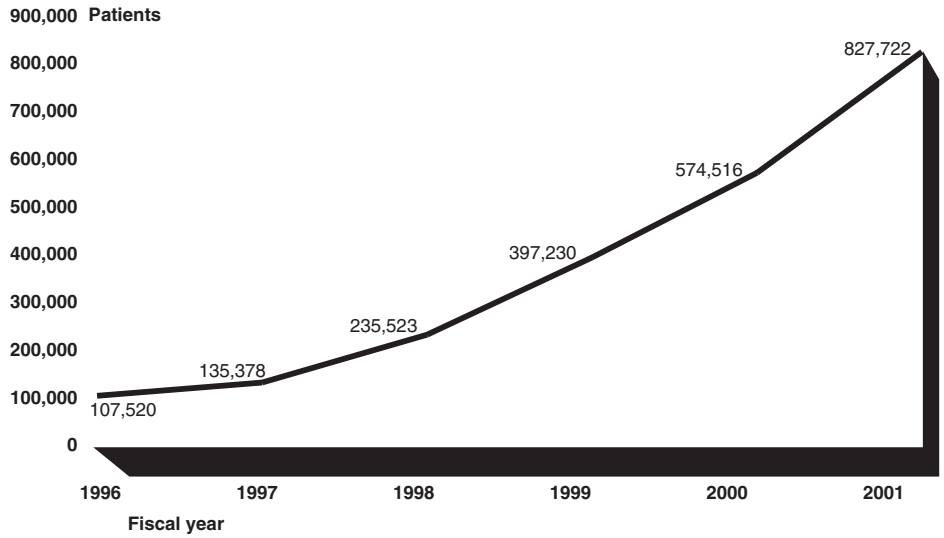
Excluding Most Higher Income Veterans Without a Service-Connected Disability Compromises the Comparability of Network Allocations

When VERA was established, the number of higher income veterans treated without a service-connected disability was small—approximately 108,000 or about 4 percent of the total number of veterans treated in fiscal year 1996. Because of their small numbers and the expectation that collections from copayments, deductibles, and third-party insurance reimbursements would cover the majority of their costs, VERA did not include most of these higher income veterans in basic care workload. However, the number of these veterans treated increased greatly in recent years and represent about 95 percent of VA's Priority 7 health care enrollment category. The number of Priority 7 veterans treated increased to approximately 827,722 users (see fig. 4).[11] Priority 7 veterans comprised 22 percent of VA's total fiscal year 2001 patient workload. This rapid growth in the number of Priority 7 veterans treated has occurred even though networks do not receive additional VERA allocations for the majority of this workload and collections covered only 24 percent of Priority 7 veterans' costs in fiscal year 2000.[12] Networks pay for most of the costs of Priority 7 services through VERA allocations made mostly on the basis of non-Priority 7 workload.

[11]VERA does include some Priority 7 veterans in its workload measure. In fiscal year 2000, about 8 percent of Priority 7 veterans treated were included in VERA's workload measure because they were complex care patients or basic care patients with service-connected conditions.

[12]Facility collections from copayments, deductibles, and third-party insurance reimbursements cover some of the costs of services for Priority 7 veterans.

Figure 4: Growth of Priority 7 Veterans Treated, Fiscal Years 1996 through 2001

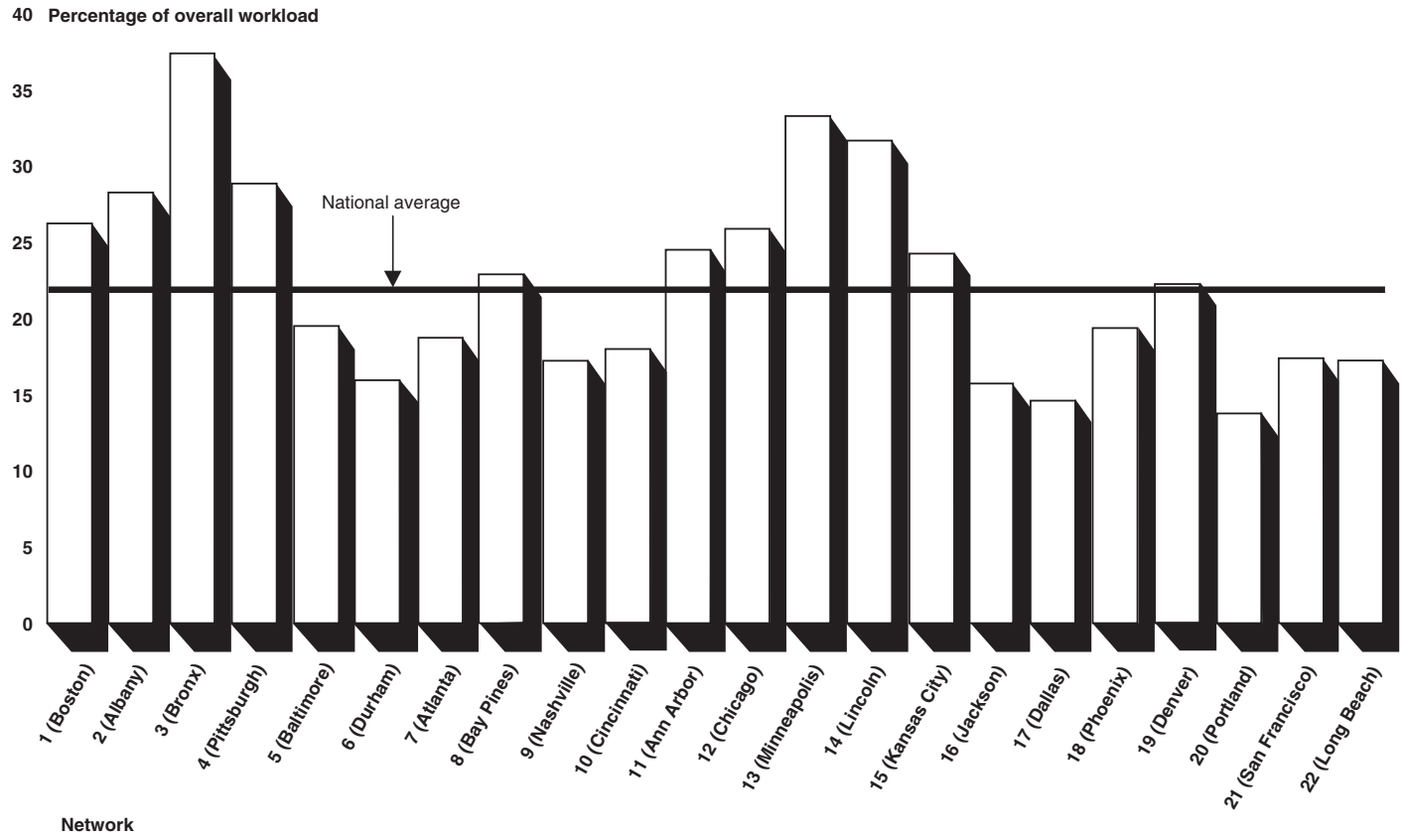


Note: Because the Priority 7 classification was not developed until fiscal year 1999, we used VA's previous classification that most closely represents this priority group, Category C. The Category C data we used for fiscal years 1996 through 1998 slightly underestimate the number of Priority 7 veterans for those years.

Source: VA.

The omission of these veterans from VERA's workload calculation creates an inequitable allocation of resources across networks because networks' proportion of Priority 7 veterans treated varies (see fig. 5). For example, in fiscal year 2001, Priority 7 users were 32 percent of Network 14's (Lincoln) total veterans treated compared to the VA average of 22 percent. Consequently, networks with a higher proportion of Priority 7 veterans, like Network 14 (Lincoln), have fewer resources per patient to treat veterans than networks with a lower proportion of Priority 7 veterans.

Figure 5: Priority 7 Veterans Treated by Network, Fiscal Year 2001



Source: VA.

VA assessed the possibility of including Priority 7 veterans in VERA's basic vested workload. However, it had concerns that including Priority 7 veterans in VERA workload would create a possible incentive to serve higher income veterans at the expense of service-connected and low-income veterans. VA considered providing a capitation amount for Priority 7 veterans that was less than the average cost of their care. However, rather than including Priority 7 veterans in the workload calculations with a reduced capitation amount, VA decided instead to pursue other options.

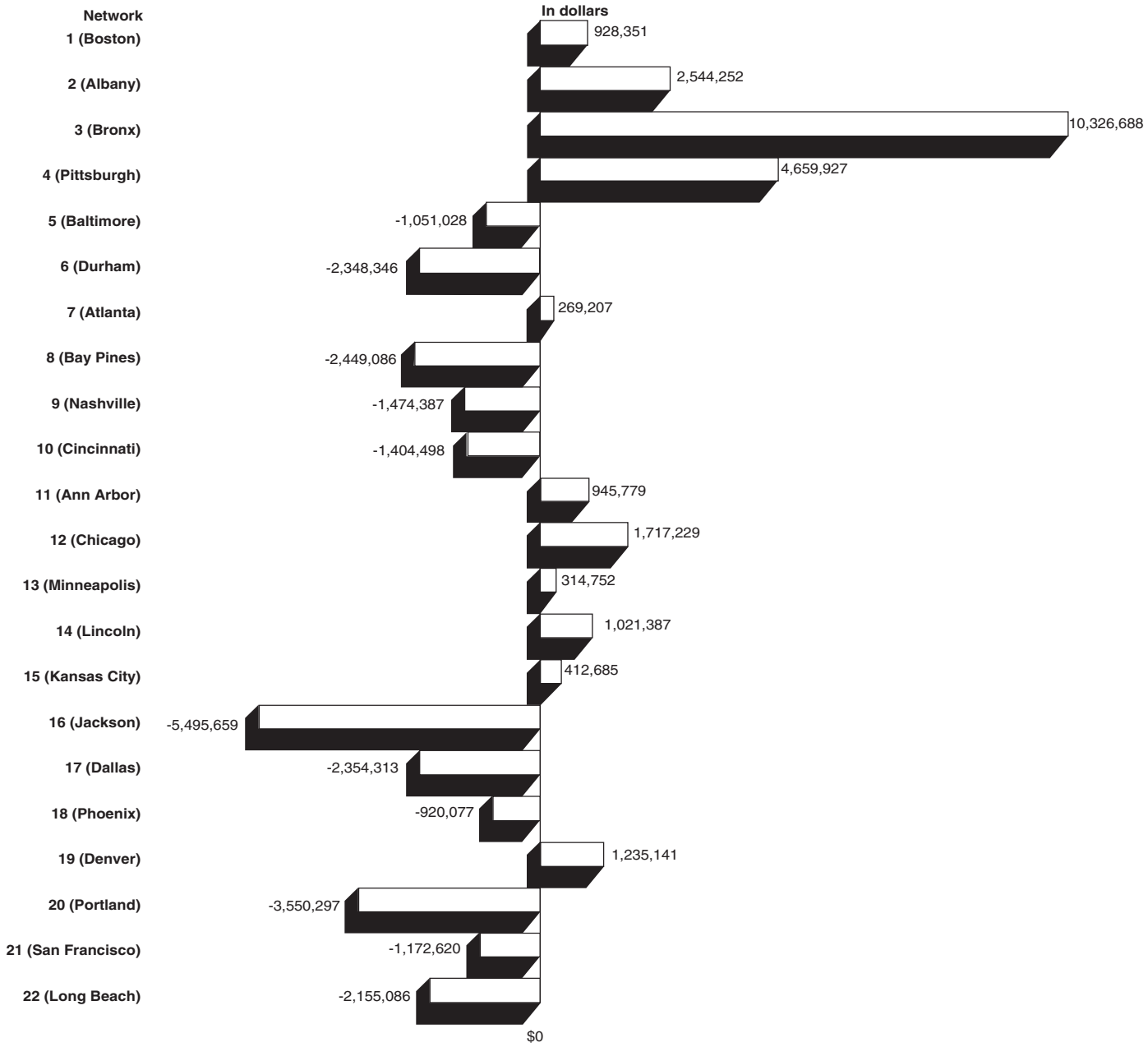
One of the options VA is examining is the effect of changing the income threshold used to classify enrolled veterans. Specifically, the current uniform national income standard used in part for determining Priority 7

status would be replaced with a regional income standard to account for regional differences in the cost of living. This would change the status of some Priority 7 veterans in high-cost regions to low-income veterans—who are included in VERA's workload calculation. Although adopting a regional income threshold could improve the equity of resource allocation, the alignment of workload with resources would still be compromised if some networks continue to have disproportionate numbers of the remaining Priority 7 veterans.

Inclusion of Priority 7 veterans in VERA basic vested care workload would increase the comparability of resources among networks per patient treated.[13] This would move resources from networks with a smaller proportion of Priority 7 veteran workload to networks with a larger proportion of Priority 7 veteran workload. If, for example, Priority 7 basic vested veterans—those who rely primarily or completely on VA for meeting their health care needs—were capitated at half the average national cost of their care, as VA had considered, this would have increased the allocation to 9 networks in the northeast and midwest and decreased the allocation to 10 networks in the south and west in the fiscal year 2001 VERA allocation (see fig. 6).

[13]VA's Office of Inspector General also recommended that VA include Priority 7 workload in the VERA model. See Office of Inspector General, Department of Veterans Affairs, *Audit of The Availability of Healthcare Services in the Florida/Puerto Rico Veterans Integrated Service Network (VISN) 8*, Report Number 99-00057-55 (Washington, D.C.: August 13, 2001).

Figure 6: Estimated Change in VERA Allocations from Adding Priority 7 Basic Vested Veterans to VERA Workload at Half Their National Cost, Fiscal Year 2001



Note: For this simulation we used VERA fiscal year 2001 workload numbers for basic vested care, which are the total unduplicated number of veterans served for fiscal years 1997, 1998, and 1999.

Source: GAO analysis of VA data.

VERA Does Not Adjust for Justifiable Cost Differences As Accurately As It Could

Although VERA adjusts network allocations for cost differences resulting from the mix of patients networks serve, it does not do so as accurately as it could. This is because the case-mix weights assigned to each category of patients are based on historical cost data from fiscal year 1995 and VERA only uses three case-mix categories to allocate resources.

Case-Mix Weights Based On Historic Data Do Not Reflect Changes In VA Health Care

VERA uses case-mix weights based on VA health care expenditures in fiscal year 1995 to allocate resources for basic and complex care workload. These weights are determined by the share of resources spent on basic and complex care in that year — 61.6 percent of expenditures for basic care and 38.4 percent for complex care. For the VERA allocation in fiscal year 2001, for example, $6.2 billion was available for complex care (38.4 percent) and $10.0 billion was available for basic care (61.6 percent).

These case-mix weights, however, have not been updated to reflect the health care that VA is providing. Because of VERA, VA Eligibility Reform, and other VA initiatives, the number of basic care patients has increased since fiscal year 1995 while the number of complex care patients has remained relatively constant. The rising proportion of basic care patients has contributed to a greater proportion of VA expenditures for basic care and a smaller proportion of expenditures for complex care. By fiscal year 1999, 66.9 percent of expenditures were for basic care and 33.1 percent were for complex care. Adjusting capitation amounts to reflect current expenditures for basic and complex care would result in an approximately 9 percent increase in the basic care capitation amounts and about a 14 percent reduction in the complex care capitation amount (see table 2).

Table 2: VERA Capitation Amounts, Fiscal Year 2001

Case-mix category	Actual 2001 VERA capitation amount[a]	Capitation amount if most current data used for 2001 VERA allocations[b]
Basic non-vested care	$121	$132
Basic vested care	3,126	3,395
Complex care	42,765	36,869

[a]Capitation amounts based on fiscal year 1995 VA expenditures.

[b]Capitation amounts based on fiscal year 1999 VA expenditures.

Source: Actual fiscal year 2001 capitation amounts from Department of Veterans Affairs, *Veterans Equitable Resource Allocation: Equity of Funding and Access to Care Across Networks* (Washington, D.C.: 2001), p. 9. Capitation amounts for most current data calculated by GAO.

VA considered updating the weights for basic and complex care based on the most recent available costs. VA officials told us they have maintained the fiscal year 1995 case-mix weights because using more current expenditure data that would lower the allocation for complex care and increase the allocation for basic care could be seen as a weakening of VA's commitment to serve veterans with complex care needs, such as those with spinal cord injuries or serious mental illness. However, continuing to base VERA case-mix weights on fiscal year 1995 expenditures has not ensured that resources were spent on complex care patients. VERA, like other allocation systems, provides networks with resources but it does not require networks to spend resources in a particular way. Rather, VA program guidance and network management decisions determine how resources are spent. Eighteen of 22 networks spent less for complex care than they received based on their complex care workload in fiscal year 2000, the most recent year for which expenditure data are available (see table 3). As a result, the proportion of VA's total expenditures on complex care has declined since fiscal year 1995 even though the proportion of VERA's allocation for complex care has remained constant. However, VA has decided to defer action on using the most recently available costs pending further study of how costs and workload vary in complex care categories among networks.

Table 3: Complex Care Workload Allocations Compared With Complex Care Expenditures, Fiscal Year 2000

	Dollars in millions		
Network	Complex care workload allocation	Expenditures on complex care	Allocation in excess of expenditures
16 (Jackson)	$433.8	$315.0	$118.8
8 (Bay Pines)	461.5	350.4	111.1
20 (Portland)	276.2	213.2	63.0
18 (Phoenix)	207.6	153.7	53.9
9 (Nashville)	253.6	205.6	48.0
7 (Atlanta)	340.1	294.3	45.8
15 (Kansas City)	208.9	167.1	41.9
17 (Dallas)	277.1	243.4	33.7
13 (Minneapolis)	169.7	142.0	27.6
14 (Lincoln)	99.7	73.2	26.4
21 (San Francisco)	280.8	256.0	24.9
4 (Pittsburgh)	322.2	302.4	19.8
19 (Denver)	128.4	109.9	18.4
5 (Baltimore)	212.9	194.9	18.0
2 (Albany)	179.7	165.4	14.3

Dollars in millions			
Network	Complex care workload allocation	Expenditures on complex care	Allocation in excess of expenditures
6 (Durham)	282.2	268.1	14.1
10 (Cincinnati)	243.4	232.2	11.3
12 (Chicago)	334.9	328.6	6.3
22 (Long Beach)	298.9	304.8	(5.9)
1 (Boston)	270.6	279.0	(8.4)
11 (Ann Arbor)	236.1	245.5	(9.5)
3 (Bronx)	366.6	408.8	(42.2)
National total	**$5,884.9**	**$5,253.6**	**$631.3**

Note: The complex care allocation includes the VERA fiscal year 2000 geographic price adjustment.

Source: GAO calculations based on VA data.

Aligning VERA case-mix weights proportionally with current expenditures is one way to better reflect how health care is delivered in VA. Doing so, however, assumes that expenditures alone are an appropriate measure of health care need. This is not always the case. For example, if health care in a particular case-mix category is not being provided efficiently, using expenditure data alone would result in a higher than necessary case-mix weight. This would lead to excess resource allocation for the case-mix category. On the other hand, using expenditure data only would result in a lower case-mix weight than appropriate if health care providers are not using more expensive treatments when needed to provide clinically appropriate care. This would lead to insufficient resource allocation for the case-mix category. As a result, setting case-mix weights may begin with consideration of current expenditures, but ultimately must use the best available data to reflect efficiency and clinically appropriate care.

The Small Number Of Case-Mix Categories In VERA Does Not Accurately Adjust For Network Differences In Veterans' Health Care Needs

VERA uses only three case-mix categories—complex, basic vested, and basic non-vested—to adjust for differences in health care needs and related resource requirements for veterans. These three case-mix categories are based on 44 patient classes VA uses to classify its patients. Using all 44 patient classes as case-mix categories would more accurately adjust for differences in needs and related resource requirements because the average costs of patients in the classes within the VERA categories vary significantly and can be dramatically higher or lower than their capitation amounts for the current three case-mix categories (see table

4).[14] For example, the national average patient cost for domiciliary care—one type of complex care—in fiscal year 2000 was roughly $17,000 less than the $42,153 capitation amount for complex care, while the average patient cost for ventilator-dependent care — another type of complex care—was about $121,000 more than the complex care capitation amount.

Table 4: VA Patient Classes, Costs, and National Capitation Amounts, Fiscal Year 2000

Patient classes	National average cost	National capitation amount
Complex care		
Chronic mental illness		
Schizophrenia and dementia	$51,992	$42,153
Other psychosis	43,313	42,153
Substance abuse	40,254	42,153
Post-traumatic stress disorder – chronic	21,472	42,153
Extended and residential care		
Specialized care	78,963	42,153
Physical	68,992	42,153
Behavioral	66,630	42,153
Clinical complex	63,929	42,153
Rehabilitation	63,885	42,153
Low activities of daily living	44,097	42,153
Community nursing home	36,321	42,153
Domiciliary	24,810	42,153
Home-based primary care	24,468	42,153
Hepatitis C with antiviral therapy	11,211	42,153
Spinal cord injury		
Spinal cord injury quadriplegic – new injury	68,023	42,153
Spinal cord injury paraplegic – new injury	60,879	42,153
Spinal cord injury quadriplegic – old injury	33,013	42,153
Spinal cord injury paraplegic – old injury	26,570	42,153
Other complex care classes		
Ventilator dependent	163,436	42,153
Transplant	78,211	42,153
End stage renal disease	70,662	42,153

[14]RAND, *An Analysis of the Veterans Equitable Resource Allocation (VERA) System* (Santa Monica, California, 2001), pp. 21-22 discusses the need for additional case-mix adjustment in VERA as does Price Waterhouse LLP and The Lewin Group, Inc., *Veterans Equitable Resource Allocation Assessment – Final Report*, March 27, 1998.

Patient classes	National average cost	National capitation amount
Blind rehabilitation service	33,545	42,153
Stroke	26,533	42,153
Traumatic brain injury	24,146	42,153
Acquired Immune Deficiency Syndrome or human immunodeficiency virus positive with antiretroviral therapy	19,870	42,153
Basic vested care		
Acute care		
Acute post traumatic stress disorder	16,041	3,249
Multiple medical conditions	13,948	3,249
Psychiatric disorder with substance abuse	13,447	3,249
Medical with psychiatric/substance abuse	9,907	3,249
Hepatitis type C without antiviral therapy	9,427	3,249
Oncology	8,576	3,249
Pulmonary disease	4,593	3,249
Gastroenterology disorder	4,444	3,249
Addictive disorders	4,400	3,249
Cardiovascular disease	3,685	3,249
Acute mental disease	3,478	3,249
Musculoskeletal disorders	2,848	3,249
Central nervous system disorder	2,690	3,249
Endocrine, nutritional, and metabolic disorders	2,498	3,249
Other acute diseases	2,050	3,249
Ear, nose, and throat	1,514	3,249
Compensation and pension exams	242	3,249
Other basic vested care class		
Human immunodeficiency virus positive without antiretroviral therapy	7,988	3,249
Basic non-vested care	358	105

Note: These are the patient classes VA uses to group patients into complex care, basic vested care, and basic non-vested care categories in VERA's case-mix adjustment of workload.

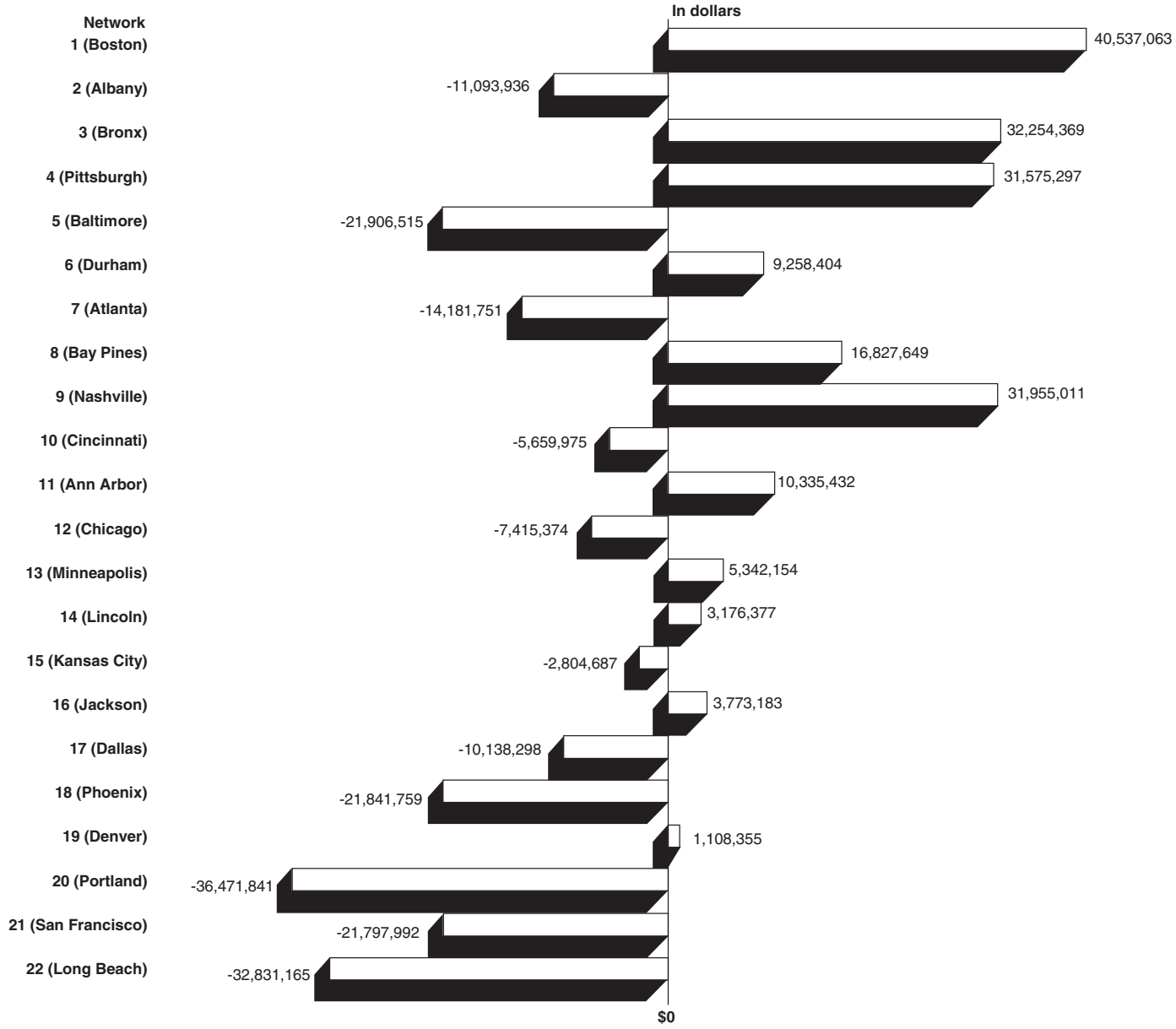
Source: GAO calculations based on VA data.

Our analysis shows that considerable variation exists among networks in the type of workload represented by VERA's three case-mix categories, which limits VERA's ability to allocate comparable resources for comparable workload. VERA provides more resources to networks, relative to their costs, that have proportionately more workload in less expensive patient classes, such as domiciliary care, than other networks. VERA provides fewer resources to networks, relative to their costs, that have more workload in more expensive patient classes, such as ventilator-dependent care. Using VA's current 44 patient classes rather than the three

case-mix categories VERA used in fiscal year 2001 would result in a significant movement of resources for some networks because of the variation by network in the type of workload (see fig. 7).[15] This would move resources from networks having proportionately fewer patients in expensive patient classes to networks having proportionately more patients in expensive patient classes, resulting in an average movement of resources of 2 percent per network.

[15]For our simulation we used VA's 44 patient classes because data were readily available.

Figure 7: Estimated Change in VERA Allocations Among Networks as a Result of Using 44 Case-Mix Categories, by Network, Fiscal Year 2001



Note: We used fiscal year 1999 expenditure data for the calculations

Source: GAO analysis of VA data.

In 1998, VA conducted a similar analysis using 54 patient classes for allocation and found that this would have moved a significant amount of resources among networks, an average of 4 percent per network.[16] The analysis further concluded that using only 7 of the 54 classes achieved nearly the same result. A 1998 Price Waterhouse analysis of VERA also concluded that additional case-mix categories would increase equitable resource allocation.[17] VA officials told us they have not introduced more than three case-mix categories because VA wants VERA to be easily understood by stakeholders.

While using more case-mix categories can increase the accuracy of allocations, the literature and experts we consulted suggest that a case-mix classification system needs to address two concerns in order to prevent providers from receiving inappropriately high levels of resources. First, having a larger number of case-mix categories may provide more opportunities for networks to inappropriately classify patients to receive the highest capitation amount. However, increasing the VERA case-mix categories from three to a higher number, but not necessarily 44, may strike an appropriate balance between improved allocation and the need to control for potential inappropriate coding of patients into higher capitation categories. Second, basing case-mix categories in part or in whole on utilization of services provides the incentive to overuse services. For instance, in VERA, a patient who receives nine home-based primary care visits is categorized in basic vested care with a capitation amount of $3,126; however, a patient who receives 10 visits is categorized in complex care, which has a capitation amount of $42,765. Consequently, if networks increase the number of such visits, they can increase their funding more than 13-fold. Currently, 22 of VA's 44 patient classes incorporate utilization factors in classifying patients. These utilization factors are found primarily in the patient classes for extended and residential long-term care and chronic mental health services and for classifying basic non-vested patients. Replacing utilization criteria with diagnosis and functional measures where possible in VERA's case-mix categories would reduce the incentive to overuse services, especially for complex care patients.

[16]The number of VA categories declined from 54 in 1998 to 44 in 2001 because VA combined some of the 1998 categories.

[17]Price Waterhouse LLP and The Lewin Group, Inc., *Veterans Equitable Resource Allocation Assessment – Final Report,* March 27, 1998.

Most VERA complex care patient classes are based in part on some measure of service utilization because of the difficulty in predicting the costs of these classes based solely on diagnostic data. Because complex care costs are high and unusually difficult to predict, the literature and experts we consulted suggest that it is prudent to partially insure networks from such unpredictable costs. [18] Therefore, it may be advantageous to use a mechanism to help providers, such as VA's health care networks, cope with their highest cost complex care patients by providing additional resources for their care based on a formula. If VA used such a funding mechanism, networks with complex care patients in the 99th percentile of cost, for example, would receive the network complex care capitation amount plus a predetermined percentage of the cost above the capitation amount. The additional funds above the capitation amount would partially offset the network's expenses for high-cost complex care patients. Resources for this funding mechanism could be set aside as part of the National Reserve Fund.

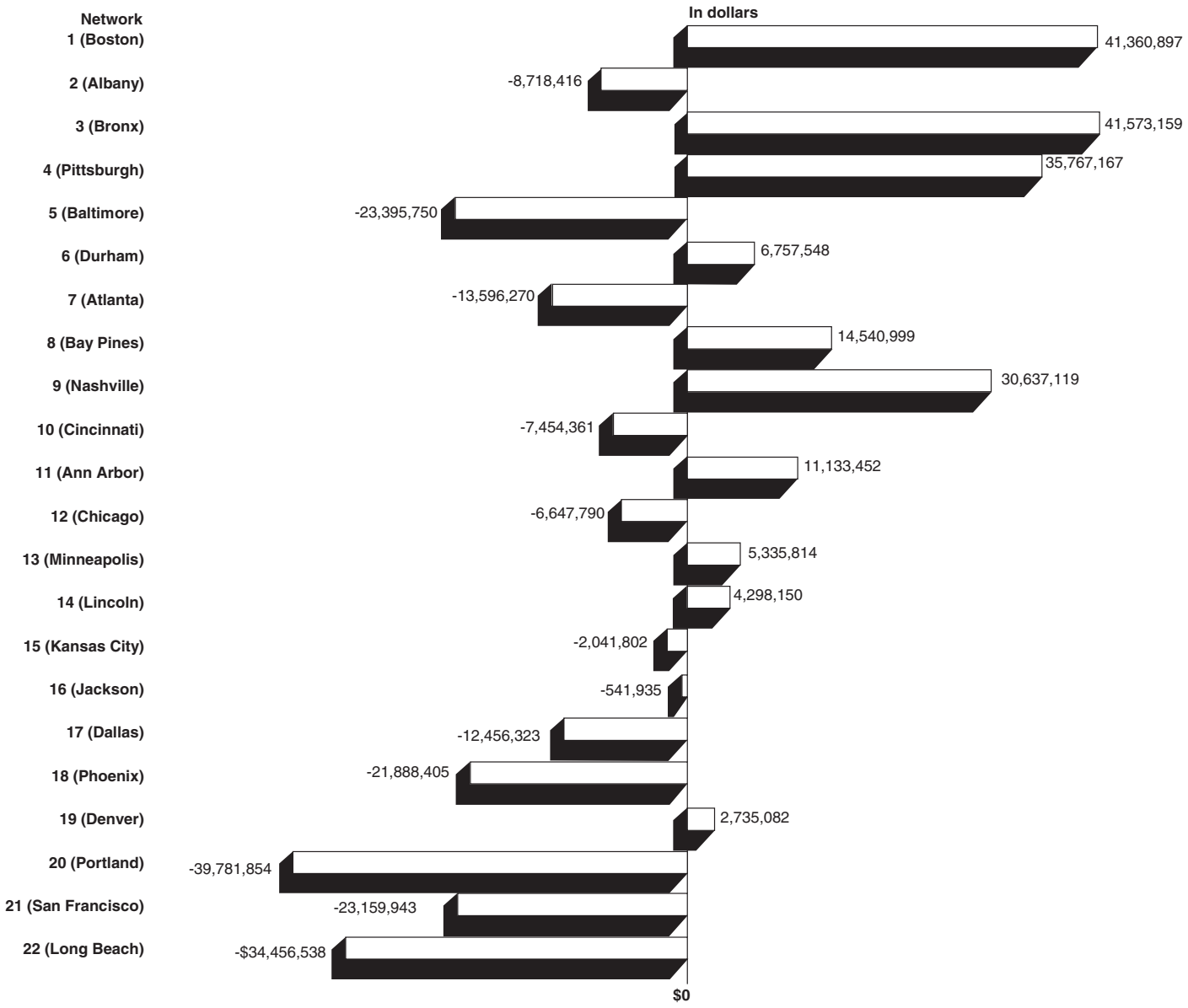
Currently, VA is exploring alternative case-mix classification systems, such as Diagnostic Cost Groups (DCG), that could provide more case-mix categories, classify patients based on nonutilization criteria, and better predict costs for acute care patients. DCGs place patients into different groups based on patient demographics and medical diagnoses. However, VA researchers have found that the DCG diagnosis-based system may not be sufficient to allocate resources for certain complex care patient classes. Predicting the costs of many complex care patients is problematic because complex care patients, including those with mental illness and those in extended care settings, may have the same diagnosis but may need very different levels of treatment and support. VA is studying the possibility of supplementing a diagnoses-based system with utilization information in order to better predict the costs of complex care patients.

[18]For discussion of predicting costs for mental health patients using different risk adjustment models, see Susan Ettner, Richard Frank, Thomas McGuire, and Richard Hermann, "Risk Adjustment Alternatives in Paying for Behavioral Health Care Under Medicaid," *Health Services Research*, Volume 36, No. 4, 2001.

Combined Effect of Changes in Workload and Case-Mix Measures to Better Align Resources and Workload Would Result in Significant Reallocation Among Some Networks

Implementing changes to VERA could better align resources with workload for VA's 22 health care networks by addressing case mix and workload issues. Incorporating all 44 of the current case-mix categories, updating case-mix weights to reflect the current distribution of expenditures, and funding Priority 7 basic vested veterans at 50 percent of costs would better align resources and workloads. Incorporating the 44 case-mix categories would have the largest effect on resource allocation. The combined effect of these changes would provide additional resources to some northeastern and midwestern networks and reduce resources for some southern and western networks (see fig. 8). The allocation change represents about 2 percent of networks' budgets, but is more substantial for some networks. Network 1 (Boston) would get approximately a 5 percent increase and Network 20 (Portland) approximately a 5 percent decrease. These changes would better align approximately $200 million with workload.

Figure 8: Estimated Change in VERA Allocations from Incorporating 44 Case-Mix Categories, Most Current Expenditure Data for Case-Mix Weights, and Priority 7 Basic Vested Veterans Treated, Fiscal Year 2001



Note: We allocated resources for Priority 7 basic vested care veterans at 50 percent of the national average cost which is $849 per veteran. We used fiscal year 1999 expenditure data for these calculations.

Source: GAO analysis of VA data.

Inadequate Network Supplemental Funding Information Limits VA's Ability to Take Corrective Action

VA has focused its process for administering the National Reserve Fund almost solely on providing supplemental resources to networks to get through a fiscal year but has not included in this process an examination of the root causes of networks' needs for supplemental resources. To operate the National Reserve Fund, VA, for the last 3 fiscal years (1999 – 2001), has set aside about 1 percent of the VERA allocation in anticipation of networks requiring supplemental resources.[19] No networks requested supplemental funding in fiscal years 1997 and 1998. However, six networks have requested supplemental funding from fiscal year 1999 to fiscal year 2001 (see table 5). Supplemental allocations to four networks in fiscal year 2001 totaled $220 million. Officials in 10 of 22 networks told us, in June 2001, that they anticipated requesting supplemental funding at least once from fiscal years 2002 through 2006.[20]

Table 5: Network Supplemental Funding, Fiscal Years 1999 through 2001

	Dollars in millions		
Network (Location)	**1999**	**2000**	**2001**
1 (Boston)	$0	$0	$53.2
3 (Bronx)	0	66.2	73.8
8 (Bay Pines)	7.0	0	0
9 (Nashville)	5.0	0	0
13 (Minneapolis)	0	14.7	44.7
14 (Lincoln)	0	9.8	48.3
Total	**$12.0**	**$90.7**	**$220.0**

Source: VA.

VA has used three different approaches to determine whether networks requesting additional resources would receive supplemental allocations. In fiscal years 1999 and 2000, VA created teams consisting of staff from networks not requesting supplemental funds. These teams reviewed networks' funding requests and made recommendations regarding the amount of supplemental allocations and efficiency initiatives networks needed to implement in order to close gaps between their expected expenditures and VERA allocations. In fiscal year 2001, responding in part

[19]Funds in the National Reserve Fund not needed for supplemental allocations can be used for other purposes.

[20]We asked network directors if they expected to request supplemental allocations under these conditions: VERA's design, current enrollment, and third-party policies remain the same and budget increases are consistent with recent years.

to criticisms of network staff review of allocation requests, VA replaced the team review process with a review by VA headquarters officials. In this process, VA headquarters officials reviewed requests for supplemental resources from networks anticipating a budget shortfall for the year. In fiscal year 2002, VA created a team to examine networks' need for supplemental resources. This team consisted of headquarters and network officials, including representatives from networks that requested supplemental allocations and those that did not.

None of VA's approaches to supplemental allocations has systematically evaluated the extent to which certain factors caused networks to require supplemental allocations. In fiscal years 1999 and 2000, VA teams conducted site visits and reviewed financial and clinical information that requesting networks provided. The teams made recommendations for supplemental allocations in order to prevent network shortfalls. However, VA could not determine to what extent supplemental resources were needed due to imperfections in VERA, lack of network efficiency, inability to predict complex care patients' costs, or lack of managerial flexibility to close or consolidate programs or facilities because the teams did not collect the information needed to make this determination. [21] Although the evaluation process changed in fiscal year 2001, VA was still unable to make such a determination. For example, in fiscal year 2001, about half the supplemental resources VA provided to networks was for "inflation and miscellaneous program adjustments." All networks experienced inflation, however, and VA did not distinguish between the level of inflation in networks that requested supplemental resources and those that did not.

VA officials told us that the changes for fiscal year 2002 will still not allow them to determine the extent to which various factors cause networks to need supplemental resources. As a result, VA cannot provide adequate assurance that supplemental allocations are appropriate or take needed action to correct problems that cause networks to have budget shortfalls.

One of the corrective actions VA could take is to assist networks that experience budget shortfalls because of an unusually large number of high-cost complex care patients in a given year. This is important because

[21]RAND, *An Analysis of the Veterans Equitable Resource Allocation (VERA) System* (Santa Monica, California, 2001), pp. 24-28. RAND discusses barriers that some networks may face to achieve the efficiencies VERA incentives provide because of difficulties in consolidating facilities.

the methods used to predict health care costs are not as precise in predicting the costs of many complex care patients as they are in predicting the costs of many basic care patients. As a result some networks' budget shortfalls could be explained in part by a higher than expected number of high-cost complex care patients. To address this risk, some other payers have established funding mechanisms to address the costs of these very expensive patients. For example, some state Medicaid programs have used a mechanism called stop-loss or reinsurance to reimburse managed care plans for certain benefits that exceed a specified expense limit.[22] If VA were to use a similar funding mechanism as part of the National Reserve Fund, this could help protect networks from budget shortfalls by providing additional resources above the capitation amount for complex care patients that reach a predetermined level of cost. VA is studying ways to address the risk that a network may have unusually high-cost patients in a given year that are not predicted in a resource allocation model.

Conclusions

VERA's overall design is a reasonable approach to resource allocation and has helped promote more comparable resource allocations for comparable workloads in VA. This approach is reasonable because VERA allocates resources primarily on the basis of workload and attempts to adjust network resources for factors beyond the control of network management, encourage efficiency, and provide protection to patients against network budget shortfalls. The implementation of this approach resulted in VA's shifting resources to more closely mirror shifts in the veteran population from the northeast and midwest to the south and west.

Although VERA's design is a reasonable approach to resource allocation, VA could correct weaknesses in VERA's implementation to improve the comparability of resource allocations with networks' workloads. One of VERA's implementation weaknesses is that it does not include most Priority 7 veterans in its workload even though the Priority 7 workload now represents about one-fifth of patients served. If the number of Priority 7 veterans VA treats continues to increase, this may create even more serious inequities in the future.

[22]John Holahan, Suresh Rangarajan, and Matthew Schirmer, *Medicaid Managed Care Payment Methods and Capitation Rates: Results of a National Survey,* Urban Institute, May 1999, p. 21.

VERA's adjustment for differences in patient health needs across networks emphasizes simplicity at the cost of increased accuracy. Maintaining only three case-mix categories in VERA does not adequately account for important variations in health care needs among networks. Increasing the VERA case-mix categories from three to a higher number would better account for the variation in health care needs across networks and would have the largest effect on resource allocation. In addition, changes are needed to update VERA's case-mix weights to better reflect how VA health care is now delivered. Updating case-mix weights may begin with using current expenditure data, but additional consideration should be given to using the best available data on appropriate clinical care and efficiency.

In addition to these weaknesses, VA has not used the supplemental funding process for improving VERA allocations and management of VA's resources. Although the amount of resources provided to networks through the supplemental funding process has continued to increase, VA has not been able to determine the relative contribution of factors, such as imperfections in VERA, network inefficiency, inability to predict complex care costs, or lack of managerial flexibility to close or consolidate programs or facilities, to the need for supplemental resources. An important factor that other health care payers have identified and account for that may contribute to VA network budget shortfalls is the inability to accurately predict the cost of complex care patients. Other payers have addressed this risk by using a funding mechanism to partially offset the unanticipated costs of such patients. Because VA has not identified the relative contribution of this factor and other factors that could cause network budget shortfalls, VA is unable to provide assurance that the supplemental funding is appropriate or take needed action to correct problems that cause networks to have budget shortfalls.

Making changes to address weaknesses in VERA will add some complexity to how VA allocates resources. Doing so, however, will better align the allocation of approximately $200 million with workload.

Recommendations for Executive Action

To continue to improve the allocation of comparable resources for comparable workloads through VERA, we recommend that the secretary of veterans affairs direct the under secretary for health to:

- better align VERA measures of workload with actual workload served regardless of veteran priority group,
- incorporate more categories into VERA's case-mix adjustment,

- update VERA's case-mix weights using the best available data on clinical appropriateness and efficiency,
- determine in the supplemental funding process the extent to which different factors cause networks to need supplemental resources and take action to address limitations in VERA or other factors that may cause budget shortfalls, and
- establish a mechanism in the National Reserve Fund to partially offset the cost of networks' highest cost complex care patients.

Agency Comments and Our Evaluation

In comments on a draft of this report, VA agreed with our conclusions that VERA's design is a reasonable approach to allocate resources commensurate with workloads and that VERA, in concert with other VA initiatives, has provided an incentive for VA to serve more veterans. VA also acknowledged the opportunities for improvements in VERA's implementation that we identified and concurred with our recommendations. VA's comments are in appendix II.

VA concurred with our workload and case mix recommendations, recognizing the substantial trend in Priority 7 workload expansion and the case-mix limitations of having only three pricing groups within VERA. VA anticipates that the distribution of an expected fiscal year 2002 supplemental appropriation will consider the Priority 7 workload, but as of February 22, 2002, Congress has not provided VA with the supplemental appropriation it anticipates. Further, VA is evaluating the appropriateness of expanding the number of VERA price groups to include corresponding updates of case-mix weights, but will not make a decision about these potential fiscal year 2003 VERA modifications until September 2002. In its comments, VA also indicated that it plans to wait for further study of VERA's workload and case-mix measures to determine whether all Priority 7 workload and case-mix refinements should be incorporated in the fiscal year 2003 VERA model. Given the extensive study of most of these issues already conducted by VA and others, we encourage VA to implement our recommended VERA workload and case-mix improvements in its fiscal year 2003 allocations to networks and to further refine these improvements in the future as needed. Delaying these needed improvements to VERA means that approximately $200 million will be allocated annually in a manner that does not align workload and resources as equitably as possible among networks.

VA also concurred with our recommendation to determine in the supplemental funding process the extent to which different factors cause networks to need supplemental resources, but the actions VA discussed to

improve the supplemental funding process do not address our recommendation. VA used a new supplemental adjustment process in fiscal year 2002 to better identify different factors that cause networks to require supplemental resources. However, this process does not identify the root causes of a network's need for additional resources as we recommended. Specifically, VA's new supplemental process does not provide VA information on the relative contributions of specific factors to network shortfalls such as network inefficiency, imperfections in VERA, and the inability to predict complex care costs. Until VA implements our recommendation, it cannot provide assurance that supplemental resources are appropriate or take needed actions to reduce the likelihood of network shortfalls in the future.

In addition, VA's discussion of actions for establishing a mechanism in the National Reserve Fund to partially offset the cost of networks' highest cost complex care patients do not fully address our recommendation. VA stated that the resources it distributed to five networks through the fiscal year 2002 supplemental adjustment process are expected to meet these networks' supplemental funding needs, including the cost of their highest cost patients. To address our recommendation, however, VA would have to identify individual complex care patients with unexpectedly high costs over the course of the fiscal year and provide stop-loss coverage for such patients to each network. VA's current process does not do this. However, as we have noted, ongoing VA studies could develop ways to provide stop loss coverage to networks for unpredictable high-cost complex care patients. Until VA establishes such a funding mechanism, some networks may experience budget shortfalls as a result of these unpredictable complex care costs.

We are sending copies of this report to the secretary of veterans affairs, interested congressional committees, and other interested parties. We will make copies of the report available to others upon request.

If you or your staffs have any questions about this report, please call me at (202) 512-7101. Another contact and key contributors are listed in appendix III.

Cynthia A. Bascetta
Director, Health Care—Veterans'
Health and Benefits Issues

List of Requesters

The Honorable Lane Evans
Ranking Minority Member
Committee on Veterans' Affairs
House of Representatives

The Honorable James T. Walsh
Chairman
The Honorable Alan B. Mollohan
Ranking Minority Member
Subcommittee on VA, HUD,
and Independent Agencies
Committee on Appropriations
House of Representatives

The Honorable Charles E. Grassley
The Honorable Chuck Hagel
The Honorable Tom Harkin
United States Senate

The Honorable Doug Bereuter
The Honorable Leonard Boswell
The Honorable Tom Latham
The Honorable James A. Leach
The Honorable Jim Nussle
The Honorable Lee Terry
House of Representatives

Appendix I: Scope and Methodology

We reviewed the Department of Veterans Affairs (VA) resource allocation for fiscal years 1997 through 2001 to (1) describe the effect the Veterans Equitable Resource Allocation (VERA) system has had on network resource allocations and workloads, (2) assess whether VERA's design is a reasonable approach to resource allocation, and (3) identify weaknesses in VERA that may limit VA's ability to allocate comparable resources for comparable workloads.

We worked with VA officials from the Resource Allocation and Analysis Office to obtain documents and data on how VERA works and how VERA has changed since fiscal year 1997. We also relied on other VA officials for our assessment of VERA including officials from the Office of the Under Secretary for Health, the Office of the Assistant Deputy Under Secretary for Health, the Office of the Chief Financial Officer, the Office of Quality and Performance, the Office of Policy and Planning, the Spinal Cord Injury Strategic Healthcare Group, the Geriatrics and Extended Care Strategic Healthcare Group, the Mental Health Strategic Healthcare Group, Health Services Research and Development Service, and the Northeast Program Evaluation Center. In addition, we interviewed officials from veteran service organizations and payment system experts outside of government.

We obtained information on VERA's effect and how it could be improved through interviews and documents from VA's networks. We visited five network offices: Albany (2); Bay Pines (8); Bronx (3); Lincoln (14); and Minneapolis (13) and conducted telephone interviews with officials in three additional networks: Denver (19), Kansas City (15), and Phoenix (18). We chose these networks because they were geographically diverse and had different financial experiences under VERA. We also obtained information from network officials about potential improvements to VERA including adding basic vested care Priority 7 users, basing VERA case-mix weights on more current expenditures, using more categories to adjust for case-mix differences, and other factors. We had follow-up telephone interviews with network officials in Bronx (3), Minneapolis (13), and Lincoln (14) regarding fiscal year 2001 supplemental resources from the National Reserve Fund.

We conducted an electronic mail survey to obtain the input of all 22 network directors about VERA. We also obtained information on network directors' anticipation of future supplemental funding requests.

To assess the reasonableness of VERA as an approach to resource allocation, we performed a literature review using works published primarily within the last 5 years. We searched the following databases:

MEDLINE, ABI/Inform Global, and Econlit, and relied on publications from other federal agencies. We focused our search on finding information on similar health care payment systems, case-mix adjustment for acute and extended care populations, and managing risk for mental health and special care populations.

To assess the effect VERA has had on network resource allocations and workload, we identified how resources have shifted among regions and increased veterans' access to care as measured by the number of veterans treated. We calculated the resources VERA shifted by projecting what allocations would have been in fiscal year 2001 if networks received the same proportion of funding in that year that they received in fiscal year 1996, the year preceding VERA's implementation. We calculated the resource shifts by subtracting networks' actual 2001 VERA allocations from their projected allocations. To calculate the total amount of resources VERA shifted, we summed the absolute value of networks' net gains or losses and divided by two. We divided the total by two to avoid double counting because a dollar transferred to one network is the same dollar transferred from another.

To determine weaknesses in VERA, we first examined our more than 10 years of work reviewing VA's resource allocation processes. In addition, we relied on external evaluations of VERA completed by Price Waterhouse, LLP and The Lewin Group, Inc., AMA Systems, Inc., and the RAND Corporation. We constructed simulation models to estimate the effect in fiscal year 2001 of 1) funding basic vested care Priority 7 patient users, 2) basing the case-mix weights on current expenditures, 3) using all 44 VERA patient classes to allocate network resources, and 4) the result of combining all three of these simulations. VA provided workload and expenditure data from fiscal years 1996 through 2000 and the actual VERA allocations received by networks during fiscal years 1997 through 2001. These data were obtained from VA's Office of the Chief Financial Officer, Allocation Resource Center, and Office of the Assistant Deputy Under Secretary for Health.

To estimate the effect on VERA allocations of funding basic vested care Priority 7 patients, we used the total unduplicated number of basic vested care Priority 7 veterans served for fiscal years 1997, 1998, and 1999. In addition, we assumed that these patients would be funded at 50 percent of the national average cost or $849 in fiscal year 1999. In our simulation, we chose to fund them at 50 percent of the national average cost based on documentation from a prior recommendation by the Veterans Health

Administration Policy Board. Funding these patients at less than full cost lessens the incentive for networks to serve more Priority 7 veterans.

To estimate the effect on network allocations of basing case-mix weights on current expenditures, we compared VERA's fiscal year 2001 allocations made on the basis of fiscal year 1995 expenditure data to what fiscal year 2001 allocations would have been if they were based on fiscal year 1999 expenditure data. The fiscal year 1999 expenditure data were the most recent available for case-mix weight calculations for the fiscal year 2001 VERA allocation. Using fiscal year 1999 data, we computed new capitation amounts for basic non-vested care, basic vested care, and complex care.

To estimate the effect on network allocations of using all 44 VERA patient classes, we used fiscal year 1999 expenditures based on VERA workload. To calculate new capitation amounts, we first calculated the percent of expenditures spent on each of the 44 classes. Second, we calculated the amount of resources available for each class by multiplying the new percentages for each class by the total fiscal year 2001 resources that VERA allocated. Third, we calculated the new capitation amounts by dividing the amount of resources available by the corresponding VERA workload.

To estimate the combined effect on network allocations of making each of these changes, we calculated capitation amounts for each of the 44 classes and funded basic vested care Priority 7 users at 50 percent of the national average cost based on fiscal year 1999 expenditures related to VERA workload. In our simulation we created a separate category for basic vested care Priority 7 patients because we did not have data on Priority 7 veterans for each basic care patient class.

We tested VA computer-based data used in our analysis and concluded that it was adequate for our purposes. To do this, we assessed the reliability of workload (VERA and non-VERA) and expenditure data we obtained from VA that were used in our analyses. When we identified inconsistencies between databases, we tried to resolve them by interviewing officials responsible for creating or maintaining the databases, updating the databases with additional information VA provided, and requesting special data runs with parameters that we specified. In addition, we confirmed that VA's Allocation Resource Center verifies all workload and expenditure data used in the VERA allocation process. We did not, however, verify whether these processes were adequate. We relied on previous work to determine what limitations, if

any, VA's data may have had on the analyses we completed. We performed our review from October 2000 through December 2001 in accordance with generally accepted government auditing standards.

Appendix II: Comments From the Department of Veterans Affairs

THE SECRETARY OF VETERANS AFFAIRS
WASHINGTON

February 11, 2002

Ms. Cynthia A. Bascetta
Director, Health Care—Veterans'
Health and Benefits Issues
U. S. General Accounting Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Bascetta:

This responds to your draft report, ***VA HEALTH CARE: Allocation Changes Would Better Align Resources with Workload*** (GAO-02-338). The Department of Veterans Affairs (VA) agrees with the General Accounting Office's (GAO) conclusions that the Veterans Equitable Resource Allocation (VERA) system's overall design is a reasonable approach to allocate resources commensurate with workloads and that VERA's methodology has had a substantial impact on network resource allocations and workloads. Also, as your report observes, VERA, in concert with other VA initiatives, has provided an incentive for the Veterans Health Administration's (VHA) networks to serve more veterans.

VA acknowledges the opportunities for improvement that GAO identifies and concurs with GAO's recommendations. Inherent in our approach to managing the VERA allocation process is an emphasis on ongoing evaluation of model effectiveness and the flexibility to initiate modifications and refinements on an as-needed basis. The enclosure details actions underway and plans to implement GAO's recommendations.

Thank you for the opportunity to comment on your draft report.

Sincerely yours,

Anthony J. Principi

Enclosure

Enclosure

DEPARTMENT OF VETERANS AFFAIRS COMMENTS
TO GAO DRAFT REPORT, ***VA HEALTH CARE: Allocation Changes Would Better Align Resources with Workload***
(GAO-02-338)

To continue to improve the allocation of comparable resources for comparable workloads through VERA, GAO recommends that the Secretary of Veterans Affairs direct the Under Secretary for Health to:

- **Better align VERA measures of workload with actual workload served regardless of veteran priority group,**

Concur - As GAO reports, VERA funds complex care patients in all seven veteran priority groups, as well as basic care patients through priority 7a. VHA continues to review the issue of providing workload and funding credit for priority 7c veterans. VHA is examining various VERA models/simulations for FY 2003 network budget allocations that reflect VERA workload and funding credit for patients in that category, both in whole and in part. Because of the substantial trend in priority 7 workload expansion, VA anticipates that the distribution of the additional supplemental appropriation associated with the Secretary's enrollment decision for FY 2002 will consider the priority 7c workload.

VA continues to stress that VERA is not a static model; rather, it is reviewed and refined on an ongoing basis through both VHA internal workgroups and external studies such as GAO's. VA is committed to thoroughly evaluating the appropriateness and feasibility of including basic care priority 7c workload in the funding methodology. For example, the RAND Corporation is conducting a Phase II VERA study that will address workload scope among other objectives. The RAND study should be published at the end of this fiscal year. At that time VHA will be better able to assess the benefit of permanently incorporating priority group 7c workload in the FY 2003 VERA model.

- **Incorporate more categories into VERA's case-mix adjustment,**

Concur - VA recognizes the case-mix limitations of having only three primary pricing groups within VERA. The VHA Patient Classification Workgroup is reviewing several alternatives, including the impact of incorporating Diagnostic Cost Groups (DCGs) or additional VERA pricing groups to establish more definitive case-mix and risk adjustment options. Movement in this direction would retain the strengths of VERA while providing increased flexibility in allocation determinations. As part of this assessment, the Management Science Group, a field unit of VHA's Office of Policy and Planning, has modified the DCG

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DEPARTMENT OF VETERANS AFFAIRS COMMENTS
TO GAO DRAFT REPORT, ***VA HEALTH CARE: Allocation Changes Would Better Align Resources with Workload***
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(Continued)

method to reflect the unique characteristics of the VA population and illness patterns in VA.

VHA will make VERA modifications and enhancements as it gains more experience in the application of selected case-mix allocation strategies. VHA expects to finalize preliminary decisions about modifications in the FY 2003 methodology by the end of September 2002, at which time recommendations of the RAND study and other internal workgroups will also be considered.

- **Update VERA's case-mix weights using the best available data on clinical appropriateness and efficiency,**

Concur - As noted in our comments above, the Patient Classification Workgroup will complete a feasibility study to determine the advantages of incorporating DCGs into the VERA methodology. VHA is also evaluating the appropriateness of expanding the number of VERA price groups. Corresponding updates of case-mix weights will be integral to the anticipated model modifications.

- **Determine in the supplemental funding process the extent to which different factors cause networks to need supplemental resources and take action to address limitations in VERA or other factors that may cause budget shortfalls,**

Concur - VHA management officials have been carefully tracking budgetary trends in funding levels since the supplemental funding process was initiated in FY 1999. It has given special attention to targeting specific causes for the supplement requests and accompanying justification. Many of the supplements reflected unanticipated developments that could not be predicted during the initial allocation.

Although there is no evidence to suggest that limitations in the VERA methodology influenced the budget shortfalls, VHA decided to apply a rigorous new supplemental adjustment process in FY 2002, in order to better identify the different factors that lead to supplemental network funding requirements. Adjustments are now executed as part of the initial VERA allocation of the Medical Care appropriation. As part of the process, a concerted effort was made to develop updated estimates of each network's projected FY 2002 financial status. This included developing estimates of all the resources that would be

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DEPARTMENT OF VETERANS AFFAIRS COMMENTS
TO GAO DRAFT REPORT, ***VA HEALTH CARE: Allocation Changes Would Better Align Resources with Workload***
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(Continued)

available to each network and their corresponding estimated expenses for the year. Included among the available estimated expenses were funds carried over from FY 2001, estimated collections, estimated reimbursements, and the estimated VERA allocation of the Medical Care appropriation. The estimated FY 2002 expenses were based on the actual expenses of FY 2001, plus approved budget increases for inflation and pay raises, minus a 2 percent efficiency target. Based on this analysis, VHA determined that five networks (Networks 1, 3,12, 13, and 14) should receive an adjustment to their initial VERA allocation. VHA will assess the effectiveness of the adjustment during this fiscal year, and introduce additional corrective modifications as necessary in future budget cycles. As stated earlier, the VERA development process is a dynamic one that continually undergoes internal review by both VHA work groups and external bodies such as GAO.

- **Establish a mechanism in the National Reserve Fund to partially offset the cost of networks' highest cost complex care patients.**

Concur – The Department's response to this recommendation coincides with the previous response. Through the supplemental adjustment process, VHA distributed a VERA adjustment of more than $267 million to five networks. It is expected that this additional funding will meet the five networks' patient care supplemental funding needs, including the cost of the highest cost patients. In addition, as the VHA Patient Classification Workgroup studies the DCG model and other risk adjustment refinements to the FY 2003 VERA, the impact of extraordinarily high cost patients will also be considered.

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Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

James C. Musselwhite, (202) 512-7259

Staff Acknowledgments

In addition to the contact named above Marcia A. Mann, Jacquelyn T. Clinton, Thomas A. Walke, Diana Shevlin, Maria Vargas, Leslie D. Blevins, Deborah L. Edwards, and Susan Lawes made key contributions to this report.

Related GAO Products

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