

# **CBO PAPERS**

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**EVALUATING THE COSTS OF  
EXPANDING THE CHAMPUS  
REFORM INITIATIVE INTO  
WASHINGTON AND OREGON**

November 1993



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**NOTE**

**Numbers in the text and tables of this paper may not add to totals because of rounding.**

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## **PREFACE**

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In 1988, the Department of Defense (DoD) began the CHAMPUS Reform Initiative (CRI) as a test of managed care in the military. The Department of Defense Appropriations Act of 1993 mandated an expansion of CRI to include other states and areas beyond California, Hawaii, and New Orleans, the current sites of the program. But the National Defense Authorization Act for Fiscal Year 1993 prohibited DoD from expanding the program until it had certified to the Congress that CRI was the most efficient means of providing medical care, based on considerations of cost-effectiveness, access, and quality. The authorization bill also required that the Congressional Budget Office (CBO) and the General Accounting Office evaluate DoD's certification.

On August 20, 1993, DoD certified to the Congress that a revised version of the CRI program would be the most efficient method of providing health care to beneficiaries in the states of Washington and Oregon. This paper presents CBO's evaluation of the department's certification report, focusing on DoD's cost analysis. In keeping with CBO's mandate to provide nonpartisan analysis, the paper contains no recommendations.

Ellen Breslin Davidson of CBO's National Security Division prepared the paper under the supervision of Robert F. Hale and Neil M. Singer. The author gratefully acknowledges the assistance of her CBO colleague Deborah Clay-Mendez. In addition, Sandra Christensen of CBO's Health and Human Resources Division provided useful comments on an earlier draft. Special thanks go to personnel at the Office of the Assistant Secretary of Defense (Health Affairs) and David L. Kennell of Lewin-VHI, Inc., for their cooperation and assistance. (CBO, of course, bears full responsibility for the final product.)

Leah Mazade edited the manuscript, and Christian Spoor provided editorial assistance. Cynthia Cleveland prepared the paper for publication.

**Robert D. Reischauer**  
Director

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## SUMMARY

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The Department of Defense (DoD) operates one of the nation's largest health care systems. About 8.7 million people, including active-duty personnel and retirees--and their families--are entitled to use its facilities. Because DoD does not require these beneficiaries to enroll in a specific health care plan, it can only guess at the total number of actual users of its system. Based on data that the department has provided, the Congressional Budget Office (CBO) estimates that 6.7 million people rely on the military health care system.

The remainder of the 8.7 million eligible beneficiaries, chiefly retirees and their families, depend on sources outside the military (Medicare, for example) for some or all of their health care. Others have private insurance, perhaps through their own or their spouse's employment, which they use to pay for health care in the civilian sector. These so-called "ghost" eligibles, who do not now rely on the military system, can reenter it at any time. As benefits improve relative to their outside insurance, so does the risk of their increasing reliance on the military for health care.

The 6.7 million beneficiaries who choose to use the Military Health Services System receive most of their care through the direct care portion of the system, which consists of nearly 140 hospitals and over 500 clinics worldwide operated by the Army, Navy, and Air Force. When care in military facilities is not available, families of active-duty personnel and retirees and their dependents under the age of 65 may use civilian providers.<sup>1</sup> DoD reimburses those providers through a traditional fee-for-service insurance program known as the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). Active-duty military personnel, however, are not eligible to use CHAMPUS and thus receive all of their health care in military facilities.

Eligible beneficiaries pay higher out-of-pocket costs when they receive care under CHAMPUS than when they receive it in the nearly free direct care system. Nevertheless, many beneficiaries have increased their reliance on CHAMPUS because they cannot get the care they need at military treatment facilities. As their use of CHAMPUS has grown, so has their dissatisfaction with the military health care system.

In response to that dissatisfaction and to substantial growth in CHAMPUS costs, the Congress authorized the CHAMPUS Reform Initiative (CRI) in 1987 to test managed care in the military and improve the coordination of service delivery between military facilities and CHAMPUS.

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1. Military retirees and dependents over age 65 retain their eligibility for care in military facilities, but they receive civilian care through Medicare rather than CHAMPUS.

CRI began as a demonstration program in California and Hawaii in 1988. Its most significant new element was that it offered two alternatives to the standard version of CHAMPUS (Standard CHAMPUS): CHAMPUS Prime, an option that contains some features similar to those found in civilian health maintenance organizations (HMOs), and CHAMPUS Extra, an optional preferred provider organization (PPO).

The Department of Defense Appropriations Act of 1993 mandated an expansion of CRI to include other states and areas. But subsequent authorization legislation prohibited DoD from expanding the program until the department had certified that CRI was the most efficient means of providing medical care, based on considerations of cost-effectiveness, access, and quality. The authorization bill also required that CBO and the General Accounting Office evaluate DoD's certification.

On August 20, 1993, DoD proposed that it extend a version of CRI to the states of Washington and Oregon. The department certified that the most efficient method of providing health care in the two additional states would be to offer CRI with a revised version of the CHAMPUS Prime benefit currently in effect in California and Hawaii, coupled with changes in the structure of the CRI contract and the management of health care. This new version of CHAMPUS Prime, in combination with the current benefits offered under CHAMPUS Extra and Standard CHAMPUS, is referred to hereafter as the revised CRI benefit.

In compliance with the requirements of the authorization bill, on September 20, 1993, CBO submitted a letter report to the Congress, summarizing the findings of its evaluation of DoD's certification. This paper presents those findings in more detail, focusing on the department's cost analysis. Because of improvements in CBO's estimating methodology, the numbers in this paper differ slightly from those presented in CBO's letter report.

DoD has concluded from its analysis that its plan to revise the CRI benefit and offer it in combination with changes in the program's structure and other efficiencies in providing military health care will be the most efficient approach to care in Washington and Oregon; that is, the costs of CHAMPUS with the revised CRI benefit in those states need not exceed the levels they have reached under CHAMPUS without CRI, and might even fall modestly. CBO's analysis, however, suggests that the revised CRI benefit is likely to cost more than DoD has estimated. It is possible that those higher costs will be offset by savings from structural changes and competition (see the discussion below). But under other, equally plausible assumptions, net costs could increase substantially.

### DoD's Cost Estimates

In its certification, DoD estimated that the revised CRI benefit in Washington and Oregon in 1993 would have cost 6.2 percent more than the benefits available under CHAMPUS without CRI. Costs would have been higher in large part because the benefits available to beneficiaries who enroll in the revised version of CHAMPUS Prime or participate in CHAMPUS Extra are more generous than those available under Standard CHAMPUS. Compared with the current version of CRI in effect in California and Hawaii, however, the revised CRI benefit features increases in cost sharing for those who enroll in CHAMPUS Prime, CRI's most generous plan, and as a result lowers the cost to the government. The increases in out-of-pocket costs take the form of an enrollment fee and larger copayments.

Although the government's costs would be higher under the revised CRI benefit than under CHAMPUS without CRI, DoD has estimated that various changes in the program's structure could offset the higher costs. Those structural changes include requiring the contractor who administers the program to bear more of the risk if costs rise above projected levels and controlling the use of military treatment facilities by those enrolled in CHAMPUS Prime. DoD also contends that competition among contractors seeking to administer the program would lead to savings that would offset some of the higher costs of benefits.

Indeed, according to DoD, under plausible assumptions, savings from structural changes and competition among contractors could fully offset the higher costs of benefits. Under DoD's more optimistic assumptions about the effects of those factors, implementing CHAMPUS Prime in Washington and Oregon might actually decrease net costs by 3.6 percent, compared with the costs of CHAMPUS without CRI in 1993.

### CBO's Evaluation

To evaluate DoD's estimates of costs, CBO assessed costs using a wide range of assumptions based on the implementation of CRI in California, Hawaii, and New Orleans, as well as the civilian medical literature. For purposes of comparison, CBO grouped the assumptions into a base case, an optimistic case that leads to lower costs than the base case, and a pessimistic case that leads to higher costs.

CBO's Estimates Are Generally Consistent with DoD's Conclusions. Under the optimistic case, which incorporates most of DoD's assumptions, CBO concludes that DoD's revised CRI benefit, coupled with the changes it plans

in structure and competition, could actually reduce costs in Washington and Oregon by 3.2 percent, compared with the costs of CHAMPUS without CRI in 1993. That finding is consistent with DoD's conclusion.

CBO's base case also incorporates many of DoD's assumptions, but in some instances CBO has altered them to reflect experience with cost increases under CRI in California and Hawaii. CBO estimates that under the base case, the revised CRI benefit would have increased costs in Washington and Oregon by roughly 10.1 percent above the costs of CHAMPUS without CRI in 1993, an increase larger than DoD's estimate of 6.2 percent. Even if DoD realized substantial savings from structural changes and competition, net costs would increase by 3.1 percent above the costs of CHAMPUS without CRI in 1993. That conclusion differs, but only to a modest degree, from DoD's finding that the costs of benefit increases would be fully offset.

Other Plausible Assumptions Raise Doubts. More pessimistic assumptions, however, suggest that the revised CRI benefit could cost substantially more than CHAMPUS without CRI, even when coupled with structural changes and competition. Indeed, under the pessimistic case, implementing the revised benefit, in combination with structural and management changes, would have cost about 17 percent more than CHAMPUS without CRI in 1993 in Washington and Oregon.

Three key differences are apparent in comparing DoD's assumptions with those grouped in CBO's pessimistic case. First, CBO's pessimistic case assumes higher rates of enrollment in the relatively costly CHAMPUS Prime. Continued increases in enrollment in that program in California and Hawaii and high initial levels of enrollment in New Orleans, where CRI was implemented two years ago, suggest that DoD's projections may be too low.

Second, CBO's pessimistic case reflects assumptions consistent with the lower end of DoD's range of savings associated with structural changes. CBO used the lower end because it believes that DoD may find it difficult to implement some of those changes. For example, one key structural alteration involves creating a version of CHAMPUS Prime that is more like a civilian HMO. Yet even that revised version would differ from effective civilian HMOs in important ways.

Finally, the fact that, compared with California and Hawaii, fewer people are enrolled in managed care programs in Washington and Oregon may make it difficult for DoD to achieve the savings that it expects from managed care. CBO's pessimistic case therefore assumes lower savings than does DoD from such policies as negotiating discounts with health care providers and introducing utilization management programs.

### Other Cost-Related Issues

This analysis focuses on costs and does not attempt an overall assessment of the desirability of expanding CRI to include Washington and Oregon. While assessing costs, however, CBO noted that expansion of CRI, if it continued, could conflict with other DoD initiatives aimed at improving efficiency and holding down costs in the military portion of the department's medical system. For example, DoD has just appointed "lead agents" in 12 regions around the country. These agents, each of whom also heads a military medical facility, will be responsible for developing an integrated health care network and coordinating care for all beneficiaries in their area, with the goal of maintaining quality while holding down costs and striving for efficient use of resources. Because the HMO and PPO options offered under CRI continue to provide beneficiaries with access to both civilian and military care, the responsibility for managing the use of health care by beneficiaries may at times be fragmented between the contractor and the lead agent.

By the same token, CRI might also conflict with capitated budgeting, another initiative designed to control costs by providing the lead agents with a fixed amount of funds for each beneficiary and control over all resources for military and civilian care. Apportioning a significant share of the resources to the CRI contractor may hinder the lead agent's ability to manage all resources and beneficiaries within a geographic area.

Finally, national health care reform could have important implications for the military health care system. Continued expansion of CRI might conflict with the changes required in military health care to make it compatible with a national system.

CBO's evaluation is limited to the approach proposed in DoD's certification report, which focuses on the revised version of CRI and the proposed changes in the CHAMPUS Prime benefit. The 1993 authorization act, however, required DoD to certify that the proposed plan for military health care was the most cost-effective means of providing that care. CBO did not attempt to determine whether the department's proposal is the most cost-effective among all possible approaches. Such an analysis would have required assessing costs and benefits under a variety of health care plans other than CRI.

## INTRODUCTION

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The way the Department of Defense (DoD) provides health care to the dependents of active-duty military personnel and retirees has been the subject of widespread dissatisfaction for many years. Beneficiaries have complained about restricted access to military facilities and inadequate reimbursement for the costs of civilian care through the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), a traditional fee-for-service health insurance plan. DoD and the Congress have had to accommodate rapid growth in the total cost of CHAMPUS, which grew, on average, by more than 12.5 percent per year between 1970 and 1987.<sup>1</sup> Since 1987, the cost of CHAMPUS has grown by an average of about 11 percent per year.<sup>2</sup>

In the National Defense Authorization Act for Fiscal Year 1987, the Congress sought to address those issues by authorizing the CHAMPUS Reform Initiative (CRI). The plan had several objectives: to improve beneficiaries' access to health care and their satisfaction with the military's health care system, to maintain the quality of care provided, and to control the growth in health care costs. Under CRI, DoD assigned the responsibility for achieving those goals to a health care contractor that oversees all care provided to CHAMPUS beneficiaries.

DoD inaugurated CRI in 1988 as a five-year demonstration program in California and Hawaii. It recently decided to renew CRI in those states under its demonstration authority and has awarded a new five-year contract--but to a different contractor.

In 1991, the Congress authorized DoD to expand CRI beyond California and Hawaii, and the department thus began a small program in New Orleans. In the appropriation legislation that provided funds to DoD for 1993, the Congress directed the department to expand CRI to include six additional areas of the country: the states of Washington, Oregon, and Florida, and three sites in Texas and Louisiana where military bases were being closed pursuant to recommendations of the Base Realignment and Closure (BRAC) Commission.<sup>3</sup> CRI was to be in place at the BRAC sites by May 1, 1993.

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1. As noted by RAND in its evaluation of the CHAMPUS Reform Initiative in California and Hawaii. See Elizabeth M. Sloss and Susan D. Hosek, *Beneficiary Access and Satisfaction*, vol. 2 of *Evaluation of the CHAMPUS Reform Initiative* (Santa Monica, Calif.: RAND, 1993), p. 2.
  2. Congressional Budget Office estimate based on historical data provided by the Office of the Assistant Secretary for Defense (Health Affairs).
  3. Section 9032 of the Department of Defense Appropriations Act for Fiscal Year 1993 directed DoD to extend CRI to the additional six sites. To date, however, DoD has not expanded CRI to include Florida.

Yet in subsequent authorization legislation, the Congress restricted the expansion of CRI. DoD could still extend the program to locations where the closure of military bases reduced the access to health care of remaining eligible beneficiaries. But except at those BRAC sites, the Secretary of Defense was prohibited from expanding CRI beyond California and Hawaii until he certified that CRI was the most efficient method of providing health care to covered beneficiaries.<sup>4</sup> As DoD considered what was most efficient, the authorization act instructed it to include the criteria of cost-effectiveness, access, and quality in its analyses. The act also required that the Congressional Budget Office (CBO) and the General Accounting Office (GAO) evaluate DoD's certification report within 30 days of the department's decision to certify and expand CRI.

On August 20, 1993, DoD certified that a revised version of CRI would be the most efficient method of providing health care to covered beneficiaries in Washington and Oregon. Compared with CRI in California and Hawaii, the revised program featured a reduced benefit package and changes in the program's structure and management. In its letter of certification, DoD stated that "the combined effect of these enhancements, when applied on a national basis, results in a CRI model that is no more costly than standard CHAMPUS, and satisfies the 'most efficient method' requirement for purposes of this statutory certification."<sup>5</sup> On this basis, DoD has certified the expansion of CRI to include Washington and Oregon.

This paper is CBO's response to the provisions of the 1993 National Defense Authorization Act. (It amplifies the summary of findings that CBO submitted to the Congress on September 20, 1993.) Its analysis focuses on DoD's assessment of the changes in costs that would occur if the revised version of CRI were implemented in Washington and Oregon. GAO has submitted a separate letter report relating to other aspects of the certification.

## BACKGROUND TO THE CHAMPUS REFORM INITIATIVE

DoD operates one of the largest health care systems in the country. In fiscal year 1994, about 8.7 million people will be eligible to receive care through this system. That total includes men and women on duty in the active forces and reserves, their spouses and children, and retired military personnel and their dependents and survivors who are registered with the Defense

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4. Section 712 of the National Defense Authorization Act for Fiscal Year 1993 outlines the specific conditions for expanding CRI to include other locations.

5. Letter from Edward D. Martin, Acting Assistant Secretary of Defense, to the Congress, August 20, 1993.

Enrollment Eligibility Reporting System (DEERS), which tracks eligibility for post exchange privileges, health care, and other benefits.

Fewer than 8.7 million people, however, actually use the military system. Because DoD does not require beneficiaries to enroll in a specific military health care plan, the department can only estimate the total number of actual users. Based on a 1984 survey of beneficiaries conducted by DoD, CBO estimates that 2.4 million dependents of active-duty personnel and 2.3 million retirees and their family members rely on military health care--in addition to the 1.9 million men and women on active duty.<sup>6</sup>

Some beneficiaries, particularly retirees, depend on sources outside the military for some or all of their care. (Medicare would be an example of one such source.) Others have private insurance, perhaps through their own or their spouse's employment, which they use to pay for health care in the civilian sector. These beneficiaries are known as "ghost" eligibles, because they can reenter the military system and receive care at any time.

### The Military Health Services System

The 6.7 million beneficiaries who choose to use the Military Health Services System (MHSS) receive most of their care through the direct care portion, the larger of the two parts of the MHSS. The direct care system encompasses about 140 hospitals and over 500 clinics operated by the Army, Navy, and Air Force worldwide. By law, active-duty personnel are entitled to care in those hospitals and clinics, and they have priority over all other potential users. Indeed, all care provided to active-duty personnel comes through the direct care system or is paid for by it.

Some people who are not on active duty also use the direct care system when space is available. Dependents of active-duty personnel are legally eligible to receive care in military treatment facilities (MTFs). They are second in priority only to active-duty personnel and receive most of their health care in military hospitals and clinics. Retirees and their dependents and survivors, who are also eligible by law to receive care in military facilities, fall behind all others in their priority for access to the direct care system.

When care in military facilities is not available or when the facilities are too far away, families of active-duty personnel and retirees and their dependents under the age of 65 may use civilian providers to obtain care.

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6. The latter figure includes 1.7 million active-duty personnel and 0.2 million guard and reserve personnel on active duty.

The civilian providers are reimbursed by CHAMPUS. Active-duty personnel are not eligible to use CHAMPUS, nor are beneficiaries after they reach age 65, when Medicare replaces CHAMPUS coverage.

### The Role of CHAMPUS

The extent of reliance on CHAMPUS depends on the amount of care available to beneficiaries in the direct care system. Budget constraints, staff shortages, or an inefficient mix of resources in the direct care system can all lead to increases in such reliance. In the future, the dynamic nature of this relationship may become more manageable if the commanders of MTFs gain increased responsibility for all resources devoted to medical care in their area, including both CHAMPUS and direct care (see the discussion beginning on page 27).

CHAMPUS operates like a traditional fee-for-service insurance program, covering most of the costs of care that beneficiaries receive from civilian health care providers. Generally, beneficiaries are free to choose their health care provider; they then pay a deductible and a portion of the cost for each service. CHAMPUS pays the remaining costs. Although the civilian sector provides almost all of the care financed by CHAMPUS, civilian providers working under the Military-Civilian Health Service Partnership Program also furnish some care within the direct care system.<sup>7</sup>

### Design of CRI

The CHAMPUS Reform Initiative was designed to improve the way beneficiaries use care under both CHAMPUS and the direct care system. Its other goals are to increase access to the MHSS and curb costs. To accomplish those objectives, CRI made several major changes in the standard version of CHAMPUS and in the relationship between the military and civilian parts of the military health care system.

CRI Risk-Sharing Arrangement. CRI, as implemented in California and Hawaii, alters the standard version of CHAMPUS in several ways. It changes the program's management structure by placing a health care contractor in charge of all care to CHAMPUS beneficiaries in a particular geographic area. Under CRI, the contractor receives a fixed payment for providing civilian

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7. The Military-Civilian Health Service Partnership program allows commanders of MTFs to enter into agreements with civilian providers to compensate for staff shortages, thus improving beneficiaries' access to services.

health care services to CHAMPUS beneficiaries. In addition, however, the contractor operates under a risk-sharing arrangement with the government whereby the contract price can be adjusted under various circumstances (for example, for changes in the population to be covered).

Two Alternatives to Standard CHAMPUS. Beneficiaries under CRI are offered two alternatives in addition to Standard CHAMPUS: CHAMPUS Prime and CHAMPUS Extra. DoD describes CHAMPUS Prime as a plan that is similar to a health maintenance organization (HMO) in that beneficiaries enroll in the plan and agree to obtain all of their care through designated providers, either those in the contractor's civilian network or in MTFs. In return for surrendering some freedom to choose their doctors, enrollees in CHAMPUS Prime benefit from reduced paperwork, enhanced coverage, and substantially lower out-of-pocket charges. CHAMPUS Extra is similar to a preferred provider organization (PPO). It requires no enrollment, but beneficiaries who choose to use providers in the contractor's network benefit from the lower prices that the contractor has negotiated.

Health Care Finder. To improve beneficiaries' access to care, control costs, and coordinate the delivery of services by CHAMPUS and the direct care system, CRI has established a Health Care Finder. This service is designed to help beneficiaries find the care they need and make cost-efficient referrals between the civilian and military sectors. Through it, beneficiaries are first sent to the MTF for care before using CHAMPUS.

Resource-Sharing Program. In support of the Health Care Finder, CRI also includes a resource-sharing program under which contractors may purchase equipment and resources for MTFs to increase the use of the facilities by beneficiaries. Over the years, beneficiaries have increased their reliance on CHAMPUS to supplement the health care they receive in the MTFs, in part as a result of shortages of staff or inappropriate mixes of staff and equipment at the facilities. Resource-sharing agreements between the MTF commanders and the CHAMPUS contractor are intended to improve the efficiency of the MTFs by putting the right mix of resources at the facility and at the same time avoid the higher costs of CHAMPUS care. The contractor is not reimbursed for adding these resources to the MTF, however, and thus can be expected to do so only if shifting care from the civilian sector to the MTF saves the contractor more than the additional resources would cost.

Managed Care Strategies. CRI relies heavily on two managed care strategies: a utilization review program to reduce the inappropriate use of health care by beneficiaries through prior and concurrent review of expensive medical services, and a program of negotiating discounts with providers for their

services. Both CHAMPUS Prime and CHAMPUS Extra incorporate these strategies to reduce costs.

### Empirical Evidence from the RAND CRI Evaluation

From CRI's inception, RAND, under contract to DoD, has been evaluating the program. In 1993, RAND released the results of its examination of beneficiary access and satisfaction and health care utilization and costs under CRI.<sup>8</sup> It compared data related to those factors for a sample of beneficiaries from 11 CRI demonstration sites in California and Hawaii with data for a similar sample of beneficiaries from a set of 11 statistically matched non-CRI control sites located elsewhere. The comparison focused on two time periods: just before CRI's implementation and about two years later. Although the empirical evidence pertains only to CRI in California and Hawaii, the findings provide a basis for evaluating the effects of extending the program to other regions.

Access and Satisfaction. RAND found that although beneficiary access and satisfaction improved in general under CRI in California and Hawaii, the greatest improvement took place among CHAMPUS Prime enrollees. Those beneficiaries experienced less than half as many problems in receiving care as did beneficiaries at the control sites. Overall, CHAMPUS Prime enrollees--both the families of active-duty personnel and retirees alike--were more satisfied with all aspects of the military health care system, though for different reasons.<sup>9</sup> Families of active-duty personnel, who generally enjoy preferred access to MTFs, welcomed the lower out-of-pocket costs offered by the Prime option. Retirees and their spouses appreciated their improved access to health care as well as other CRI benefits.

In contrast, nonenrollees--beneficiaries who opted to use CHAMPUS Extra or to remain with Standard CHAMPUS--experienced only minimal benefits from CRI in terms of either access or satisfaction. That finding is especially important in view of DoD's decision to reduce the benefits offered under the version of CHAMPUS Prime that it proposes to operate in Washington and Oregon (see the later discussion), thus making CHAMPUS Extra relatively more attractive.

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8. See Sloss and Hosek, *Beneficiary Access and Satisfaction*. See also Susan D. Hosek and others, *Health Care Utilization and Costs*, vol. 3 of *Evaluation of the CHAMPUS Reform Initiative* (Santa Monica, Calif.: RAND, 1993).

9. Beneficiary satisfaction as measured by RAND included four categories: military health care overall, the cost of care, doctors in the direct care system, and the ability to get military health care.

Utilization and Costs. The RAND study concluded that CRI, as implemented in California and Hawaii, did not achieve its goal of controlling costs. When the total costs of CHAMPUS (including overhead) were combined with the costs of care in military facilities, the cost of CRI in California and Hawaii was 8 percent higher than total costs in the matching control sites. (Because RAND measures the cost of CRI as a percentage of total costs, its results cannot be compared with DoD's and CBO's estimates of costs.<sup>10</sup>) Among beneficiary groups, the RAND researchers found that CRI increased health care costs only for retired beneficiaries and their spouses; costs fell slightly for the spouses of active-duty personnel.

Those overall findings, however, conceal sharp differences between the costs for CHAMPUS Extra and those for CHAMPUS Prime. The RAND study found that Extra was a cost-effective addition to the MHSS. But the government's total cost for providing care (including MTF costs) to Prime enrollees was 57 percent higher than the cost per beneficiary in areas without CRI.

The higher costs of CRI stemmed in large part from two factors: increased utilization of outpatient services, particularly among Prime enrollees, and a rise in overhead costs, which include administration and profit. Successful managed care programs, particularly HMOs, typically realize savings in inpatient care that more than offset increases in the costs of outpatient care. Under CRI, however, the overall cost of inpatient services changed too little to generate enough savings to offset the increased costs of outpatient care and overhead.

The use of outpatient services rose sharply under CRI. Spouses of active-duty personnel who were enrolled in CHAMPUS Prime had roughly one-quarter more visits than dependents in the matched control areas; retirees and their spouses who were enrolled in Prime had roughly two-thirds more visits. Such increases are consistent with findings that smaller copayments--a major feature of the Prime option--increase the demand by beneficiaries for care. In addition, CHAMPUS Prime's "first-dollar coverage"--CRI eliminated the deductible and began paying for care immediately--contributed to higher rates of outpatient care and higher costs. DoD had expected some of this increase, but the rise in utilization and costs was larger than anticipated. Based on the RAND Health Insurance Experiment, a study that estimated the

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10. RAND measured the cost of CRI as a percentage of total costs for the MHSS, including both CHAMPUS and the direct care system, in California and Hawaii during 1990. In contrast, DoD and CBO measured the cost of CRI as a percentage of CHAMPUS costs in Washington and Oregon for fiscal year 1993 in the absence of CRI. As a result, direct comparisons between RAND's results and CBO's or DoD's results are not possible. However, if RAND had estimated the effect of CRI as a percentage of CHAMPUS costs alone, its estimate of the increased cost of CRI would have been higher than 8 percent in California and Hawaii in 1990.

effect of changes in copayments on the demand for health services, DoD might have expected an increase in outpatient services on the order of 37 percent.<sup>11</sup>

Simply put, CRI opened the door to civilian care for certain Prime enrollees without reducing their access to care at the MTF. Although the overall level of use of outpatient services increased for Prime enrollees, particularly for retirees, the RAND study found that the increases occurred largely in the use of civilian care to augment care received at the MTFs.<sup>12</sup> Under CRI, more than 80 percent of Prime enrollees were assigned to a civilian primary care physician (only 20 percent were assigned to a military physician), thus gaining improved access to civilian care at a low cost. But those beneficiaries retained their access to care at the MTFs, and although Prime enrollees were required to see their assigned primary care physician if they needed a referral to a civilian specialist, there was no such requirement for visiting an MTF. Consequently, Prime enrollees (particularly retirees) who were assigned a civilian primary care physician could--and did--continue to visit the MTFs, thus increasing the overall use of outpatient care.

RAND also identified other factors that pushed up the costs of CRI. For example, the benefits it offered attracted some new beneficiaries to the system; others, particularly Prime enrollees, dropped their private insurance, which increased both their reliance on the military system and the system's total cost. On average, RAND found that rates of coverage by private insurance were about 10 percent less in areas with CRI than in areas without it.

Overhead was a further contribution to high costs. These expenses comprised running CRI and its managed care programs, including the additional funds needed for negotiating discounts with providers and operating utilization review programs, as well as the resources required to coordinate care with the MTFs. Total overhead costs--including both profit for the CRI contractor and administration--were 24 percent of CHAMPUS health care costs under CRI for the period examined by RAND.<sup>13</sup> In comparison,

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11. W. Manning and others, "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment," *American Economic Review*, vol. 77, no. 3 (1987).
  12. RAND researchers examined the usual source of care for Prime enrollees before and after enrollment and found that the proportion whose usual source was a civilian provider increased by 50 percent. In addition, RAND found an increase in the number of enrollees using both the MTF and a civilian source. Many Prime enrollees who had previously received care chiefly at an MTF continued to look to the MTF for care even when they were assigned a civilian primary care physician.
  13. Since that time, overhead costs under CRI have dropped to about 20 percent of CHAMPUS health care costs.

overhead costs were estimated to be roughly 5 percent of CHAMPUS health care costs without CRI.

## DIFFERENCES BETWEEN CRI AND MANAGED CARE

Successful managed care programs can save money by reducing the use of services by enrollees and the costs of those services, offsetting any increases in outpatient care and costs with reductions in inpatient use and costs. The extent to which a managed care organization is successful in achieving overall savings depends on the type of managed care arrangement it uses. In general, the more tightly integrated the delivery and financing system, the greater the savings. More loosely integrated systems have been less successful in reducing the use and costs of services.

### Civilian Managed Care

Of the several types of managed care arrangements now in use, HMOs generally offer the greatest opportunity to coordinate the delivery of services, because members are limited to using the organization's health care delivery system. PPOs are less tightly integrated than HMOs in their delivery and financing of care and hence exert far less control over the incentives that physicians and patients face to use resources efficiently.<sup>14</sup>

Among HMOs, the degree of success in reducing use and costs varies widely. Group- and staff-model HMOs are the most successful because they link the delivery and financing of health care. In the staff model, salaried physicians work through a medical group practice to provide health care services to HMO members. In the group model, an HMO contracts with a medical group, which is usually compensated on a capitated basis, to provide health services to members.<sup>15</sup>

Other types of HMOs are more loosely structured and have been less effective than the group and staff models in reducing use and costs. One example is the independent practice association (IPA) model, in which an HMO contracts with an association of physicians--some solo, some in groups--to provide health services to members. Reimbursement occurs on a fee-for-

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14. See two recent CBO Staff Memorandums: "The Effects of Managed Care on Use and Costs of Health Services" (June 1992), and "The Potential Impact of Certain Forms of Managed Care on Health Care Expenditures" (August 1992).

15. "Capitated" in this context refers to the method of financing in which physicians receive a fixed amount per enrollee rather than fees for specific services.

service or capitation basis. PPOs are also considered less effective than group- or staff-model HMOs because enrollees can choose physicians either inside or outside of the plan's network. Whatever the model, the true test of a managed care organization is its ability to generate savings by reducing inpatient use and costs and managing the use and costs of outpatient care.

### CRI's Version of Managed Care

CRI's managed care arrangements do not fit neatly into any of the current models of managed care. Instead, the program combines two loosely integrated HMO and PPO options with Standard CHAMPUS, which has few elements of managed care. CRI places the contractor at risk by assigning it the responsibility of providing all of the civilian health care for eligible CHAMPUS beneficiaries in California and Hawaii, even though DoD cannot guarantee the number of beneficiaries who will rely on civilian care or the option that users will select. The contractor then receives a fixed payment, subject to limitations on profits and losses. As a result of this arrangement, the contractor faces a strong incentive to encourage CHAMPUS users with high rates of utilization to join Prime, the HMO option, in an effort to lower their health care use and costs.

As a result of its loosely structured financing and delivery system--and, more broadly, the fragmentation of the military health care system--CRI has been unable to control utilization and costs. Under CRI in California and Hawaii, the contractor controlled only the use of civilian care by CHAMPUS beneficiaries, and the military commander controlled only the use of military care for the same population. No single gatekeeper worked to control the totality of care used by Prime enrollees.

CRI's failure to decrease utilization is also related to its financial incentives. Successful managed care programs typically rely on capitated budgets to encourage the efficient use of resources. But under CRI, civilian providers are reimbursed by CHAMPUS on a fee-for-service basis and therefore face a financial incentive to deliver more services to offset the effects of accepting negotiated discounts. Similarly, military commanders have had an incentive to use their inpatient capacity to its maximum because the budgetary system for military hospitals rewards additional inpatient work load. DoD has recently changed these incentives (see the discussion beginning on page 28).

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## CHANGES THAT DOD PROPOSES IN CRI

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In its report certifying CRI as the most cost-efficient method of providing health care to CHAMPUS-eligible beneficiaries in Washington and Oregon, DoD agreed with RAND's conclusion that, compared with CHAMPUS without CRI, the current CRI design has led to higher costs. Indeed, the department stated that "CRI, as presently designed, improves access, does not affect quality, but increases costs."<sup>16</sup> As a result, DoD proposed several changes to make CRI cost-effective without harming access and quality and to generally strengthen the program's managed care elements.

Specifically, DoD proposed that it revise the CRI benefit package to make it less costly. The department intends to implement a set of changes in the structure of the CRI contract to improve the incentives that the CRI contractor and the MTF commander face. In addition, DoD expects to achieve additional savings by improving coordination between the military and civilian parts of the health care system. The department also anticipates that competitive forces will hold down costs.

### The Revised Benefit Package

Under the standard version of CHAMPUS, which would still be available to beneficiaries when the revised version of CRI was in place, all users pay a deductible and other copayments (see Table 1). For example, before CHAMPUS shares in the cost of any outpatient care, dependents of active-duty personnel whose pay grade is below E-5 must satisfy an annual deductible of \$50 per person or \$100 per family if they use services; dependents of personnel whose pay grade is E-5 or above and retirees must satisfy a higher annual deductible of \$150 per person or \$300 per family if they use services. In contrast, the current version of CRI operating in California and Hawaii substantially reduces cost sharing: it eliminates the annual deductible and reduces copayments for beneficiaries who enroll in CHAMPUS Prime. It offers a smaller reduction in copayments for beneficiaries who participate in CHAMPUS Extra.

Under the revised version of CRI that DoD proposes for Washington and Oregon, CHAMPUS Extra benefits would remain the same. But CHAMPUS Prime benefits would be reduced, although they would still be more generous than the benefits available under either CHAMPUS Extra or Standard CHAMPUS.

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16. Letter from Edward D. Martin, Acting Assistant Secretary of Defense, to the Congress, August 20, 1993.

TABLE 1. COST SHARING UNDER STANDARD CHAMPUS AND THE CURRENT AND REVISED VERSIONS OF CHAMPUS PRIME

	Standard CHAMPUS	CHAMPUS Prime (Dollars)	
		Current	Revised
<b>Annual Deductible (Individual/family)<sup>a</sup></b>			
Active-duty families			
Pay grades E-1 through E-4	\$50/100	n.a.	n.a.
Pay grades E-5 and above	\$150/300	n.a.	n.a.
Retirees and others	\$150/300	n.a.	n.a.
<b>Enrollment Fee (Individual/family)<sup>a</sup></b>			
Families of active-duty personnel			
Pay grades E-1 through E-4	n.a.	n.a.	0
Pay grades E-5 and above	n.a.	n.a.	35/70
Retirees and others	n.a.	n.a.	50/100
<b>Copayments<sup>b</sup></b>			
Physician office visit			
Families of active-duty personnel			
Pay grades E-1 through E-4	20%	0	5
Pay grades E-5 and above	20%	5	10
Retirees and others	25%	5	15
Emergency room visits			
Families of active-duty personnel			
Pay grades E-1 through E-4	20%	25	35
Pay grades E-5 and above	20%	25	50
Retirees and others	25%	25	60
Outpatient surgery			
Families of active-duty personnel			
Pay grades E-1 through E-4	\$25	5	15
Pay grades E-5 and above	\$25	5	25
Retirees and others	25%	5	75
Outpatient mental health			
Families of active-duty personnel			
Pay grades E-1 through E-4	20%	10	10
Pay grades E-5 and above	20%	10	20
Retirees and others	25%	10	25

(Continued)

TABLE 1. CONTINUED

	Standard CHAMPUS	CHAMPUS Prime (Dollars)	
		Current	Revised
<b>Copayments (Continued)<sup>b</sup></b>			
<b>Hospitalization</b>			
Families of active-duty personnel	\$25/9.30 <sup>c</sup>	0	25/9.30 <sup>c</sup>
Retirees and others	\$265 <sup>d</sup>	75 <sup>d</sup>	125 <sup>d</sup>
<b>Prescriptions</b>			
Families of active-duty personnel	20%	4	4
Retirees and others	25%	5	8
<b>Outpatient services<sup>e</sup></b>			
Families of active-duty personnel			
Pay grades E-1 through E-4	20%	5	5
Pay grades E-5 and above	20%	5	10
Retirees and others	25%	5	10

SOURCE: Congressional Budget Office based on information from the Department of Defense, Lewin-VHI, Inc., and RAND.

NOTES: This table does not include CHAMPUS Extra, even though that option includes changes in cost sharing compared with Standard CHAMPUS, because the revised version of CRI calls for no change in the benefits currently available in California and Hawaii for Extra. CHAMPUS = Civilian Health and Medical Program of the Uniformed Services; n.a. = not applicable.

a. The CHAMPUS Reform Initiative (CRI) eliminates the deductible in both the current and revised versions of CHAMPUS Prime. DoD is proposing to institute an annual enrollment fee for the revised version, however, that beneficiaries wishing to enroll in CHAMPUS Prime must pay before they use any care at all.

b. Copayments are figured on the basis of CHAMPUS-allowable charges. An allowable charge is the maximum amount that CHAMPUS will pay for care given by physicians and other providers. In contrast, the actual billed charge is the higher amount that a physician or other provider charges.

For outpatient services, copayments defined as percentages are payable to the provider based on the CHAMPUS-allowable charge. For inpatient services for retirees and their families, copayments are defined as a percentage of billed charges.

c. Under Standard CHAMPUS, hospitalization copayments for dependents of active-duty personnel are the greater of \$25 per inpatient stay or \$9.30 per day.

d. For retirees and others, the hospitalization copayment under Standard CHAMPUS is the lesser of \$265 per day or 25 percent of hospital charges. Under the current CRI benefit, hospitalization copayments for retirees and others are \$75 per day for nonpsychological care and \$50 for psychological care. Under the revised CRI benefit, the copayment would be the lesser of \$125 per day for nonpsychological care (\$100 per day for psychological care) or 25 percent of hospital charges with a 10-day cap on inpatient cost sharing per episode, plus 20 percent of separately billed professional charges.

e. Copayments are required for the broad category of outpatient services, including X-ray, laboratory, ambulance, and home health. However, under CRI, X-ray and laboratory services require no copayment if they are rendered as part of an office visit. Under the revised benefit plan, ambulance services would require a \$15 copayment by retirees.

Increases in what beneficiaries must pay under the revised version of CRI compared with the original form vary by type of medical service and beneficiary category; in general, however, the increases are larger for retirees and dependents of more senior personnel. For example, the copayment for physician office visits for retirees who enroll in the revised version of CHAMPUS Prime would increase from \$5 to \$15, but it would rise from \$5 to only \$10 for families of active-duty personnel whose pay grade is E-5 or above (see Table 1).

The changes in benefits that DoD is proposing respond to a key finding in the RAND evaluation of CRI that the program's additional costs stemmed primarily from CHAMPUS Prime, in particular, for retirees. Those higher costs were due in large part to the effects of lower levels of cost sharing for CHAMPUS Prime enrollees.

The revised benefit package reduces the share of Prime costs borne by the government by increasing cost sharing, particularly for retirees; nevertheless, the government's share would still be larger than its share under Standard CHAMPUS. DoD estimated the magnitude of the shares for both beneficiaries and the government, assuming, for the sake of illustration, that both versions of CRI were available nationwide (see Table 2). For retirees and their dependents, the government would bear 93 percent of the costs of CHAMPUS Prime under the version of CRI in effect in California and Hawaii. That percentage would decline under the revised benefits proposed for Washington and Oregon, but it would still exceed the percentage of costs borne by the government for retirees and their dependents under the current CHAMPUS program. Shifts are similar but less far-reaching for dependents of active-duty personnel. (See Appendix A for more details on the cost of the revised benefits.)

### Changes in the Structure of the Program

Even with the revised benefit package, DoD has estimated that CRI will cost more than CHAMPUS without CRI. The department has therefore proposed six major changes in CRI's structure to improve efficiency and coordinate health care services between the military and civilian parts of the military health care system. DoD intends to make these changes not only under the revised version of CRI proposed for Washington and Oregon but also in California, Hawaii, and other areas in which CRI is currently operating.

One important change that DoD is proposing would seek to limit access to MTFs by CHAMPUS Prime enrollees who have a civilian primary care physician. Thus, the revised version of CRI requires that the civilian physician

act as a gatekeeper. Specifically, Prime enrollees would have to obtain a referral from this gatekeeper before using an MTF for anything except emergency care.

Establishing gatekeepers is part of DoD's response to a key shortcoming in CRI implied by the RAND evaluation: CRI permits uncontrolled use of outpatient care by Prime enrollees, resulting from the fragmentation of responsibility between the CRI contractor and MTF commanders. To implement this policy change, DoD plans to rely on DEERS, the system used to verify eligibility for military health care services. The department proposes to note next to beneficiaries' names their status as Prime enrollees and their assignment to a military or civilian primary care physician. Presumably, a gatekeeper policy could also be applied to beneficiaries who were assigned a military primary care provider.

The other significant structural change involves shifting risk from the government to the CRI contractor. At present, the government pays part or all of the costs of medical care that exceed a threshold established in the CRI contract. That provision was deemed necessary because the military health care system does not require potential beneficiaries to enroll for care; consequently, the contractor does not know in advance what portion of

TABLE 2. BENEFICIARY AND GOVERNMENT SHARES OF PER CAPITA CHAMPUS COSTS FOR THE NATION UNDER STANDARD CHAMPUS AND THE CURRENT AND REVISED VERSIONS OF CHAMPUS PRIME (In percent)

Plan	Dependents of Active-Duty Personnel		Retirees and Others	
	Government	Beneficiary	Government	Beneficiary
Standard CHAMPUS	82	18	68	32
CHAMPUS Prime				
Current	96	4	93	7
Revised	89	11	80	20

SOURCE: Congressional Budget Office based on calculations by Lewin-VHI, Inc., for the Department of Defense.

NOTE: Percentage shares of beneficiary and government per capita costs exclude costs for care received at military treatment facilities. CHAMPUS = Civilian Health and Medical Program of the Uniformed Services.

those people eligible for treatment by the military will seek care and therefore what its costs will be or what services beneficiaries will use. The revised version of CRI retains the risk-sharing provisions but makes them less generous for the contractor (see Appendix B).

### Competition

DoD anticipates that competition among bidders to provide care in Washington and Oregon will lower the cost of CRI to the government. It bases its expectations on the market forces that apparently operated in the recent recompetition of the CRI contract for California and Hawaii. DoD has estimated that the bid that was accepted for those states will result in costs that are 4 percent lower than it had anticipated, and it believes that it can realize similar savings in Washington and Oregon.<sup>17</sup>

### DOD'S ASSESSMENT OF LIKELY CRI COSTS IN WASHINGTON AND OREGON

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DoD has estimated that the revised CRI benefit will cost more than CHAMPUS without CRI. (The "revised CRI benefit" comprises the revised version of the CHAMPUS Prime benefit in combination with the current benefits offered under CHAMPUS Extra and Standard CHAMPUS.) But the added costs could be offset by savings from structural and managerial changes and competition.

### How the Revised CRI Benefit Affects Costs

To illustrate how changes in benefits would affect costs, DoD's certification report estimated the costs of the current and revised versions of CRI and compared those estimates with costs under CHAMPUS without CRI. The calculation included total costs for all CHAMPUS-eligible beneficiaries. The estimates were intended to provide rankings for the plans rather than projections of future costs and were calculated for 1993 under the assumption that all of the plans were fully in effect throughout that year. To provide additional information, DoD made the comparisons not only for Washington and Oregon but also under an assumption of nationwide implementation.

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17. Lewin-VHI, Inc., "Revised Estimates of Competitive Effects and Structural Improvements," Memorandum to the Department of Defense (Washington, D.C., August 13, 1993). Based on a final assessment of the recompetition award for CRI in California and Hawaii, DoD has estimated that competition could reduce the cost of CRI by 5 percent overall. Only 4 percent is considered here because DoD's analysis accounts for the other 1 percent of these savings in its calculation of lower administrative and profit costs.

All estimates of the cost of CRI for both the current and revised versions included the costs for Prime enrollees and participants in Extra and Standard CHAMPUS. DoD then compared the cost of CRI with the cost of CHAMPUS for fiscal year 1993 in the absence of CRI.

Had the current version of CRI been in effect in Washington and Oregon in 1993, DoD's estimates indicate that the department would have spent 18.5 percent more on health care for those eligible for CHAMPUS than it did under CHAMPUS without CRI (see Table 3). Yet the increase would have amounted to only 11.4 percent nationwide because the nation as a whole has a smaller fraction of beneficiaries--compared with Washington and Oregon--who are particularly costly to CRI (such as retirees). Nationwide implementation also offers greater potential savings associated with managing medical care (see Box 1).

Had the revised CRI benefit been in effect in 1993, its costs in Washington and Oregon, according to DoD, would have been only 6.2 percent higher than CHAMPUS without CRI, rather than the increase of 18.5 percent associated with the current version of CRI. The cost increase would have been smaller because benefits under the revised version are reduced, compared with the current version of CRI.

The higher cost of both versions of CRI reflect the net effect of several factors. Compared with CHAMPUS without CRI, factors that increase costs include lower cost-sharing requirements for beneficiaries, greater demand for

**BOX 1.**  
**IMPLICATIONS FOR EXPANDING CRI**  
**TO INCLUDE WASHINGTON AND OREGON**

Costs for the CHAMPUS Reform Initiative (CRI) would be higher in Washington and Oregon than in the nation as a whole for two major reasons.

Greater Spending on Retirees. RAND found that the relative increase in costs for the government was greater for extending CRI to retirees than for extending it to dependents of active-duty personnel. Compared with the nation as a whole, Washington and Oregon spend more on retirees and their families than on active-duty dependents.

Less Savings from Managed Care. CRI includes two major managed care strategies to reduce costs: negotiated discounts with providers and a utilization management program (see Appendix A for more details). The resulting savings from those strategies are greatest for inpatient mental health care and smallest for outpatient nonmental health care. Compared with the nation as a whole, Washington and Oregon spend less on inpatient mental health care and slightly more on outpatient nonmental health.

**TABLE 3. DOD'S BEST ESTIMATES OF CHANGES IN CHAMPUS COSTS UNDER CRI, FISCAL YEAR 1993 (In percent)**

	Percentage Compared with CHAMPUS Without CRI	
	Nationwide <sup>a</sup>	Washington/Oregon <sup>a</sup>
<b>Current Version of CRI<sup>b</sup></b>		
Costs	11.4	18.5
Savings <sup>c</sup>	<u>-6.0 to -9.8</u>	<u>-6.0 to -9.8</u>
Total Government Cost Relative to Current System	5.4 to 1.6	12.5 to 8.7
<b>Revised Version of CRI<sup>d</sup></b>		
Costs	2.1	6.2
Savings <sup>c</sup>	<u>-6.0 to -9.8</u>	<u>-6.0 to -9.8</u>
Total Government Cost Relative to Current System	-3.9 to -7.7	0.2 to -3.6

SOURCE: Congressional Budget Office based on calculations by Lewin-VHI, Inc., contained in the certification report submitted by the Department of Defense to the Congress.

NOTES: DoD = Department of Defense; CHAMPUS = Civilian Health and Medical Program of the Uniformed Services; CRI = CHAMPUS Reform Initiative.

- a. For the nation, DoD estimates CHAMPUS costs in the absence of CRI to be approximately \$3.2 billion. For Washington and Oregon, DoD estimates CHAMPUS costs in the absence of CRI to be \$89.9 million.
- b. Prime enrollment under the current CRI program is estimated to be 35 percent for all beneficiaries. Participation in Standard CHAMPUS is estimated to be 25 percent for all beneficiaries, and Extra participation is projected to be 40 percent for all beneficiaries.
- c. Estimates of savings include savings from structural improvements of 1.0 percent to 1.5 percent from an improved risk-sharing arrangement between the government and the contractor, and 1.0 percent to 4.3 percent in savings from establishing a gatekeeper (civilian primary care physician) to control the use of care by Prime enrollees at the military treatment facilities. In addition, DoD estimates that it will realize 4 percent savings from competition.
- d. Prime enrollment under CRI with the revised benefit package is expected to be 30 percent for dependents of active-duty personnel whose sponsor's pay grade is below E-5, 22 percent for dependents of active-duty personnel whose sponsor's pay grade is E-5 or above, and 23 percent for retirees and others. Participation in Standard CHAMPUS is expected to increase to 30 percent, 38 percent, and 37 percent, respectively. Extra participation is projected to remain at 40 percent for all beneficiaries.

medical services induced by those requirements, and higher overhead costs. Other factors lead to savings that do not completely offset those higher costs. Savings stem from managed care strategies such as reducing the amount of inappropriate care, negotiating discounts from providers, and making more efficient use of MTFs.

Among the most important of DoD's assumptions for its cost estimate is the number of people who would choose to enroll in CHAMPUS Prime and participate in CHAMPUS Extra and Standard CHAMPUS, as a percentage of the CHAMPUS-eligible population that relies on the MHSS. Because both Prime enrollees and Extra participants increase the government's per capita costs compared with Standard CHAMPUS users, assumptions about enrollment have a significant effect on estimates of costs. The enrollment rate for CHAMPUS Prime is particularly important.

Experience to date, however, makes it difficult to predict rates of enrollment in the various plans. DoD estimates that in the CRI demonstration in California and Hawaii, current enrollment in Prime is 30 percent, whereas participation rates for Extra and Standard CHAMPUS are 40 percent and 30 percent, respectively. Recent data on CRI from a sample of the CHAMPUS-eligible population in California and Hawaii indicate that the proportion of the eligible CHAMPUS population enrolled in Prime has continued to increase throughout the five-year demonstration period. Where it will level off is unclear. Indeed, in New Orleans, after just two years of operation, the rate of enrollment in CHAMPUS Prime has reached close to 60 percent.<sup>18</sup>

In its cost estimates, DoD appears to have placed more weight on its experience with CRI in California and Hawaii than on its experience in New Orleans. In estimating costs under the current version of CRI, DoD assumed that 35 percent of CHAMPUS-eligible beneficiaries who relied on the military health care system would enroll in CHAMPUS Prime. It projected that 40 percent would participate in CHAMPUS Extra and 25 percent in Standard

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18. All rates of enrollment in CHAMPUS Prime, along with rates of participation in CHAMPUS Extra and Standard CHAMPUS, are based on estimates of the number of CHAMPUS-eligible beneficiaries who rely on the MHSS—which comprises both the military and civilian parts of DoD's health care system. Data from DoD indicate that 90 percent of dependents of active-duty personnel and 57 percent of dependents of retirees eligible for CHAMPUS rely on the MHSS. Based on those data, CBO estimates that in the New Orleans Managed Care project with the current version of the CRI benefit structure, Prime enrollment reached more than 40 percent in just the first year and increased to 60 percent by the end of the second year. Higher rates of enrollment in CHAMPUS Prime in New Orleans may be attributable to the area's lack of any MTFs. Because New Orleans has military clinics but no military hospital, it follows that beneficiaries rely more heavily on the civilian sector than on the military sector for their care; thus, the incentive is greater than in other areas for beneficiaries to enroll in Prime. This experience suggests that rates of enrollment will vary. In particular, high rates might be expected in Oregon, which has no military facilities, rather than in Washington, which has MTFs.

CHAMPUS. In estimating costs under the revised CRI benefit, DoD assumed that the provisions for higher levels of cost sharing under the new benefit design would reduce Prime enrollment to 30 percent of dependents of active-duty sponsors whose pay grade was below E-5, 22 percent for dependents of active-duty sponsors with a pay grade of E-5 or above, and 23 percent for retirees and others. DoD also projected that participation in Standard CHAMPUS among these three groups would increase to 30 percent, 38 percent, and 37 percent, respectively; it assumed that participation in CHAMPUS Extra would remain at 40 percent for all the groups.<sup>19</sup>

The lack of firm data on enrollment suggests an area of substantial uncertainty in DoD's cost estimates. DoD illustrated that uncertainty by analyzing the effects of different assumptions about CHAMPUS Prime enrollments on the costs of the current version of CRI. Compared with CHAMPUS without CRI, costs in Washington and Oregon increased from 16.5 percent to 20.6 percent as CHAMPUS Prime enrollment increased from 30 percent to 40 percent of the CHAMPUS-eligible population who rely on the MHSS.

#### How Changes in Program Structure and Competition Affect Costs

To offset the higher costs of CRI benefits, DoD relies on savings from changes in the structure of the program and the effects of competition. As Table 3 on page 18 shows, DoD has estimated that savings from structural and managerial changes could reduce CRI costs by between 2 percent and 5.8 percent. Those changes (discussed earlier) include establishing gatekeepers and increasing the portion of the cost risk borne by the contractor. To the structural savings are added a further 4 percent from additional competition based on DoD's experience with the recent contract award in California and Hawaii.<sup>20</sup>

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19. The revised Prime benefit includes an enrollment fee and higher copayments. DoD's assumptions about enrollment rates under this option thus represent an adjustment for the larger cost-sharing requirements compared with the original Prime benefit. However, those increases affect each beneficiary category differently. For that reason, dependents of active-duty sponsors whose pay grade is below E-5 are projected to maintain a relatively high rate of enrollment, while Prime enrollment for dependents of active-duty sponsors whose pay grade is E-5 or above and for retiree families will drop more substantially. DoD estimated these changes in relative participation rates based on the findings summarized in M. Morrissey, *Price Sensitivity in Health Care: Implications for Health Care Policy* (Washington, D.C.: National Federation of Independent Businesses, 1992), pp. 40-45. See Appendix A for further discussion.

20. Competition reflects changes in the current version of CRI. Savings are therefore estimated relative to that program. For consistency of presentation, however, savings are noted as a percentage of the costs of the current version of CHAMPUS.

In all, DoD suggests the following net result of the effects of the changes it has proposed for the revised version of CRI: it estimates that costs in Washington and Oregon in 1993, compared with costs under CHAMPUS without CRI, would have been essentially unchanged under its lower estimate of savings from structural changes. Costs would have been reduced by about 3.6 percent under its higher estimate.

## CBO'S ASSESSMENT OF DOD'S COST ESTIMATES

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There is considerable uncertainty about many of the assumptions underlying DoD's cost estimates. Accordingly, to evaluate those estimates, CBO considered how a range of assumptions about the key factors involved would affect costs. CBO based its range on several empirical sources, including RAND's evaluation of CRI in California and Hawaii, DoD's experience with CRI in New Orleans, and the results of experiments with managed care in the civilian sector (see Appendix A). The choice of a range also reflects differing experience in the areas in which CRI is operating. To facilitate comparisons, CBO followed DoD's approach and focused on 1993 costs for the CHAMPUS-eligible population in Washington and Oregon. (However, unlike DoD, it did not estimate costs for the nation under the revised CRI benefit.)

CBO's analysis suggests that the costs of the revised CRI benefit are likely to be higher than DoD has estimated. It is possible that those higher costs will be offset by savings from structural changes and competition. But under several plausible assumptions, the government's net costs could increase substantially.

### Defining Three Cases

The various assumptions CBO considered can be grouped into three cases: a base case, a more optimistic case, and a more pessimistic one. In the base case, CBO used some of DoD's assumptions, but in certain instances it altered them to project costs that reflected DoD's experience with CRI in California, Hawaii, and New Orleans. The optimistic case incorporates most of DoD's assumptions and combines the favorable estimates of savings from the CRI demonstration in California and Hawaii and findings from the civilian literature to generate a set of assumptions that lead to low costs. The pessimistic case does the opposite, using the most extreme cost estimates for CRI in California and Hawaii and the lowest savings for utilization management reported in the civilian literature. Appendixes A and B discuss the assumptions in detail.

Assumptions About the Cost of the Revised CRI Benefit. The base case employs DoD's assumptions about the number of ghost eligibles who might decide to use the military health care system once the more generous CRI benefits were in place. (These assumptions are based on DoD's experience with CRI in California and Hawaii and in the New Orleans Managed Care Project.) The base case also uses DoD's assumptions about the savings that might be gained from utilization and claims management--that is, the process of eliminating unnecessary medical care and inappropriate admissions in combination with processing claims more accurately.

In other areas, the base case reflects assumptions that lead to higher costs than those DoD has estimated. For example, the base case reflects certain empirical findings suggesting that induced demand--the increase in the use of health care induced by smaller copayments under CRI--would be greater among retirees than DoD has assumed. The base case also assumes higher administrative costs than DoD's assumption, reflecting aspects of the department's experience with CRI in 1992 in California and Hawaii. In addition, CBO's base case reflects slightly smaller estimates of the productivity savings that could result from more use of underutilized MTFs.

CBO also estimated costs under an optimistic case. Many of the assumptions it used in this case, including assumptions about ghosts, are similar to those used in the base case. The optimistic case also incorporates DoD's assumptions about administrative costs and profit. However, key assumptions about enrollment rates differ: the optimistic case uses lower rates of enrollment than the base case. On the savings side, the optimistic case makes even more favorable assumptions than DoD made about savings from utilization management.

Finally, CBO estimated costs under a pessimistic case that leads to high costs. Because enrollment levels in the relatively expensive CHAMPUS Prime continue to rise in California and Hawaii and because initial enrollment in the New Orleans Prime program has been high, the pessimistic case assumes that more people in Washington and Oregon will enroll in CHAMPUS Prime than DoD has projected. In particular, the pessimistic case assumes enrollment rates of 42 percent for dependents of active-duty personnel whose pay grade is below E-5, 27 percent for those whose sponsor's pay grade is E-5 or above, and 30 percent for retirees and others. Further assumptions about enrollment for those groups include rates of 18 percent, 33 percent, and 30 percent, respectively, for Standard CHAMPUS, and 40 percent participation for all three groups in CHAMPUS Extra.

The pessimistic case also embodies other assumptions that could lead to higher costs. Compared with California and Hawaii, a smaller proportion of the population in Washington and Oregon is enrolled in HMOs. It follows that fewer providers will be associated with that form of managed care. Those differences suggest that DoD may find it difficult to realize the savings it has assumed in relation to utilization management and provider discounts; as a result, CBO's pessimistic case reflects lower savings. This case also reflects empirical evidence suggesting that increases in demand induced by CRI's smaller copayments could be larger than were assumed in the base case. Finally, compared with the base case, the pessimistic case assumes that more ghost eligibles are attracted back to the military medical system and that administrative costs and profits are higher.

Structural Changes and Competition. For its certification report, DoD calculated a range of cost effects related to changes in the structure of the CRI program and competition (see Table 3 on page 18). CBO also estimated a range of potential savings from two of the structural improvements that DoD proposed and the greater competition for the CRI contract. Like DoD, CBO did not estimate the potential savings from other structural improvements that could reduce CRI costs even more. Therefore, the pessimistic case assumes the lower estimate of savings, the optimistic case uses the higher estimate, and the base case uses the midpoint.

CBO adjusted its estimates of savings associated with certain of the managerial changes under the pessimistic case to reflect the assumption that more people would enroll in CHAMPUS Prime than DoD had estimated. One of the managerial changes assumes a gatekeeper. With higher levels of enrollment in CHAMPUS Prime, the imposition of a gatekeeper, whose job is to control the use of military facilities by Prime enrollees, should generate a broader range of savings overall. The lower bound of that range was used in the pessimistic case.

### Costs Under CBO's Three Cases

Under the assumptions of the base case, if the revised CRI benefit had been in place in Washington and Oregon in 1993, CBO estimates that it would have cost about 10.1 percent more than the benefits available under CHAMPUS without CRI. CBO's estimate of the increase in costs is higher than DoD's estimate of 6.2 percent primarily because of differences in assumptions about discounts, administrative costs and profit, and productivity in the MTFs. Table 4 summarizes the differences in estimates based on varying assumptions for the optimistic, base, and pessimistic cases and compares them with the assumptions developed by DoD.

TABLE 4. COSTS OR SAVINGS TO THE GOVERNMENT UNDER VARYING ASSUMPTIONS ABOUT EXTENDING THE REVISED VERSION OF CRI TO WASHINGTON AND OREGON, FISCAL YEAR 1993 (In percent)

	CBO Optimistic Case	CBO Base Case	CBO Pessimistic Case	DoD Estimate
<b>Costs</b>				
<b>Factors Increasing</b>				
Benefit improvements	4.4	5.3	10.0	6.0
Induced demand <sup>a</sup>	2.8	3.9	5.2	5.0
Ghosts <sup>b</sup>	1.3	1.0	1.5	n.a.
Administration and profit	<u>11.0</u>	<u>12.5</u>	<u>14.0</u>	<u>11.0</u>
Subtotal	19.5	22.7	30.7	22.0
<b>Factors Decreasing</b>				
Utilization management	3.3	3.0	2.5	3.0
Claims management	1.0	1.0	1.0	1.0
Negotiated discounts	4.5	4.2	3.7	6.0
MTF productivity savings	<u>4.5</u>	<u>4.4</u>	<u>1.9</u>	<u>6.0</u>
Subtotal	13.3	12.6	9.1	16.0
<b>Total</b>	<b>6.2</b>	<b>10.1</b>	<b>21.6</b>	<b>6.2</b>
<b>Savings</b>				
Competition	3.5	3.3	3.0	4.0
<b>Structural Improvements</b>				
Risk sharing	1.5	0.8	0	1 to 1.5
Gatekeepers	<u>4.4</u>	<u>2.9</u>	<u>1.5</u>	<u>1 to 4.3</u>
<b>Total</b>	<b>9.4</b>	<b>7.0</b>	<b>4.5</b>	<b>6 to 9.8</b>
<b>Total Government Costs or Savings (-) Relative to Current System</b>				
<b>All Factors</b>	<b>-3.2</b>	<b>3.1</b>	<b>17.1</b>	<b>0.2 to -3.6</b>

SOURCE: Congressional Budget Office.

NOTES: Costs and savings are measured as a percentage change in CHAMPUS costs without CRI. CBO used a baseline of \$93.2 million in its calculations, and DoD used a baseline of \$89.9 million. CRI = CHAMPUS Reform Initiative; CHAMPUS = Civilian Health and Medical Program of the Uniformed Services; CBO = Congressional Budget Office; DoD = Department of Defense; MTF = military treatment facility.

- a. DoD's estimate of cost increases resulting from induced demand includes the increase attributable to ghosts (see note b).
- b. The term "ghosts" refers to a proportion of the military beneficiary population who do not rely on the military health care system. Given the reduced cost sharing under the revised CRI benefit relative to Standard CHAMPUS, a number of CHAMPUS-eligible beneficiaries who are currently ghosts are expected to return to the Military Health Services System as enrollees in the Prime program.

Costs Could Be About the Same. It is possible that the higher costs for CRI that CBO has estimated could be offset by the substantial savings from structural and managerial changes and competition that the optimistic case assumes. In those circumstances, there would be little net change in CHAMPUS costs. The optimistic case, therefore, is consistent with DoD's basic conclusion that costs in Washington and Oregon need not increase.

CBO's optimistic case suggests that the revised CRI benefit, coupled with savings from structural improvements, could actually reduce costs compared with CHAMPUS without CRI, perhaps by 3.2 percent. In the optimistic case, cost increases associated with the revised CRI benefit but without structural improvements are smaller than under the base case (6.2 percent compared with 10.1 percent), primarily because the optimistic case assumes lower administrative costs and profit, smaller induced demand, and more savings from discounts. The optimistic case also assumes the higher end of the range of savings associated with structural and managerial changes and competition. The results under this case are consistent with DoD's conclusion that implementing the revised CRI benefit and realizing savings from managerial changes and competition could actually reduce costs modestly in Washington and Oregon.

Other Assumptions, However, Raise Doubts. Another set of assumptions consistent with aspects of the CRI implementation in California and Hawaii and in New Orleans, as well as evidence from tests of managed care in the civilian sector, suggest that the revised CRI benefit could cost substantially more than CHAMPUS without CRI, even when coupled with structural changes and competition. Indeed, under CBO's pessimistic case, implementing the changes DoD has proposed for the revised CRI benefit in Washington and Oregon in 1993 would have added around 17 percent to net costs.

The pessimistic case presumes that enrollment in the relatively expensive CHAMPUS Prime would rise to over 40 percent for dependents of active-duty personnel whose pay grade was below E-5. That result is not implausible in view of continued increases in enrollment in California and Hawaii and high initial levels of enrollment in New Orleans (adjusted, however, for the change in cost sharing for Prime enrollees). CBO also used assumptions of higher levels of induced demand, higher administrative costs, and larger profits, leading to higher estimates of costs. Compared with the other cases, the pessimistic case assumes smaller savings from utilization management and other managed care strategies, such as provider discounts.

The pessimistic case also assumes the lower end of the range of savings associated with structural changes. That assumption is plausible in view of the

difficulty that DoD may have in realizing some savings--for example, those associated with gatekeepers, who are intended to reduce the use of MTFs by enrollees in CHAMPUS Prime. Historically, military beneficiaries have used much more outpatient care than their civilian counterparts. The average CHAMPUS-eligible person under the age of 65--including families of active-duty personnel and retirees and their families--makes 6.4 outpatient visits per year between the MTF and CHAMPUS, compared with only 4.4 visits in the civilian sector for those under 65.<sup>21</sup> The savings associated with gatekeepers suggest that this high rate of use can be curbed, but that goal may be hard to reach. (The high rate of use does imply, however, that DoD has room to control the number of outpatient visits without jeopardizing beneficiaries' health.)

Empirical evidence indicates that savings from utilization review programs are most likely when levels of health care use are high, as they are in the military. Nonetheless, controlling the use of health care by military beneficiaries will be difficult as long as low levels of cost sharing encourage beneficiaries to use outpatient care in the civilian sector and as long as care in military facilities is essentially free. If DoD is to realize sufficient savings to offset CRI's higher costs and encourage beneficiaries to economize in their use of health care, CRI may have to be combined with such changes as establishing copayments for outpatient care at MTFs (a change that would require Congressional authorization).

DoD's Conclusions Are Not Unreasonable, But Uncertainty Remains. In sum, CBO's analysis suggests that under plausible assumptions, DoD's conclusions about costs for CRI are not unreasonable. It is possible that costs in Washington and Oregon will be only slightly different if the revised CRI benefit is implemented along with structural and managerial changes. But there are substantial risks to the government. Under more pessimistic but equally plausible assumptions, costs could be substantially higher.

## OTHER COST-RELATED ISSUES

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This analysis focuses on the costs of implementing a revised version of CRI in Washington and Oregon and does not attempt to assess the overall desirability of this policy. In the process of assessing the costs of a revised CRI benefit, however, CBO noted that such a policy could conflict with other DoD initiatives to improve efficiency in the military part of the health care

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21. This comparison of rates is based on an analysis developed by Lewin-VHI, Inc., using data from DoD's Resource Analysis and Planning System (RAPS) and the National Health Interview Survey. Because active-duty personnel use only the MTFs, they are not included in this comparison between the military and civilian sectors.

system. Hindrances to those efforts could have serious consequences, because the military portion of the system accounts for close to 75 percent of the resources DoD devotes to health care.<sup>22</sup>

### CRI and the Role of the Lead Agent

Implementing the revised CRI benefit in Washington and Oregon would bring the program one step closer to nationwide implementation. But a nationwide version of CRI might interfere with DoD's plan for a system of "lead agents" to improve the efficiency of MTFs. Under this plan, each geographic region has one such agent, generally the commander of the major military medical center in the area, who controls the flow of the health care work load between military facilities and civilian care. At present, dependents of military personnel and retirees and their dependents are to use civilian health care only when military facilities are unable to provide the care they need. In practice, though, beneficiaries can often choose which type of care they prefer. Their choices may add to CHAMPUS costs when resources are available in the MTFs.

DoD's plan will constrain such use by authorizing lead agents to coordinate the delivery of health care within their regions; the plan holds them accountable for the efficient use of the MTFs they command. Each lead agent can assign patient work load to either an MTF or a civilian provider. To support the system of lead agents, DoD plans to grant new authority to these commanders.

For such a system to operate efficiently, however, the lead agent needs control over the use of health care by all beneficiaries and an accurate estimate of the number of beneficiaries in the region and the amount of health care they use. At present, the military's population of beneficiaries is undefined because beneficiaries retain their right to military care even if they generally rely on civilian providers. To get a firm estimate of the number of beneficiaries and the extent to which they rely on the MHSS, DoD would have to require beneficiaries to designate the system as their only provider of care and to enroll in a specific health care plan as a precondition for using the system.

The CRI contractor's responsibility to manage all civilian health care services used by CHAMPUS beneficiaries may conflict with the MTF

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22. Based on data provided by DoD, CBO estimates that in fiscal year 1993, the department spent roughly \$16 billion on the military health care system to serve all beneficiaries, including active-duty personnel. DoD spent over 25 percent of that budget on CHAMPUS.

commanders' responsibility to control the use of health care, particularly for Prime enrollees, who are likely to be assigned to a civilian primary care physician. Under CRI, roughly one-third of the eligible population is expected to enroll in the Prime option. MTF commanders or lead agents may find it difficult to determine the extent to which the populations of beneficiaries under their authority rely on the military's health care system. Compounding this problem is the presence of ghost beneficiaries, some of whom, the RAND evaluation of CRI found, have been returning to receive care from the military system.

### CRI and Capitated Budgeting

DoD has just started a system of capitated budgets for medical care for fiscal year 1994. Under this plan, DoD will provide each military service with a per capita allowance based on the service's projected health care needs. Ideally, such projections would be based on a defined population of beneficiaries, but under CRI, only a portion of the military's beneficiary population would be clearly defined. CRI also raises another issue related to capitated budgeting: control of resources.

Farther down the road, DoD plans to carry out capitated budgeting through its lead agents. Thus, MTF commanders would be responsible for allocating resources, including CHAMPUS funds, through capitated budgets. Under CRI, however, the contractor will receive a budget for the health care needs of all eligible CHAMPUS beneficiaries. The changes to the CRI contract create strong incentives for the contractor to manage resources efficiently. But at the same time, CRI may undermine the ability of the MTF commanders to hold down total costs, since the CRI contractor will exert some control over resources for civilian care that are also under the purview of the MTF commander.

### CRI and Future Health Care Reforms

Recent proposals submitted to the Congress by the Clinton Administration suggest that, in the future, the military health care system could be transformed into one of regionally organized health care.<sup>23</sup> In effect, under these proposals, lead agents would establish a regional health care system for military beneficiaries. In turn, beneficiaries could be required to choose between a military-based health plan, centered around the military hospital and supplemented by civilian provider networks set up by the commander,

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23. See the September 22, 1993, news release of the Office of the Assistant Secretary of Defense (Public Affairs).

and civilian health care plans. Under such a system, CHAMPUS as it now exists could be abolished.

At least one likely effect of this approach would be to strengthen the incentives for military commanders to use and allocate their resources more efficiently in order to compete with civilian plans. The effectiveness of this approach, however, would depend on many specific details. For instance, to what extent will military commanders be able to compete for beneficiaries? How much more flexibility will MTF commanders have to use resources and develop provider networks? What will the defined-benefit package consist of, compared with plans available in the civilian sector? How would such a plan affect the military's wartime readiness mission?

Without answers to these questions, continued expansion of CRI may constitute de facto adoption of a benefit package for military beneficiaries who are not on active duty and thus conflict with changes required in military health care (for dependents of active-duty personnel and retirees and their dependents below the age of 65) to make it compatible with a national health care system. Extending CRI to Washington and Oregon would mean that close to 25 percent of all CHAMPUS costs would be tied to CRI.<sup>24</sup> Should national health care reform provide more or less generous benefits than CRI, DoD might find it harder or easier to compete for beneficiaries. But as long as CRI remains a separate provider network rather than a supplement to the MTFs, it is unclear how lead agents will be able to design regional health care delivery systems or to plan and budget for their beneficiaries.

With bases closing, budgets tightening, and the number of beneficiaries dissatisfied with the military's direct care system increasing, CRI represents a way of addressing DoD's immediate problems. In the long term, however, the Congress will need to review the implications of national health care reform for the military health care system. That may be the time to assess the role of CRI in broader efforts to correct the inefficiencies of the MHSS.

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24. Based on DoD's estimates, in 1993 the New Orleans Managed Care Project accounted for less than 1 percent of CHAMPUS costs, whereas the BRAC sites in Texas and Louisiana accounted for 1.15 percent and California and Hawaii 20.9 percent of the program's cost--for a total of about 23 percent. Washington and Oregon could raise that total beyond 25 percent of total CHAMPUS costs.

## APPENDIX A: CBO'S METHODOLOGY FOR ESTIMATING CRI'S EFFECTS ON COSTS

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The Congressional Budget Office used a number of methods and assumptions to simulate the effects of the CHAMPUS Reform Initiative under the revised benefit plan and to compare the resulting costs with costs for the Civilian Health and Medical Program of the Uniformed Services for 1993 in the absence of CRI. The methodology suggests that changes in the underlying assumptions about the behavior of providers and beneficiaries can generate a wide range of uncertainty about the government's costs and savings.

The data used to estimate the effects of CRI on CHAMPUS costs for 1993 came from several offices of the Department of Defense and DoD contractors, including the Defense Medical Systems Support Center, the Office of the Civilian Health and Medical Program of the Uniformed Services, the Office of the Assistant Secretary of Defense (Health Affairs), Lewin-VHI, Inc., and RAND. CBO also relied on other sources to develop alternative assumptions about the various elements of the cost analysis. These included behavioral assumptions that CBO had developed for the analysis of civilian health care programs, several CBO staff memorandums on managed care, the RAND evaluation of CRI in California and Hawaii, preliminary data on CRI in New Orleans, and empirical evidence of the effects of utilization review and lower cost-sharing requirements on the use and costs of health care services.<sup>1</sup> In addition, CBO used DoD's cost and utilization data on CHAMPUS, as well as its cost-sharing requirements for the Prime, Extra, and Standard versions of the program. Finally, CBO employed certain assumptions generated by the model that Lewin-VHI developed to estimate CRI costs for DoD.

### Methodology

To estimate the costs of CRI, CBO patterned its methodology on the Lewin-VHI model. Specifically, CBO performed the following three steps:

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1. See the following CBO Memorandums: "Behavioral Assumptions for Estimating the Effects of Health Care Proposals" (October 1993); "The Potential Impact of Certain Forms of Managed Care on Health Expenditures" (August 1992); and "The Effects of Managed Care on Use and Costs of Health Services" (June 1992). See also W. Manning and others, "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment," *American Economic Review*, vol. 77, no. 3 (1987); Susan D. Hosek and others, "Health Care Utilization and Costs," vol. 3 of *Evaluation of the CHAMPUS Reform Initiative* (Santa Monica, Calif.: RAND, 1993); Lewin-VHI, Inc., "DoD New Orleans Analysis" (Fairfax, Va., 1993); and other data on New Orleans provided by the Department of Defense.

1. It projected costs for CHAMPUS for 1993 in the absence of CRI, based on CHAMPUS costs for 1992.<sup>2</sup>
2. It estimated the overall number of beneficiaries who rely on the Military Health Services System (and use either a military treatment facility or CHAMPUS for their health care), in order to project the number who would enroll in CHAMPUS Prime, participate in CHAMPUS Extra, and continue using Standard CHAMPUS.
3. It estimated the effects of factors that changed costs relative to the current version of CHAMPUS.

### Baseline Estimate of CHAMPUS Costs for Fiscal Year 1993

CBO estimates that CHAMPUS costs for fiscal year 1993 in Washington and Oregon totaled \$93.2 million, including the costs of both health care and administration. CBO's estimate is based on adjusting CHAMPUS health care cost and utilization data for several factors, including changes in population, inflation, and intensity of services. CBO then calculated total CHAMPUS costs by adding administrative costs, figured as 5.3 percent of the government's health care costs under CHAMPUS. Table A-1 shows CHAMPUS costs by category of care for fiscal years 1992 and 1993 in the absence of CRI.

### Eligible CHAMPUS Beneficiaries in Washington and Oregon

To estimate the number of beneficiaries in Washington and Oregon who would enroll in CHAMPUS Prime, participate in CHAMPUS Extra, and remain with Standard CHAMPUS, CBO first estimated the number of CHAMPUS eligibles who would rely on the military health care system in fiscal year 1993. Taking data on the number of eligible CHAMPUS beneficiaries for fiscal year 1992 from the Defense Medical Information System, CBO projected the change in the number of beneficiaries for fiscal year 1993 based on DoD's Resource Analysis and Planning System (RAPS) (see Table A-2).

To determine the total number of beneficiaries using CHAMPUS, however, it is necessary to determine the number of beneficiaries who rely on

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2. CHAMPUS data for fiscal year 1992 were provided by the Office of the Civilian Health and Medical Program of the Uniformed Services.

the military health care system. According to DoD, 90 percent of the dependents of active-duty personnel and 57 percent of retiree beneficiaries and their dependents use the military health care system for some or all of their care. Those beneficiaries who do not rely on the MHSS make up the so-called ghost population and go outside both the MTFs and CHAMPUS for their health care, which is covered by other forms of insurance such as private insurance and Medicare. As Table A-2 shows, based on the estimated population of CHAMPUS eligibles for fiscal year 1993 in Washington and Oregon, 146,822 beneficiaries actually depend on the military health care system for some or all of their care. Those beneficiaries make up the so-called MHSS-reliant population. By taking the difference between the total CHAMPUS-eligible population and reliant groups, CBO estimates the ghost population of CHAMPUS eligibles to be 57,519 beneficiaries.

TABLE A-1. ESTIMATED CHAMPUS COSTS FOR FISCAL YEARS 1992 AND 1993 FOR WASHINGTON AND OREGON, BY CATEGORY OF CARE (In millions of dollars)

Category	<u>Current CHAMPUS Costs</u>	
	1992	1993
Health Care		
Outpatient		
Mental health	4.3	4.7
Non-mental health	34.0	37.2
Inpatient		
Mental health	6.4	6.9
Non-mental health	<u>37.4</u>	<u>39.6</u>
Subtotal	82.2	88.5
Administrative Costs <sup>a</sup>	<u>4.4</u>	<u>4.7</u>
Total CHAMPUS Costs	86.5	93.2

SOURCE: Congressional Budget Office calculations based on CHAMPUS health care cost and utilization data for fiscal year 1992, provided by the Department of Defense.

NOTE: Numbers may not add to totals because of rounding. CHAMPUS = Civilian Health and Medical Program of the Uniformed Services.

a. Administrative costs are figured as 5.3 percent of total health care costs.

TABLE A-2. ESTIMATES OF CHAMPUS PARTICIPATION FOR WASHINGTON AND OREGON, BY BENEFICIARY CATEGORY, FISCAL YEAR 1993

Group	Dependents of Active-Duty Personnel		Retirees and Others	All
	Pay Grade E-1 Through E-4	Pay Grade E-5 and Above		
<b>CHAMPUS Population</b>				
Eligibles	22,991	68,972	112,378	204,341
MHSS Reliant	20,692	62,075	64,055	146,822
MHSS Nonreliant	2,299	6,897	48,323	57,519
<b>Enrollment and Participation Under the Revised Version of CRI<sup>a</sup></b>				
<b>Optimistic Case<sup>b</sup></b>				
Prime	5,587	10,553	12,171	28,310
Extra	8,277	24,830	25,622	58,729
Standard	<u>6,828</u>	<u>26,692</u>	<u>26,263</u>	<u>59,783</u>
Total	20,692	62,075	64,055	146,822
<b>Base Case<sup>c</sup></b>				
Prime	7,449	14,277	16,654	38,381
Extra	8,277	24,830	25,622	58,729
Standard	<u>4,966</u>	<u>22,968</u>	<u>21,779</u>	<u>49,713</u>
Total	20,692	62,075	64,055	146,822
<b>Pessimistic Case<sup>d</sup></b>				
Prime	8,691	16,760	19,217	44,667
Extra	8,277	24,830	25,622	58,729
Standard	<u>3,725</u>	<u>20,485</u>	<u>19,217</u>	<u>43,426</u>
Total	20,692	62,075	64,055	146,822

SOURCE: Congressional Budget Office calculations based on data from the Department of Defense's Defense Medical Information System and Resource Analysis and Planning System.

NOTES: CHAMPUS = Civilian Health and Medical Program of the Uniformed Services; MHSS = Military Health Service System; CRI = CHAMPUS Reform Initiative.

- Enrollment and participation figures are based on the total number of beneficiaries who are MHSS reliant.
- For the optimistic case, enrollment rates in CHAMPUS Prime are projected to be 27 percent for dependents of active-duty personnel whose sponsor's pay grade is below E-5, 17 percent for such dependents whose sponsor's pay grade is E-5 or above, and 19 percent for retirees and others. Participation in Standard CHAMPUS is projected to be 33 percent, 43 percent, and 41 percent, respectively, whereas Extra participation is projected to be 40 percent for all beneficiary groups.
- For the base case, enrollment rates in CHAMPUS Prime are projected to be 36 percent for dependents of active-duty personnel whose sponsor's pay grade is below E-5, 23 percent for such dependents whose sponsor's pay grade is E-5 or above, and 26 percent for retirees and others. Participation in Standard CHAMPUS is projected to be 24 percent, 37 percent, and 34 percent, respectively, whereas Extra participation is projected to be 40 percent for all beneficiary groups.
- For the pessimistic case, enrollment rates in CHAMPUS Prime are projected to be 42 percent for dependents of active-duty personnel whose sponsor's pay grade is below E-5, 27 percent for such dependents whose sponsor's pay grade is E-5 or above, and 30 percent for retirees and others. Participation in Standard CHAMPUS is projected to be 18 percent, 33 percent, and 30 percent, respectively, whereas Extra participation is projected to remain at 40 percent for all beneficiary groups.

## Enrollment Rates

To estimate the actual number of beneficiaries who would enroll in CHAMPUS Prime under the revised benefit, as well as those who would participate in Extra and Standard CHAMPUS, CBO considered DoD's projected participation rates for the three options and the experience of CRI under the current benefit package in California and Hawaii and in New Orleans. Each of those sources yielded different implied long-run relationships of beneficiary responsiveness to changes in cost sharing.<sup>3</sup> CBO used those measures of responsiveness in its optimistic, base, and pessimistic cases to project the behavior of beneficiaries under the revised Prime benefit.

DoD's Estimate. In its certification report, DoD projected a Prime enrollment rate of 35 percent in Washington and Oregon and for the nation. The implied long-run measure of responsiveness from this evidence is -0.45. That is, a 10 percent change in out-of-pocket costs for beneficiaries under the original Prime option would yield a 4.5 percentage point increase in enrollment in Prime.

CRI Experience. Among CHAMPUS-eligible beneficiaries who rely on the military health care system, current enrollment rates in California and Hawaii are approximately 30 percent for Prime, 40 percent for Extra, and 30 percent for Standard CHAMPUS. Based on the percentage change in cost sharing between Standard CHAMPUS and the current Prime benefit in California and Hawaii, the implied long-run measure of responsiveness from this evidence is -0.38. In New Orleans, however, the Prime enrollment rate has reached close to 60 percent, implying a long-run measure of responsiveness

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3. Long-run elasticities could not be determined from the evidence. (An elasticity is a number that indicates the percentage change to be expected in a given value in response to a specified percentage change in one of its determinants.) Based on the evidence, however, CBO could determine long-run measures of responsiveness by beneficiaries to changes in cost sharing. To measure the implied relationship between cost sharing and enrollment in Prime under the original benefit--or rather the percentage-point increase in enrollment in Prime under the revised benefit as a result of a percentage change in out-of-pocket costs--CBO used the following formula:

$$R = ENR_0 * [1/(P_1 - P_0)/P_0]$$

where R indicates the implied relationship between cost sharing and Prime enrollment,  $ENR_0$  indicates the old enrollment rate in Prime under the original benefit,  $P_1$  indicates the new price under the original Prime benefit, and  $P_0$  indicates the old price under Standard CHAMPUS. To calculate the new enrollment rates in Prime under the revised benefit, CBO used the following formula:

$$R = ENR_1 * [1/(P_2 - P_0)/P_0]$$

where R indicates the implied relationship between cost sharing and the Prime enrollment rate under the original benefit,  $ENR_1$  indicates the new enrollment rate in Prime under the revised benefit,  $P_2$  indicates the new price under the revised Prime benefit, and  $P_0$  indicates the old price under Standard CHAMPUS.

of about -0.7.<sup>4</sup> In other words, a 10 percent change in out-of-pocket costs for beneficiaries under the original Prime option would yield a 7 percentage point increase in Prime enrollment.

**CBO's Middle-Ground Estimate.** The evidence suggests that the implied long-run measure of responsiveness lies somewhere between -0.45 and -0.7. For this reason, CBO has assumed a long-run measure of about -0.6 under the base case, which is smaller than that suggested by the New Orleans data but greater than either the California and Hawaii estimate or the one based on DoD's projection for Washington and Oregon.

By taking a middle-ground estimate of the implied long-run measure of responsiveness, the base case reflects the possibility that the experiences of CRI in California and Hawaii and in New Orleans may not be entirely applicable to Washington and Oregon. For example, New Orleans is an area with no MTFs; as such, it is referred to as a noncatchment area. (A catchment area is the roughly 40-mile radius around an MTF.) Accordingly, beneficiaries there are more likely to enroll in CHAMPUS Prime than are beneficiaries in catchment areas with hospitals. Although Oregon is a non-catchment area similar to New Orleans, it only encompasses 15 percent of the total CHAMPUS-eligible population living in the states of Washington and Oregon. At the other extreme, evidence related to the rate of enrollment in California and Hawaii represents only catchment areas. Therefore, it captures the relationship between changes in cost sharing and Prime enrollment rates only for beneficiaries living within 40 miles of an MTF.

**Estimates of Participation for CBO's Optimistic and Pessimistic Cases.** CBO's estimate of participation rates for the optimistic case used an implied measure of long-run responsiveness of -0.45, the low end of the range of estimates. That measure yielded steady-state enrollment rates in CHAMPUS Prime of 27 percent for dependents of active-duty sponsors with a pay grade below E-5, 17 percent for such dependents of sponsors with a pay grade of E-5 or above, and 19 percent for non-active-duty beneficiaries (retirees and others). CBO assumed that participation in CHAMPUS Extra would remain at 40 percent for all beneficiaries. It projected that participation in Standard CHAMPUS would subsequently increase from 25 percent in California and Hawaii to 33 percent, 43 percent, and 41 percent, respectively, for the three groups of beneficiaries noted above.

For its base case, CBO used an implied long-run measure of responsiveness of -0.6. That choice led to projections of steady-state Prime enrollment

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4. CBO has estimated that the rate of Prime enrollment reached more than 40 percent in New Orleans in a little less than one year. DoD's recent data indicate that after two years, Prime enrollment has reached 60 percent.

rates of 36 percent for dependents of active-duty sponsors with a pay grade below E-5, 23 percent for such dependents of sponsors with a pay grade of E-5 or above, and 26 percent for non-active-duty beneficiaries. CBO projected that participation in Standard CHAMPUS among the three groups would decrease to 24 percent and increase to 37 percent and 34 percent, respectively, given that Extra participation was assumed to remain at 40 percent for all beneficiaries.

Experience with the New Orleans CRI program, however, indicates that rates of enrollment in CHAMPUS Prime could be higher than DoD's estimates. In its pessimistic case, CBO used an implied relationship of -0.7, producing steady-state Prime enrollment rates of 42 percent, 27 percent, and 30 percent, respectively, for the three groups noted above. Assuming that participation in Extra would remain constant at 40 percent, CBO projected that participation in Standard CHAMPUS would decrease to 18 percent for dependents of active-duty sponsors with a pay grade below E-5, and increase to 33 percent and 30 percent, respectively, for the other beneficiary groups.

Several aspects of the military health care system may lead to a higher rate of enrollment for CHAMPUS Prime than might be estimated using a measure of responsiveness based on -0.6. For example, military beneficiaries are accustomed to less choice about their primary provider than are many civilians, and for that reason, military beneficiaries may be more willing than their civilian counterparts to join an HMO.

As developed by Lewin-VHI, the methodology DoD used to project enrollments differs somewhat from CBO's. The Lewin-VHI approach combines a short-run elasticity of -0.20 and an average elasticity of -0.16 taken from the literature on civilian health plans.<sup>5</sup> DoD thus projected Prime enrollment under the revised benefit by assuming that the long-run rate of enrollment in Prime under the original benefit would be 35 percent. The difference in out-of-pocket costs between the current and revised benefits was then used in combination with the average of the two elasticities to yield the following estimates of rates of enrollment in Prime: 30 percent for dependents of active-duty sponsors whose pay grade was below E-5, 22 percent for dependents of sponsors whose pay grade was E-5 or above, and 23 percent for retirees and others.

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5. See M. Holmer, "Tax Policy and the Demand for Health Insurance," *Journal of Health Economics*, vol. 3 (1984), pp. 203-222; and W.P. Welch, "The Elasticity of Demand for Health Maintenance Organizations," *Journal of Human Resources*, vol. 21 (1986), pp. 252-266. These findings are summarized in M.A. Morrissey, *Price Sensitivity in Health Care: Implications for Health Care Policy* (Washington D.C.: National Federation of Independent Business, 1992), pp. 40-45.

### Factors That Increase Costs

Four factors are important in estimating the increases in costs under the revised version of CRI: the additional benefits compared with Standard CHAMPUS, the induced demand for care, ghost participation, and administrative costs and profit. For each factor, CBO estimated a range of net effects on costs based on the assumptions of its optimistic, base, and pessimistic cases. All cost increases are calculated relative to a \$93.2 million baseline estimate of CHAMPUS costs in 1993 for dependents of active-duty personnel and retirees and their dependents in Washington and Oregon in the absence of CRI.

Additional Benefits. The revised CRI benefit reduces cost sharing for beneficiaries in CHAMPUS Prime and Extra relative to Standard CHAMPUS and provides expanded coverage of preventive services and other medical procedures. As might be expected, the government's share of costs increases. For its estimate of the effects of this factor, CBO relied on the estimates developed by Lewin-VHI of the share of government costs for Standard CHAMPUS, CHAMPUS Prime, and CHAMPUS Extra users figured on a nationwide basis. For the nation, Lewin-VHI calculated the government's share of total health care costs by applying CHAMPUS cost sharing to the average rate of utilization of services by CHAMPUS beneficiaries. (Using current utilization rates and patterns of health care use, however, could understate the government's share of costs under Prime and Extra to the extent that beneficiaries used more expensive services under CRI than they now use under Standard CHAMPUS. CBO's calculations for this factor could also understate the government's share of costs under Prime and Extra to the extent that beneficiaries used more health care in Washington and Oregon than in the nation.)

Based on the relative number of projected participants in Prime, Extra, and Standard CHAMPUS, CBO estimated that under the optimistic case, the revised benefit could lead to costs that were 4.4 percent higher for CRI than for CHAMPUS in the absence of CRI. For the base case, adjusting for higher rates of enrollment, CBO estimated that the revised benefit could lead to costs that were 5.3 percent higher for CRI than for CHAMPUS in its absence. For the pessimistic case, adjusting for higher rates of enrollment, CBO estimated that the revised benefit could lead to costs that were 10 percent higher for CRI than for CHAMPUS without it.

Induced Demand. To estimate the increased demand for health care under CRI, the Congressional Budget Office relied on findings from the RAND Health Insurance Experiment (HIE) and RAND's evaluation of CRI in California and Hawaii. Both RAND studies confirmed that the use of health

care changes in response to changes in cost sharing, but the evaluation of CRI indicated greater beneficiary responsiveness to changes in cost sharing than was found in the HIE. Specifically, for outpatient services, the RAND HIE found that a reduction in the coinsurance rate from 25 percent to zero would lead to an increase in the use of such services of 37 percent. In contrast, Rand's evaluation of CRI concluded that retirees and their dependents who were CHAMPUS Prime enrollees used almost two-thirds more outpatient care compared with non-CRI beneficiaries when coinsurance rates for beneficiaries fell over roughly the same range as that used by the HIE.

CBO's optimistic case assumes that CHAMPUS beneficiaries will respond to lower cost sharing as the RAND HIE predicts. (That assumption is optimistic in that CBO is assuming a smaller increase in the use of outpatient services than the increase RAND found in California and Hawaii.) Based on the RAND HIE findings of how induced demand affects costs, CBO assumed that health care costs would increase by 18 percent when coinsurance fell from 25 percent to zero. Adjusted for the coinsurance rates under CHAMPUS Prime and Extra, the optimistic case assumes that the increase in costs resulting from induced demand will be 2.8 percent.

To determine the effects of induced demand for the base and pessimistic cases, CBO first assumed that CHAMPUS beneficiaries would respond to lower cost sharing as the RAND HIE predicts. That assumption led to a 3.5 percent increase in costs under the base case and a 4 percent increase under the pessimistic case. Then, based on the findings of RAND's evaluation of CRI, CBO adjusted the cases to reflect greater induced demand for outpatient services to illustrate the risk that the RAND HIE prediction might be too low in these cases. For the base case, CBO assumed an additional increase of 5 percent in CHAMPUS visits for retirees and their dependents who were Prime enrollees, bringing the total increase in costs resulting from induced demand to 3.9 percent. For the pessimistic case, CBO assumed an additional increase of 15 percent in CHAMPUS visits for the same group, bringing the total increase in costs resulting from induced demand to 5.2 percent. For these three cases, then, the estimates of the cost resulting from induced demand ranged from 2.8 percent to 5.2 percent above the cost of CHAMPUS in the absence of CRI.

Ghost Participants. Under the CRI program in California and Hawaii, the reduced cost sharing offered by the Prime option attracted some CHAMPUS beneficiaries--so-called ghosts--who had not been relying on the military health care system. Based on its experience with CRI in California and Hawaii, DoD estimated that each reduction of 10 percentage points in out-of-pocket costs, relative to Standard CHAMPUS, would lead 1 percent of the ghost population to enroll in CHAMPUS Prime. Continuing the calculation,

DoD estimated that 8 percent of Prime enrollees in a CRI program would be previously non-MHSS-reliant beneficiaries. Its evaluation of CRI led RAND to a slightly lower estimate of 7 percent. Preliminary results from New Orleans indicate that 10 percent of Prime enrollees there are ghosts.

Under the optimistic and base cases, CBO used DoD's assumptions that for each reduction of 10 percentage points in out-of-pocket costs, 1 percent of the non-MHSS-reliant population would enroll in Prime. Based on the percentage-point reduction in out-of-pocket costs under the revised Prime benefit, in CBO's optimistic case about 5.2 percent of the non-MHSS-reliant population would be expected to enroll in the Prime option; under CBO's base case, 3.8 percent would be expected to enroll. The pessimistic case reflects the added risks that a permanent program could lead even more retirees and their dependents to rely on the military health care system and that expanding into the noncatchment state of Oregon could raise ghost enrollments above the levels in catchment areas. Thus, in this case, CBO assumed that each reduction of 10 percentage points in out-of-pocket costs would lead 1.5 percent of the ghost population in the retiree category to enroll in Prime. That assumption changes the percentage of the non-MHSS-reliant population that is expected to enroll in CHAMPUS Prime to 4.9 percent.

The above assumptions lead to costs that are between 1.0 percent and 1.5 percent higher than the cost of CHAMPUS without CRI. CBO's estimates, like DoD's, however, could understate the cost increases associated with this factor to the extent that any Prime enrollees increased their reliance on the military health care system.

Administrative Costs and Profit. Overhead costs for the CHAMPUS program without CRI, including administration and profit, total about 5.3 percent of CHAMPUS health care costs. Under the revised CRI benefit, however, DoD estimates that the increase in overhead costs will be 11 percent of CHAMPUS health care costs in 1993. DoD's estimate is based on an analysis of the downward trend since 1990 in CRI administrative costs as a percentage of health care costs and the effects of a competitive procurement process on the fee rate. CBO's optimistic case follows DoD's estimates in assuming that the increase in overhead costs will be 11 percent of CHAMPUS health care costs in 1993. In the pessimistic case, CBO assumes that the increase in overhead costs will be 14 percent of CHAMPUS health care costs in 1993, based on the experience of CRI in California and Hawaii and incorporating two major differences between these areas and Washington and Oregon: the smaller geographic area of Washington and Oregon that limits economies of scale, and the less well established managed care market in Washington and Oregon. CBO's base case occupies the middle ground, assuming that the

increase in overhead costs will be 12.5 percent of CHAMPUS health care costs in 1993. For this factor, then, the increase in total CHAMPUS health care costs in 1993 in the absence of CRI ranges from 11 percent to 14 percent.

### Factors That Produce Savings

To offset the increase in costs under the revised version of CRI, CBO estimated savings from three factors: utilization and claims management, negotiated discounts with providers, and the sharing of resources with the MTF, along with more efficient routing and referral of patients. Again, CBO estimated the net effects of costs based on assumptions ranging from the optimistic to the pessimistic. All savings are calculated relative to a \$93.2 million baseline estimate of CHAMPUS costs in 1993 for all dependents of active-duty personnel and retirees and their dependents in Washington and Oregon in the absence of CRI. CBO's estimates of savings incorporate the fact that spending on mental health care is lower in Washington and Oregon than in the nation at large and that managed care is less common in those states than in California and Hawaii and other parts of the country.

Utilization and Claims Management. Savings from managing the use of care by beneficiaries is a major benefit of managed care programs. Utilization management programs are designed to achieve savings primarily by reducing unnecessary or inappropriate admissions and lengths of stay. Like DoD, CBO assumed savings from utilization management only in the inpatient setting and projected no such savings in the outpatient setting. (Not only did the RAND evaluation of CRI demonstrate that utilization management produced no reduction in the use of outpatient care, but the literature supports the idea that managed care programs tend to shift care from inpatient to outpatient settings.)

CBO's estimates of savings from utilization management are based on both civilian experience and previously published CBO analyses.<sup>6</sup> The literature indicates that the higher the pattern of use, the greater the potential for savings; it offers estimates of savings ranging from 8 percent to 12 percent of hospital expenditures, depending on the effectiveness of the program and the level of the patterns of inpatient use. CBO's assumptions of savings from utilization management reflect a range of effectiveness. The optimistic case assumes 12 percent savings in hospital expenditures for CHAMPUS Prime

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6. See Congressional Budget Office, "The Effects of Managed Care on Use and Costs of Health Services," and "The Potential Impact of Certain Forms of Managed Care on Health Care Expenditures." See also Thomas M. Wickizer, "The Effect of Utilization Review on Hospital Use and Expenditures: A Review of the Literature and an Update on Recent Findings," *Medical Care Review*, vol. 47, no. 3 (Fall 1990).

and 10 percent savings for CHAMPUS Extra. The base case assumes 10 percent savings for Prime and 8 percent for Extra. The pessimistic case assumes 8 percent savings for Prime and 6 percent for Extra.

CBO calculated savings from utilization management in the inpatient setting on the basis of total inpatient spending for fiscal year 1993, as estimated by CBO for Washington and Oregon (see Table A-1 on page 32 for inpatient costs used to estimate the savings). That analysis resulted in savings ranging from 3.3 percent down to 2.5 percent of CHAMPUS health care costs. In comparison, DoD estimated utilization management savings of 3 percent, based on a comparison of the changes in utilization by beneficiary category under CRI and for non-CRI areas, using data from the November 1992 bid price adjustment.

Reducing inpatient use of mental health services played a significant part in achieving savings for CRI in California and Hawaii, where mental health spending is close to 20 percent of all inpatient spending. In Washington and Oregon, however, spending on inpatient mental health constitutes less than 15 percent of inpatient spending. CBO's more conservative estimate of savings thus reflects uncertainty about replicating the CRI results from California and Hawaii in Washington and Oregon.

As a by-product of various incentives to manage resources more effectively, DoD estimates that it will gain additional savings of 1 percent from processing claims more accurately. All of CBO's cases include this estimate. Together, the two measures could lead to between 4.3 percent and 3.5 percent in savings.

Negotiated Discounts with Providers. Discounts negotiated with networks of providers are another significant feature of managed care programs. RAND found in its evaluation of CRI in California and Hawaii that, as with utilization management, mental health providers were associated with the greatest savings—that is, the largest discounts. Based on its experience with CRI in California and Hawaii, DoD has estimated that the following discounts against the amounts allowed under Standard CHAMPUS are possible for Prime and Extra beneficiaries: 40 percent for inpatient mental health services, 35 percent for outpatient mental health, 2 percent for inpatient non-mental health, and 5 percent for outpatient non-mental health.

CBO assumed those same discounts under its optimistic case. But managed care is less common in Washington and Oregon than in California and Hawaii; as a result, it may not be possible to negotiate the discounts envisioned by DoD. (For instance, in 1991, 19 percent of the total population in Washington and Oregon was enrolled in health maintenance organizations,

compared with 33 percent of the total population in California and Hawaii.<sup>7)</sup> To reflect this concern, CBO's base case assumes somewhat lower discounts than the optimistic case--30 percent for inpatient mental health and 25 percent for outpatient mental health services, while holding constant the savings for non-mental health care. CBO's pessimistic case assumes significantly lower discounts for both Prime and Extra: 20 percent for inpatient and outpatient mental health services, and for non-mental health, 2 percent and 5 percent, respectively, for inpatient and outpatient care. These reductions reflect the difficulty in achieving large discounts from providers in light of the reimbursement reforms to Standard CHAMPUS (such as restrictions in increases in costs for psychiatric hospitals) apart from the revised CRI program. This factor could lead to savings ranging from 4.5 percent down to 3.7 percent.

Productivity Savings at MTFs. One of the major goals of CRI is to improve coordination between MTFs and CHAMPUS, as well as to increase the use of MTFs when such use is the more cost-effective way to deliver health care. To achieve these goals, the current version of CRI included a Health Care Finder, which is designed to improve routing and referrals to the MTF, and a resource-sharing program, which is designed to make greater use of MTFs. Based on the evidence of CRI in California and Hawaii, DoD estimates that total MTF outpatient visits increased by 10 percent, or were "recaptured"--assigned to MTFs rather than civilian providers. Inpatient admissions at MTFs increased by close to 25 percent. In future CRI expansion sites, DoD also plans to save 1 percent of CHAMPUS health care costs by improving routing and referrals.

Because of DoD's new facility in Washington State (Maddigan Medical Center) and the space now available to take advantage of the potential gains from the resource-sharing program, CBO adopted DoD's estimate of savings from recapture in its optimistic and base cases. For the optimistic case, CBO estimated that routing and referral savings would be 1 percent. But for the base case, CBO estimated only 0.85 percent savings to reflect the fact that 15 percent of the total CHAMPUS-eligible beneficiary population living in the two states resides in Oregon and that most of those beneficiaries live 40 miles or more from an MTF. In the pessimistic case, CBO estimated that DoD would recapture only half as much care and achieve no savings from routing and referral. That assumption is based on the smaller percentage of nonavailability statements issued to CHAMPUS eligibles in Washington State for inpatient care, compared with beneficiaries living in California and

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7. HMO enrollment rates are based on total population, both insured and uninsured. See Group Health Insurance Association of America, Inc., *1992 National Directory of HMOs* (Washington, D.C., 1992).

Hawaii.<sup>8</sup> Productivity savings at the MTF in these different cases could lead to savings ranging from 4.5 percent down to 1.9 percent.

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8. When beneficiaries living in a catchment area want to use CHAMPUS, they must receive a statement from their local military medical commander indicating nonavailability of care at the MTF. These statements are required for nonemergency inpatient care and some outpatient care.

## APPENDIX B: CBO'S ESTIMATES OF SAVINGS FROM STRUCTURAL IMPROVEMENTS AND COMPETITION

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This appendix describes the methodology that the Congressional Budget Office used to estimate the savings from structural improvements in delivering military health care and greater competition for the contract award to provide services under the CHAMPUS Reform Initiative. Estimates for the structural improvements are hypothetical because there is no empirical evidence to gauge the ability of the Department of Defense to implement these measures effectively. CBO relied on several sources in developing its estimates: the Office of the Assistant Secretary of Defense (Health Affairs), the Office of the Civilian Health and Medical Program of the Uniformed Services, the Defense Medical Systems Support Center, Lewin-VHI, Inc., and RAND.

To make CRI cost neutral, DoD projected savings from two structural and managerial improvements in the program and from increased competition for the CRI contract. The structural improvements are increasing risk sharing by the contractor and limiting utilization of military treatment facilities by CHAMPUS Prime enrollees with civilian primary care gatekeepers. DoD has proposed other improvements to the contract, such as using volume trade-off factors to reduce the government's risk of declines in the MTF workload, ensuring that the government will realize savings from CHAMPUS reimbursement reforms, and eliminating pass through costs. Further changes to the system include making resource sharing more cost-effective by giving MTF commanders more direct responsibility for all costs in their catchment area. Neither DoD nor CBO estimated savings from these policy options.

### CRI Risk Sharing

The current CRI contract for California and Hawaii requires that the government begin sharing losses with the contractor when the contractor has lost 3 percentage points of its profit and before it has lost all of its profit for the contract year. Moreover, the contractor's cumulative losses are capped at \$5 million plus cumulative profit. For Washington and Oregon, DoD plans to modify that loss-sharing arrangement. The contract will stipulate that the government will share losses only after the contractor has lost all of its health care profits for the current period plus 1 percent of health care costs; the contract will also set a higher cap on the contractor's losses. Based on an analysis of the cost overruns in the initial contract for California and Hawaii and an assumed profit rate of 5 percent, DoD estimates that the net effect of reducing the government's risk of cost overruns will result in savings of between 1 percent and 1.5 percent. The department assumes that it can shift those costs to the contractor and that the winning bidder for the recently recompeted contract will not have raised its bid to cover those costs.

CBO has assumed under its optimistic case that the new risk-sharing requirements could reduce costs by as much as 1.5 percent. That high estimate of savings assumes that the market for the CRI contract may not be very competitive and that the contractor may be able to absorb costs by reducing its profit. Alternatively, as DoD expects, the market for this contract could be quite competitive. Consistent with that assumption, CBO estimates no savings under the pessimistic case, because in a competitive market, the winning contractor might have to increase its bid to cover additional costs. The base case assumes a middle-of-the-road estimate of 0.75 percent savings to reflect the possibility that the contractor and the government may share in any additional costs. Savings are estimated relative to the original CRI contract for California and Hawaii.

#### Using Gatekeepers to Limit MTF Utilization by Prime Enrollees

Under CRI in California and Hawaii, Prime enrollees with a civilian primary care physician have greater access to civilian outpatient care than other CHAMPUS beneficiaries and unimpeded access to MTFs. DoD estimates that by using a gatekeeper to control the use of MTF outpatient care by Prime enrollees, it could eliminate as many as 50 percent of such visits without a concomitant increase in the number of visits covered under CHAMPUS. Alternatively, less effective implementation could lead to as few as 11 percent of such visits being eliminated. DoD's middle-of-the-road estimate of the savings is founded on eliminating 25 percent of MTF visits by Prime enrollees without increasing CHAMPUS visits. Based on an analysis of cost and utilization data for health care delivered in MTFs and through CHAMPUS nationally, DoD estimates that the savings from this measure could range from 1 percent to 4.3 percent.

To model the effect of the gatekeeper, CBO calculated savings for Washington and Oregon using the same optimistic, base, and pessimistic assumptions that DoD used but relying on health care cost and utilization data for Washington and Oregon rather than for the nation. Because CBO used population data specific to those two states, its estimates of savings are slightly larger than DoD's. Like DoD, CBO assumed a per capita visit rate of 5.3 for dependents of active-duty personnel and a rate of 4.0 for dependents of non-active-duty personnel. The relatively higher per capita rate of visits by dependents of active-duty personnel means that the potential for savings is greatest in areas in which the percentage of dependents of active-duty personnel is largest. Washington State has a larger percentage of dependents of active-duty personnel among its enrolled Prime population than does the nation as a whole. Thus, CBO's estimates of savings are higher than DoD's estimates based on national data. For the optimistic case, CBO

estimated savings of about 4.4 percent from this policy, with savings of roughly 2.9 percent for the base case and 1.5 percent for the pessimistic case. Even the low end of CBO's estimates of savings is larger than DoD's estimates, as a result of the higher rates of enrollment in CHAMPUS Prime assumed under the pessimistic case and the corresponding increase in the number of MTF visits that could be eliminated. Savings are estimated relative to the \$93.2 million baseline estimate of CHAMPUS costs without CRI.

### Effects of Competition

Based on its experience of an extremely competitive market for the award of the CRI contract in California and Hawaii, DoD expects that the final costs of the contract in Washington and Oregon will be even lower than the government's best estimate. Assuming that the market for the contract award for CRI continues to be competitive, CBO also expects that DoD will realize savings in Washington and Oregon, but it expects them to be somewhat lower to reflect the less mature managed care market in those states, compared with California and Hawaii. (CBO based its assumption on the extent of the population participating in HMOs in the four states.) DoD estimates that it will realize 4 percent savings from competition; CBO estimates savings in CHAMPUS costs ranging from 3.5 percent down to 3.0 percent.<sup>1</sup> Savings are estimated relative to the current CRI contract in California and Hawaii.

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1. DoD has estimated that it could realize a total of 5 percent in savings from competition, based on the recompetition for the CRI contract in California and Hawaii. CBO has isolated 4 percent for consideration here because the other 1 percent in savings from a lower fee rate is considered in conjunction with overhead costs under CRI. Note that DoD's assumption that the increase in overhead costs will be 11 percent of CHAMPUS health care costs in 1993 (described in Appendix A) reflects a 1 percent savings from competition.