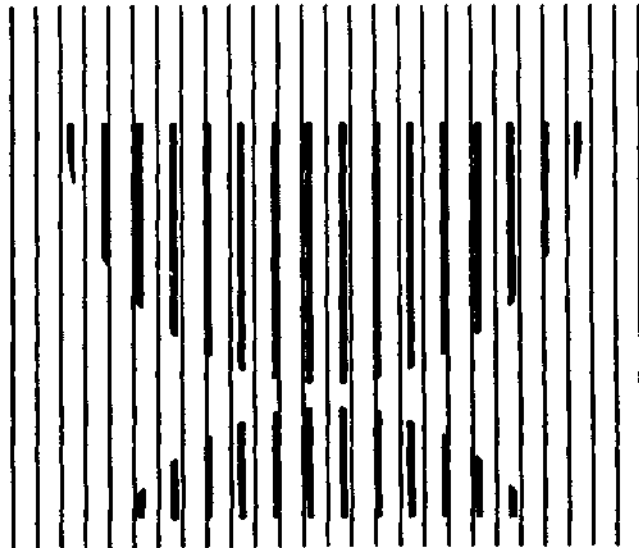


CBO STAFF MEMORANDUM

**SINGLE-PAYER AND ALL-PAYER HEALTH
INSURANCE SYSTEMS
USING MEDICARE'S PAYMENT RATES**

April 1993



**CONGRESSIONAL BUDGET OFFICE
SECOND AND D STREETS, S.W.
WASHINGTON, D.C. 20515**

This Congressional Budget Office (CBO) Staff Memorandum updates and expands a previous study done at the request of the Subcommittee on Health of the House Committee on Ways and Means (*Universal Health Insurance Coverage Using Medicare's Payment Rates*, December 1991). Revised results are shown for both the single-payer and all-payer health insurance systems discussed in the earlier study. In keeping with CBO's mandate to provide objective and impartial analysis, this memorandum contains no recommendations.

The memorandum was written by Sandra Christensen, of CBO's Human Resources and Community Development Division, under the direction of Nancy Gordon and Kathryn Langwell. It builds on the earlier study, which was done largely by Terri Menke before her departure from CBO. Charles Seagrave and Jeffrey Lemieux offered valuable comments.

Paul L. Houts edited the text, with assistance from Chris Spoor. Jill Bury provided administrative assistance and prepared the final version of the manuscript.

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SUMMARY

Although the United States is a leader in medical research and has the ability to deliver health care of the highest quality, there is widespread dissatisfaction with its health care system. Critics find fault with two aspects of the system--that a substantial number of people lack health insurance coverage, and that health care costs are high compared with countries where coverage is universal.

This paper examines two approaches by which both universal health insurance coverage and greater control over health care costs might be achieved. It updates and expands earlier estimates by the Congressional Budget Office (CBO) of the effects of single-payer and all-payer systems presented in a study called *Universal Health Insurance Coverage Using Medicare's Payment Rates* (December 1991). The estimates here make use of new information on health care spending and on Medicare's payment rates relative to those of other payers. Revised results are shown for the single-payer and all-payer options discussed in the earlier study, and new results are presented for two alternative versions.

A single-payer (SP) system is one in which all covered health care services are insured and paid for by a single insurer. An all-payer (AP) system is one in which services are covered and paid for by multiple insurers, but where all payers adopt the same payment methods and rates.

The paper presents estimates for four illustrative payment systems:

- o SP1 is like the single-payer plan examined in CBO's earlier study, with hospital and physician reimbursement based on Medicare's current payment methods, but with hospital rates increased 11 percent to cover current average costs per case fully. Insurance coverage would be universal, and the plan's benefits would be actuarially equivalent to the average benefits now paid under Medicare and private insurance. Copayments would be required of patients, similar to the copayment requirements now typical in the United States, but balance-billing (collecting the difference between the provider's charge and the insurer's payment rate from patients) would be prohibited.
- o SP2 is a Canadian-style single-payer system. Coverage would be universal, and no copayments would be required of patients. Although physicians would be paid based on Medicare's rates, hospitals would be funded through global budgets and would maintain only very limited management information systems.

- o AP1 is like the all-payer plan examined in CBO's previous study. As with SP1, all hospitals and physicians would be reimbursed based on Medicare's payment methods, and copayments but not balance-billing would be required of patients. Coverage would be universal--Medicare would cover people currently uninsured, and there would be no change in insurer for others.
- o AP2 is like AP1 except that coverage would not be universal. Those currently without insurance would remain without coverage.

The illustrative estimates presented in this paper are not cost estimates. The cost estimates that CBO prepares for specific legislative proposals require much more detail about the characteristics of the proposals, and they show the impact on the federal budget. The estimates here indicate what national health expenditures would have been had any of the alternative payment systems been fully effective throughout 1991. They show only the immediate effects of each option--savings on insurers' and providers' overhead expenses, savings from lower average payment rates, and the costs of extending coverage to the uninsured (for all but AP2). Additional savings might accrue if the new systems provided for effective cost containment through, for example, expenditure caps or price and utilization controls. If such features were included, spending might be significantly lower than for the options shown.

The methods and assumptions underlying the estimates presented in this paper differ from those used in the previous CBO study in significant ways. First, these results are for 1991, while the previous results were for 1989. Second, this paper makes use of new information on the differences between Medicare's payment rates and those of other payers that shows that Medicare's rates are lower than assumed in the previous study. Third, the estimated increase in health spending for the newly insured is larger here, based on more recent survey data. Fourth, this paper includes estimates of the effects on spending for insured services in addition to the hospital and physician services considered in the previous study. Fifth, more stringent assumptions are used to develop estimates of savings on overhead costs. Finally, this paper includes estimates of uncompensated costs (or bad debt) for insured groups, costs ignored in the previous study.

Effects on National Health Expenditures

Differences in the effects on national health expenditures under the four options examined here would be quite modest (see Summary Table). The

largest difference--7 percent between SP1 and SP2--is less than the amount by which national health expenditures now increase annually (about 11 percent). Spending would be lowest under SP1, the single-payer option that would retain copayment requirements. Spending would be highest under SP2, the single payer with first-dollar coverage, but would be nearly as high under AP1, the all-payer option with universal coverage and copayment requirements.

SUMMARY TABLE. ILLUSTRATIVE CHANGES IN NATIONAL HEALTH EXPENDITURES, 1991

	SP1	SP2	AP1	AP2
Characteristics of Options				
Universal Coverage	Yes	Yes	Yes	No
Copayments Required	Yes	No	Yes	Yes
Change in Billions of Dollars				
Payments to Providers	10.1	64.4	17.1	-12.7
Insurers' Overhead	-24.3	-26.8	6.2	2.8
National Health Expenditures	-14.2	37.6	23.3	-9.9
Uncompensated Costs ^a	-14.7	-20.3	-14.7	0.9
Percentage Change				
Payments to Providers	2.3	14.9	4.0	-2.9
Insurers' Overhead	-60.2	-66.5	15.4	6.9
National Health Expenditures	-1.9	5.0	3.1	-1.3
Uncompensated Costs ^a	-72.3	-100.0	-72.3	4.6

SOURCE: Congressional Budget Office based on data from the National Health Expenditure Accounts.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan; AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage.

These estimates do not include the effects of cost containment provisions--such as effective expenditure caps or price and utilization controls--that might reduce spending if they were part of the new system.

a. Includes uncompensated costs only for covered hospital and physician services.

Universal first-dollar coverage could be achieved (under SP2) at a cost that would represent less than the typical annual increase in spending for health now, while universal coverage with copayments (under SP1) might even reduce spending somewhat. Expansions in coverage would be possible at little or no cost under the single-payer options because of savings on the overhead expenses of insurers and providers and because average payments to physicians per service would be reduced by about 13 percent using Medicare's rates. Average payments to hospitals per service would be slightly higher, by about 0.5 percent.

Either of the single-payer options would increase payments to providers and reduce insurers' overhead costs. The increase in payments to providers would, however, be much larger under the system without copayments for two reasons. First, use of services would be greater if care was provided free of charge to patients. Second, uncompensated care would be eliminated because all costs would be paid by the insurer. These results assume that there would be no private supplementary insurance to cover patients' copayment costs under SP1. If such private insurance supplements were permitted and widely purchased, the effects on national health expenditures under SP1 would be similar to those for SP2.

An all-payer system would increase payments to providers if it achieved universal coverage (AP1), but payments to providers would fall if the currently uninsured remained without coverage (AP2). Under either option, the overhead costs of insurers would increase somewhat, entirely the result of an increase in use of services. The net effect would be a rise of 3.1 percent in spending for health under AP1, and a 1.3 percent drop in spending under AP2.

Changes in Payments to Providers

Spending for health care services--before any reduction in payment rates aimed at capturing providers' savings on overhead expenses--would be identical under SP1 and AP1 because payment rates, coverage, and copayment requirements would be the same for these two options; spending would be higher under SP2 (without copayments) and lower under AP2 (without universal coverage). For all options, spending on health care services for those who currently have private insurance would drop even though use of services would increase, since payments per service would be lower for this group at Medicare's rates. Health care spending for those covered by Medicaid and (under all options except AP2) for those who are now uninsured would increase because payment rates and use of services would both be higher. Spending for Medicare enrollees would increase for all options under

the assumption that Medicare's hospital rates would be higher; currently, rates per case cover only about 90 percent of hospitals' costs for Medicare cases.

Assuming payments to providers would be reduced by just enough to capture the expected savings on providers' overhead costs, their payments (and Medicare's adjusted payment rates) would differ among the four options. Providers' overhead costs under a single-payer system would be cut by one-half or more of current levels because providers would no longer have to deal with many different insurers, each with its own requirements for claiming reimbursement. Under an all-payer system, savings would be smaller because providers would still have to deal with many different insurers. In this case, the estimates assume that costs would fall to about three-quarters of current levels.

The net result of these effects--had they been in place in 1991--would be to increase payments to providers by \$10.1 billion (2.3 percent) under a single-payer system with copayment requirements, or by \$64.4 billion (14.9 percent) without copayment requirements. Payments to providers would increase by \$17.1 billion (4.0 percent) under an all-payer system with universal coverage, but would fall by \$12.7 billion (2.9 percent) under an all-payer system that did not cover the uninsured.

Changes in Insurers' Overhead Expenses

The two generic approaches examined here would affect the overhead costs of insurers quite differently. Under a single-payer system, the drop in overhead costs for insurers would be between \$24 billion and \$27 billion, with the larger savings resulting under the system without copayment requirements. Universal coverage by a single payer would eliminate the expenses of marketing insurance plans, assessing risk to determine premiums, and coordinating with other insurers who provide overlapping coverage.

Under an all-payer system, the estimates assume that insurers' overhead costs as a percentage of claims (the overhead rate) would be unchanged because the current system of private and public insurers would remain. Spending for insurers' overhead would nevertheless increase somewhat--by \$6.2 billion with universal coverage and \$2.8 billion without it--because of the additional overhead expenses associated with the higher use of services that would occur.

Under AP1, use of services would increase for the currently uninsured who would be newly covered, and for Medicaid beneficiaries who would have better access at higher payment rates. Use would also increase among

privately insured groups and Medicare enrollees in response to the prohibition of balance-billing and (for the privately insured) to lower payment rates. Under AP2, all of these same effects would occur except for the increase in use of services among the uninsured.

Other Considerations

Either of the generic approaches examined in this study could enhance the potential for cost containment compared with the current system of multiple uncoordinated payers. The introduction of uniform payment rates for hospital and physician services, with increases under the control of the federal government, would permit the government to slow the growth in health care prices. Further, a single payer (or coordination among payers in the case of an all-payer system) would make it possible to create a comprehensive data base that could be used to control growth in the volume of services as well. For example, physicians could be monitored to identify and influence those whose treatment patterns are inappropriately costly.

Under either approach, though, realizing the potential for cost containment would depend on how effectively controls were applied. If effective cost controls were put in place, research and development might be impeded and access to new technology reduced. In addition, choices of providers and medical treatments by patients would probably be more restricted than they are now.

Regardless of whether costs were constrained, both approaches would reallocate revenues among providers in ways that might be disruptive for some groups. Providers in affluent, well-insured areas would probably see their revenues fall, while those practicing in areas where a substantial proportion of the population is uninsured or poor would see revenues increase.

Further, some individual consumers would be adversely affected, especially under a single-payer system with copayment requirements. If (as assumed here) benefits under this system were actuarially equivalent to average benefits currently provided by Medicare and private insurers, people who now have more generous insurance arrangements would see their benefits fall. If the system achieved universal coverage either partly or entirely through a public plan, the financing arrangements would almost certainly raise taxes for affluent people, who are the ones least likely to see an increase in benefits.

INTRODUCTION AND BACKGROUND

Currently, there is widespread dissatisfaction with the health care system in the United States. Critics find fault with two aspects of it--that a substantial number of people lack health insurance coverage, and that health care costs are high compared with countries where coverage is universal.

This paper examines two approaches by which both universal health insurance coverage and greater control over health care costs might be achieved. It updates earlier estimates by the Congressional Budget Office (CBO) of the effects of single-payer (SP) and all-payer (AP) systems presented in a study called *Universal Health Insurance Coverage Using Medicare's Payment Rates* (December 1991), making use of new information on health care spending and on Medicare's payment rates relative to those of other payers. It expands the previous analysis by presenting single-payer results not only for a system with copayment requirements, but also for one without copayments. In addition, it shows all-payer results not only under the assumption of universal coverage, but also under the assumption that the number of uninsured would be unchanged from current levels.

The results show the effects on spending for health care services, overhead costs, national health expenditures (NHE), and the costs of uncompensated care under the assumption that some alternative payment system had been fully effective throughout 1991. Estimates for four options are presented:

- o Under SP1, hospital and physician reimbursement would be based on Medicare's current payment methods, except that balance-billing (collecting the difference between the provider's charge and the insurer's payment rate from patients) would be prohibited. Copayments would be required of patients, similar to the copayment requirements now typical in the United States, but coverage would be universal with benefits actuarially equivalent to benefits now provided through Medicare and private insurance. Private insurers would not be permitted to offer coverage for copayments or services covered by the single-payer plan.
- o SP2 is a Canadian-style single-payer system. Coverage would be universal as under SP1, but no copayments would be required of patients. Although physicians would be paid based on Medicare's rates, hospitals would be funded through global budgets and would maintain only very limited management information systems.

- o With AP1, the current mix of insurers would continue. All hospitals and physicians would be reimbursed based on Medicare's payment methods, and copayments but not balance-billing would be required of patients. Coverage would be universal, with currently uninsured people covered under Medicare.
- o AP2 is like AP1 except that coverage would not be universal. Those currently without insurance would remain without coverage.

The estimates show only the immediate effects of each option--savings on insurers' and providers' overhead expenses, savings from lower average payment rates, and the costs of extending coverage to the uninsured (for all but AP2). Additional savings might accrue if the new systems provided for effective cost containment through, for example, expenditure caps or price and utilization controls. If such features were included, spending might be significantly lower than for the options shown.

This analysis builds on the estimates developed in the previous CBO study and by others. See Appendix A for a review of recent studies by others, all of which examine a Canadian-style single-payer system like SP2.

ASSUMPTIONS AND METHODS USED TO DEVELOP CBO'S ESTIMATES

For both SP1 and AP1, the general provisions are the same. Insurance coverage would be universal, and copayment requirements would be imposed on patients. All payers would use Medicare's payment and utilization review procedures for physician services, and balance-billing would be prohibited for all patients. The level of payment for hospital services would be set just to cover hospitals' costs, and Medicare's case-specific payment methods would be used.

Under the single-payer system, benefits would be actuarially equivalent to the average benefits now provided to people covered under private insurance plans and Medicare, while under the all-payer system benefits for those who now have insurance would be unchanged. Under the single-payer plan, private insurers would be prohibited from offering coverage for patients' copayment costs or for any services covered under the public plan; a residual

Medicaid program would cover copayment costs for eligible low-income people.¹

Differences from the Earlier CBO Study

The estimating assumptions and methods used in this paper differ in a number of ways from those in CBO's earlier study; the most significant differences are described below. As a result of these differences, national health expenditures under the single-payer system would fall by an estimated 1.9 percent, compared with 4.3 percent in the earlier study; under the all-payer system, they would increase by 3.1 percent, compared with 0.9 percent in the previous work.

Updated to 1991. The results presented here are based on the 1991 National Health Expenditure accounts, while earlier results used the 1989 accounts. In both cases, the results estimate what spending would have been if the alternative payment systems had been in place throughout the year.

New Information on Payment Rates. The results in this paper make use of better information on the differences between Medicare's payment rates and those of other payers than was available for use in the earlier study.² This later information indicates that Medicare's rates are lower, compared with rates paid by private insurers, than the earlier study assumed.³

Higher Estimate of Spending by the Newly Insured. The earlier study based its assumptions about how much spending on health care would increase for the newly insured on a 1980 medical expenditure survey, while this paper relies on 1987 survey results. Tabulations from the later survey indicate that the increase in spending for those currently without insurance would be higher than was assumed in the previous study.

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1. Given this set of assumptions, it is reasonable to assume that the new benefit package offered under SP1--before changes in payment rates--would leave use of services unchanged from current levels, on average, for all groups but the uninsured.
 2. For hospital rate differentials, see Prospective Payment Assessment Commission, *Optional Hospital Payment Rates*, Congressional Report C-92-03 (March 1992). For differentials in physician rates, see Physician Payment Review Commission, *Optional Payment Rates for Physicians: An Analysis of Section 402 of H.R. 3626* (March 1992).
 3. See Table 4, pp. 22-23, in Congressional Budget Office, *Universal Health Insurance Coverage Using Medicare's Payment Rates* (December 1991), for a list of assumptions used in that study to compare with Table 1 in this paper.

Estimation of Effects on Other Insured Services. The previous study developed estimates only for changes in spending for insured physician and hospital services, ignoring possible changes in spending for other insured services, such as prescription drugs and services from nonphysicians (dentists, podiatrists, and psychologists, for example). These other services account for about 20 percent of all currently insured services, and changes in spending for them would probably occur when use of physician and hospital services changed. This paper expands the analysis to include estimates of changes in spending for these other insured services.

More Stringent Assumptions About Overhead Costs. For the overhead costs of insurers and providers, the results here assume that changes in the number of claims would affect these costs but that changes in payment rates alone would not. The earlier study made the less realistic assumption that overhead costs would change in response to different payment rates even when the number of claims did not change.

The estimates here also assume that savings on providers' overhead would come only from lower costs for billing or management information systems. The earlier results based estimated savings on differences in all overhead costs between providers in the United States and Canada, although probably not all of these differences would be eliminated if a single-payer system were put in place in the United States. For example, U.S. hospitals probably would not eliminate their more extensive management information systems, which Canadian hospitals are now attempting to duplicate. As another example, part of the higher overhead for physicians in the United States occurs because they are more likely than Canadian physicians to have in-office equipment and personnel for diagnostic tests, and this difference in practice might continue.

In addition, reported overhead amounts in the 1991 NHE accounts were adjusted to eliminate premium taxes paid by private insurers because these are transfers of income, not real costs of providing insurance. According to an unpublished estimate by the General Accounting Office, private insurers paid about \$1 billion in taxes on health insurance premiums in 1990.

In another adjustment, the ratio of overhead costs to benefits paid for private insurance, Medicare, and Medicaid--totaled for the six years from 1986 through 1991--was used to smooth out the six-year cycle typical of insurance premiums.⁴ Premiums, after subtracting benefits paid, determine insurers' overhead (including profits) in the NHE accounts. Thus, reported overhead

4. J. Gabel, R. Formisano, B. Lohr, and S. DiCarlo, "Tracing the Cycle of Health Insurance," *Health Affairs*, vol. 10, no. 4 (Winter 1991).

costs for any one year may misrepresent the typical overhead of insurers, as a percentage of benefits, since benefit payments do not follow the same cyclical pattern as premiums.

These adjustments make the estimates of overhead costs and possible savings under policy alternatives lower than those presented in the earlier study. As a result of the adjustments, baseline costs for insurance overhead are about 8 percent lower than reported in the NHE accounts--\$40.3 billion instead of \$43.9 billion. Consequently, the adjusted total for NHE is \$748.2 billion instead of \$751.8 billion for 1991.

Consideration of Bad Debt for Insured Groups. Although the previous study incorporated estimates of the costs of uncompensated care for the currently uninsured population, it ignored bad debt for insured groups. The results in this paper incorporate explicit assumptions about bad debt for insured groups, both currently and under the policy options examined.

Additional Policy Options. In addition to the single-payer and the all-payer options that were examined in the previous CBO study, this paper also examines a single-payer option without copayment requirements and an all-payer option without universal coverage. Key assumptions for each of the four options examined here are summarized in Table 1.

Methods and Assumptions Used

CBO's estimates assume that a portion of spending for hospital and physician services--spending under all current public programs except Medicare and Medicaid and all hospital spending for long term care--would be unaffected by the systems examined here. These amounts and all other spending not typically covered by Medicare or private insurance plans appear in an unchanging "uninsured spending" category in the reported tables, accounting for about 35 percent of current NHE. In fact, however, these expenditures might be reduced significantly under some of the options examined; for example, there might be less need for state medically needy and general assistance programs and for federal veterans' programs.

That portion of spending for hospital and physician services that would be affected was allocated among four groups of people--Medicare enrollees, Medicaid beneficiaries, those with private insurance, and the currently uninsured. Current spending reported for Medicare enrollees includes not only the Medicare benefits reported in the national accounts, but also out-of-pocket payments by these patients for insured services and benefits paid by private insurers and Medicaid on their behalf. Spending reported for

TABLE 1. ASSUMPTIONS USED FOR ESTIMATES

	SP1	SP2	AP1	AP2
Characteristics of Options				
Universal Coverage	Yes	Yes	Yes	No
Copayments Required	Yes	No	Yes	Yes
Payment-Rate Differentials for Hospital Services (Percent)^a				
Adjusted Medicare Rates as a Percentage of:				
Actual charges	67.6	67.6	67.6	67.6
Private insurance rates	78.1	78.1	78.1	78.1
Medicaid rates	125.0	125.0	125.0	125.0
Payment-Rate Differentials for Physician Services (Percent)				
Medicare Rates as a Percentage of:				
Actual charges	63.8	63.8	63.8	63.8
Private insurance rates	70.0	70.0	70.0	70.0
Medicaid rates	156.3	156.3	156.3	156.3
Percentage Change in Use of Hospital Services				
As a Result of:				
Volume offset				
Providers losing revenues	n.a.	n.a.	n.a.	n.a.
Providers gaining revenues	0	0	0	0
Insurance coverage	28.5	28.5	28.5	n.a.
Higher Medicaid rates	8.1	8.1	8.1	8.1
Eliminating copayments	n.a.	23.0	n.a.	n.a.
Percentage Change in Use of Physician Services				
As a Result of:				
Volume offset				
Providers losing revenues	55.0	55.0	55.0	55.0
Providers gaining revenues	0	0	0	0
Insurance coverage	97.2	97.2	97.2	n.a.
Higher Medicaid rates	50.0	50.0	50.0	50.0
Eliminating copayments	n.a.	23.0	n.a.	n.a.
Percentage Change in Selected Overhead Rates at Current Service Levels				
Insurers (Relative to PHE)	-3.9	-4.4	0	0
Hospitals (Relative to revenues)	-1.5	-6.0	-0.8	-0.8
Physicians (Relative to revenues)	-4.1	-6.2	-2.1	-2.1

SOURCE: Congressional Budget Office.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan; AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage; n.a. = not applicable; PHE = personal health expenditures.

a. Hospital rates adjusted to reflect the different treatment costs of non-Medicare patients and then increased by 11 percent to cover hospital costs.

Medicaid beneficiaries includes all benefits except those paid on behalf of Medicare enrollees. Spending reported for the privately insured includes their out-of-pocket payments for insured services and all private insurance benefits except those paid on behalf of Medicare enrollees. Current spending reported for the uninsured includes their out-of-pocket payments for hospital and physician services and state and local subsidies to community hospitals for uncompensated care.

Spending on other insured services was not allocated among groups by type of current insurance coverage. Other insured services include dental services (24.2 percent), other nonphysician professional care (28.8 percent), prescription drugs (21.6 percent), short-term home health care (7.3 percent), short-term nursing home care (4.7 percent), eye care (5.8 percent), and other personal care (7.6 percent).

Estimated Effects on Other Insured Services. To estimate changes in spending for insured services other than hospital and physician care, two assumptions were made. First, that overall use of these services would change in proportion to the overall change in use of physician services. Second, that the reduction in average payment rates for these services would be analogous to the average reduction in physician rates once Medicare rates were adopted universally--a drop of about 13 percent.

These assumptions may overstate new spending for other insured services because use of these other services might increase by less than the increase in physician services. Although physicians control access to many of these other services, additional use of physician services might not result in a proportional increase in the use of other insured services because they would be appropriate only for a fraction of a physician's patients, and because in some cases the additional physician services would substitute for these other services.

Payment-Rate Differentials. Differences among payers in rates paid for hospital and physician services are now substantial. For hospital services in 1990, the Prospective Payment Assessment Commission found that Medicaid rates covered about 80 percent of costs, private insurance rates covered about 128 percent of costs, and Medicare's rates covered about 90 percent of costs.⁵ Consequently, either Medicare's rates would have to be increased by about 11 percent if they were to apply to all hospital services, or hospitals would have to be more efficient to stay in operation--at least at current service

5. Prospective Payment Assessment Commission, *Optional Hospital Payment Rates*.

levels.⁶ These estimates assume that rates would be increased to cover current average costs, so that the adjusted rates for hospital services would be 111 percent of current Medicare rates, 78 percent of private insurance rates, and 125 percent of Medicaid rates. The net result, on average for all patients, would be to increase hospital rates per service slightly, by about 0.5 percent.

For physician services, the Physician Payment Review Commission estimates that Medicare's payment rates are about 70 percent of rates paid by private insurers, and about 156 percent of rates paid by Medicaid.⁷ The estimates in this paper assume that Medicare's rates would apply to all payers without adjustment. On average for all patients, this assumption would reduce payments per service by about 13 percent.

The expansion of services that would occur under each of the options in this paper might, however, immediately reduce average costs per service for providers. This reduction would be especially likely for hospitals, which are currently operating well below capacity. If this happened, Medicare's rates could be reduced accordingly, and health spending would be lower than the estimates here show. Further, in the long run, the average costs of hospitals might be reduced even more by regionwide planning and coordination of resources, permitting still lower rates.

Volume Offset to Revenue Changes. The estimates assume that an increase in the volume of services provided would offset 55 percent of the potential reduction in physician revenues that would otherwise result from reducing payment rates or other policy changes. They also assume that no analogous decrease in the volume of services would occur in response to policy changes that increased physician revenues.⁸ No offset to volume is assumed for hospital services because most hospitals would see their revenues increase under each of the options.⁹

The assumption of a one-sided volume offset is consistent with cost-estimating procedures developed by the Health Care Financing Administration and adopted by CBO. Some empirical evidence indicates that the volume

6. Medicare's case-specific payment rates would also have to be expanded to account for the different treatment requirements of the younger people who would be covered under universal plans.

7. Physician Payment Review Commission, *Optional Payment Rates for Physicians*.

8. This method implicitly assumes that physicians who treat Medicare and privately insured patients (whose payment rates would fall) are different from those who treat Medicaid and uninsured patients (whose payment rates would increase).

9. For hospitals that would lose revenues, CBO's usual estimating assumption is that 10 percent to 15 percent of the revenue loss would be offset by an increase in volume.

offset works in both directions, however.¹⁰ As providers' workload and revenues increase because patients use more services when insurance coverage is expanded, providers might respond by limiting their services. For example, physicians might schedule fewer follow-up visits, or might be less likely to suggest elective diagnostic or surgical procedures. If so, the estimates in this paper overstate spending because they ignore the partially offsetting drop in volume that might be a response among providers whose revenues would increase. Results under an assumption of a two-sided volume offset are shown in Appendix B.

Use by the Uninsured. The estimates assume that charges for health care services used by the uninsured were \$35.4 billion in 1991, consistent with the assumptions of other recent studies and with survey information. They also assume that about 30 percent of these charges were paid out of pocket. State or local governments sponsored another \$2.8 billion, or 8 percent.¹¹

The estimates of new spending under the three options that would cover the uninsured assume that this group would increase its use of hospital services by 28.5 percent, and use of physician services by 97.2 percent, once a typical plan with copayments was provided to it.¹² These estimates assume that use of services by the uninsured, once insured, would equal use by demographically similar people with insurance.

Use by Medicaid Beneficiaries. Somewhat higher use by Medicaid recipients is also assumed to result under all options from the better access they would have because of higher payment rates. The estimated increase in use is a portion of the increase in use assumed for the uninsured, based on the relative improvement in payments for the two groups.

Eliminating Copayments. The estimates assume that eliminating copayments would increase use of insured services among the groups affected, although the amount of the increase is uncertain because of potential provider responses. Results from the RAND Health Insurance Experiment for a plan with 25 percent coinsurance compared with free care showed a 23 percent increase in use of covered services when copayment requirements were

10. S. Christensen, "Volume Responses to Exogenous Changes in Medicare's Payment Policies," *Health Services Research*, vol. 27, no. 1 (April 1992); J. Hadley and R. Lee, "Toward a Physician Payment Policy: Evidence from the Economic Stabilization Program," *Policy Sciences* (1978-1979).

11. This is the 1990 value developed by the Prospective Payment Assessment Commission inflated to 1991 by the growth in spending for hospital services.

12. Based on CBO tabulations from the 1987 National Medical Expenditure Survey. Spending for those who reported themselves as uninsured throughout the year was adjusted upward to equal spending by otherwise similar people who had employment-based insurance (and no public insurance) throughout the year.

dropped; this experiment could pick up only patient responses, however.¹³ By contrast, in a natural experiment in Canada that encompassed both patient responses to eliminating copayments and offsetting provider responses, there appeared to be little overall increase in the use of services when universal first-dollar health insurance was put in place.¹⁴

The assumption used here for the one option (SP2) that would eliminate copayments is that use would increase by the full amount predicted by the RAND results, since supply would not appear to be a constraint under current conditions. The combined effects of eliminating copayments plus better access for those who are currently uninsured or covered by Medicaid would be to increase overall use of hospital services by 21 percent. Because hospitals are currently using only about 70 percent of capacity, they could increase services by more than 40 percent with present capacity.¹⁵ Use of physician services would increase overall by about a third, making the workload for U.S. physicians comparable to those in Canada. In 1987, Canadian physicians had about 30 percent more patient visits (both ambulatory and hospital inpatient) per capita than did physicians in the United States.¹⁶ This assumption ignores offsetting responses from providers that might occur, however. (See Appendix B for results that allow for offsetting responses from providers.)

Providers' Overhead. Overhead costs for providers are not shown in the national accounts but are folded in with spending for services, and the amounts reported in the tables in this paper represent only a portion of the total. For physicians, overhead costs shown are an estimate of billing costs (8.25 percent of revenues).¹⁷ For hospitals, they are an estimate of costs for billing (3 percent of revenues) and for maintaining the more extensive

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13. W. Manning and others, "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment," *American Economic Review*, vol. 77, no. 3 (June 1987).
 14. P. Eaterline, V. Salter, A. McDonald, and J. McDonald, "The Distribution of Medical Services Before and After 'Free' Medical Care: The Quebec Experience," *New England Journal of Medicine*, vol. 289, no. 22 (November 29, 1973).
 15. American Hospital Association, *Hospital Statistics, 1991-1992* (Chicago: AHA, 1991).
 16. According to 1987 data from the Organization for Economic Cooperation and Development, patient visits (office, home, and hospital inpatient) averaged 3,916 per physician in Canada, compared with 2,974 in the United States, a 31 percent difference.
 17. K. Grumbach, T. Bodenheimer, D. Himmelstein, and S. Woolhandler, "Liberal Benefits, Conservative Spending: The Physicians for a National Health Program Proposal," *Journal of the American Medical Association*, vol. 265, no. 19 (May 15, 1991).

management information systems typical in the United States relative to Canada (another 3 percent).¹⁸

The estimates assume that the billing costs of both hospitals and physicians under SP1 would be half those costs under the current system, since providers would no longer have to deal with multiple insurers, each with its own requirements for filing claims.¹⁹ Case-specific billing, both to insurers and to patients, would continue, however. Moreover, hospitals would retain the extensive management information systems they now have.

Under SP2, hospitals would be funded under global budgets and would maintain very limited management information systems. As a result, all of the 6 percent difference in overhead costs between hospitals in Canada and the United States estimated by the General Accounting Office would be eliminated.²⁰ Billing costs of physicians would fall to a quarter of current levels under this option, based on estimates of billing costs for Canadian physicians equal to only 2 percent of revenues.²¹

Under the two all-payer systems, an arbitrary assumption is made that savings on providers' billing costs would be only half the savings expected under SP1. Some savings would be expected compared with current costs because claims processing would be more standardized, but differing requirements among insurers and problems of payment coordination would remain.

Insurers' Overhead. No change in insurers' overhead rates (overhead costs as a percentage of claims) is expected under the all-payer systems. The current mix of insurers would still exist, with the same need for private insurers to market their products, coordinate payments with other insurers, and make a profit.

Under the two single-payer options, however, insurers' overhead would be reduced. The estimates assume that the single payer would have

18. Unpublished tabulations from the American Hospital Association for billing costs. Excess management information system costs are assumed to account for the other 3 percent of the 6 percent differential between Canadian and U.S. hospitals found by the General Accounting Office.

19. For physicians, the study by Grumbach and others indicates that billing costs under a Canadian-style system are only about a fourth of billing costs in the United States. CBO's assumption in this paper is that the necessity to bill patients for copayments, in addition to billing the single payer, would double billing costs--making them half of current costs in the United States. The same assumption is then made for hospital billing costs as well.

20. General Accounting Office, *Canadian Health Insurance: Lessons for the United States* (June 1991).

21. Grumbach and others, "Liberal Benefits, Conservative Spending."

Medicare's rate of program overhead costs as a percentage of insured services. In addition, overhead costs for other public programs would continue. In particular, a residual Medicaid program would remain that would, for eligible people, cover any required copayments and services (primarily long-term care) not covered by the primary insurance plan. Public health, veterans' health, and workers' compensation programs are also assumed to continue.

Under the single-payer option that would eliminate copayments (SP2), Medicaid would have little to cover except long-term care. Long-term care patients make up about 9 percent of the Medicaid caseload, but account for an estimated 20 percent of Medicaid overhead costs. Hence, the estimates for SP2 assume the costs of administration for Medicaid would be 20 percent of current levels.

Neither the absence of copayment requirements nor global budgeting is expected to change overhead costs appreciably for the single payer. Under global budgeting, just as under Medicare's prospective payment system, the insurer would need to assess the case mix of each hospital in order to set budgets appropriately, and it would still have an incentive to monitor the appropriateness of admissions.

Some analysts say that a single payer would face a lower overhead rate than Medicare's because of economies of scale in processing claims, while others believe that the rate (as a percentage of benefits) would be higher. They base the latter claim on the fact that overhead costs are most closely associated with the number of claims processed and the belief that average payment per claim would be lower under a universal plan than it is under Medicare. The estimates here reject both arguments. Economies of scale in processing claims appear to be fully realized by Medicare carriers already, with no further reductions in cost per claim to be expected from expanding the population served in each region. Further, the average benefit per claim is unlikely to fall significantly if the insured population is expanded beyond the current Medicare population because the higher costs of the Medicare population are very closely tied to higher claim rates, rather than higher amounts per claim.²² The assumptions used here may nevertheless overstate overhead costs under option SP2 because global budgeting might reduce costs somewhat.

22. CBO tabulations from the National Medical Expenditure Survey for 1967 show that average health expenditures for the aged were \$4,181, about 2.8 times higher than the nationwide average of \$1,496. The differential was nearly matched by the differential incidence of medical visits (inpatient and outpatient combined), which were 2.5 times higher than the nationwide average for the aged population.

Bad Debt and Uncompensated Costs. Bad debt reflects charges for health care services provided but not paid for, while uncompensated costs are the estimated costs for that care (generally less than charges). Charges for uncompensated care in 1991 were an estimated \$19.8 billion for hospital care (77 percent for the uninsured), and \$11.4 billion for physician care (89 percent for the uninsured). For those covered by Medicare alone or by private insurance, about 3.2 percent of charges for hospital care and about 1.1 percent of charges for physician care were unpaid.

Under the three options that would retain copayments, providers would continue to encounter nonpayment or bad debt from some of their patients, even when all were insured. The estimates assume that current bad-debt rates for insured groups would persist. For the options that would cover the uninsured, this group's bad-debt rate would be the same as for other insured groups. For the option that would leave the uninsured uncovered, the estimates assume the uninsured would continue to pay only what they now pay out of pocket. Under the option with no copayment requirements, there would be no bad debt for any group.

ESTIMATES FOR SINGLE-PAYER AND ALL-PAYER OPTIONS

This section presents estimates for the four options described earlier. Each option would use Medicare's payment rates for hospital and physician services (with hospital rates adjusted to cover average costs) and would eliminate balance-billing on physician services for all patients. Medicare enrollees' bad debts on hospital copayment liabilities would no longer be covered under these options. None of the estimates include the effects of cost containment provisions--such as effective expenditure caps or price and utilization controls--that might reduce spending if they were part of the new system.

Both single-payer options would achieve universal insurance coverage. SP1 would retain copayment requirements and case-specific billing for hospitals. SP2 would eliminate copayment requirements and use global budgeting for hospital payments. Although private insurers would be permitted to offer coverage for services excluded from the single-payer plan, no effects of any additional private health insurance are included in the estimates.

Both of the all-payer options would retain copayment requirements and case-specific billing for hospitals. AP1 assumes that universal coverage would

be achieved by extending Medicare to those currently without insurance.²³ AP2 assumes that those currently without insurance would remain so.

Overall Changes in National Health Expenditures

Differences in the effects on NHE under the four options examined here would be modest (see Table 2). The largest difference--7 percent between SP1 and SP2--is less than the amount by which expenditures now increase annually (about 11 percent). NHE would be lowest under SP1, the single-payer option that would retain copayment requirements. Spending would be highest under SP2, the single payer with first-dollar coverage, but would be nearly as high under AP1, the all-payer option with universal coverage and copayment requirements.

SP1. Under this single-payer option that would retain copayment requirements, the combined effects of changes in spending for health care services and for overhead expenses would be to reduce NHE by \$14.2 billion or 1.9 percent. Payments to providers, minus expected savings on their overhead costs, would increase by \$10.1 billion. Costs for uncompensated care would fall from \$20.3 billion to \$5.6 billion.

SP2. Under this option without copayment requirements, the combined effects of changes in spending for health care services and for overhead would be to increase NHE by \$37.6 billion, or 5.0 percent. Under this option, payments to providers would increase by \$64.4 billion, and there would be no uncompensated costs.

AP1. In this all-payer option with universal insurance coverage, the combined effects of changes in spending for health care services and for insurance administration would increase NHE by \$23.3 billion. Payments to providers would increase by \$17.1 billion. Costs for uncompensated care would fall by \$14.7 billion, to \$5.6 billion.

AP2. Under this option without universal coverage, the combined effects of changes in spending for health care services and for insurance administration would reduce NHE by \$9.9 billion, or 1.3 percent. Payments to providers would fall by \$12.7 billion. Costs for uncompensated care would increase by \$0.9 billion, primarily the result of an increase for Medicare patients.

23. To assure universal coverage, Medicare benefits would have to be provided free of premiums to this group. However, Medicaid plans and employers providing insurance would have incentives to eliminate coverage once free coverage was available through Medicare. Thus, the expansion of Medicare would go far beyond the currently uninsured population unless severe restrictions were put in place.

TABLE 2. ESTIMATED CHANGES IN NATIONAL HEALTH EXPENDITURES AND UNCOMPENSATED COSTS, 1991 (In billions of dollars)

	SP1	SP2	AP1	AP2
Payments to Affected Providers for Services				
Actual	400.9	400.9	400.9	400.9
Estimated	420.8	490.5	420.8	392.7
Change	19.9	89.6	19.9	-8.3
Percentage Change	5.0	22.3	5.0	-2.1
Payments to Affected Providers for Overhead Expenses				
Actual	31.0	31.0	31.0	31.0
Estimated	21.2	5.9	28.2	26.6
Change	-9.8	-25.2	-2.8	-4.4
Percentage Change	-31.7	-81.1	-9.0	-14.2
Total Payments to Affected Providers				
Actual	431.9	431.9	431.9	431.9
Estimated	442.0	496.4	449.1	419.3
Change	10.1	64.4	17.1	-12.7
Percentage Change	2.3	14.9	4.0	-2.9
Insurers' Overhead Expenses				
Actual	40.3	40.3	40.3	40.3
Estimated	16.0	13.5	46.5	43.1
Change	-24.3	-26.8	6.2	2.8
Percentage Change	-60.2	-66.5	15.4	6.9
Uninsured Spending				
Actual	275.9	275.9	275.9	275.9
Estimated	275.9	275.9	275.9	275.9
Change	0	0	0	0
Percentage Change	0	0	0	0
National Health Expenditures				
Actual	748.2	748.2	748.2	748.2
Estimated	734.0	785.8	771.5	738.3
Change	-14.2	37.6	23.3	-9.9
Percentage Change	-1.9	5.0	3.1	-1.3
Uncompensated Costs^a				
Actual	20.3	20.3	20.3	20.3
Estimated	5.6	0	5.6	21.2
Change	-14.7	-20.3	-14.7	0.9
Percentage Change	-72.3	-100.0	-72.3	4.6

SOURCE: Congressional Budget Office based on data from the National Health Expenditure Accounts.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan; AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage.

a. Includes uncompensated costs only for covered hospital and physician services.

Changes in Spending for Hospital Services

About 77 percent of hospital spending would be affected under the four options. For affected hospitals, estimated expenditures would increase by amounts varying from \$0.1 billion under AP2 to \$51.9 billion under SP2 (see Table 3). Spending on hospital services would increase for every patient group except those who now have private insurance.

SP1. Overall, spending for covered hospital services would increase by 4.1 percent, or \$9.1 billion, under this option. Medicare's payments for hospital care would be increased to cover current average costs per case, but Medicare would no longer cover enrollees' bad debt as it does now. On balance, payments for Medicare enrollees would increase by 9.3 percent, or \$7.5 billion. Applying cost-adjusted Medicare payment rates to those who currently receive Medicaid benefits would increase hospital spending by \$13.4 billion. The increase would result from the 25 percent increase in payment rates that would occur under this approach, which would not only increase payment levels for services Medicaid recipients now receive, but would also increase their use of services by improving access.

Spending for hospital services for the privately insured would fall by \$20.7 billion. On average, payment rates would be only 78 percent of what private insurers pay now, and the fall in spending under this option would fully reflect this difference. Hospital spending for the uninsured would increase by \$9.0 billion. Charges for hospital care to the uninsured were an estimated \$21.7 billion in 1991, representing costs of \$14.7 billion. About \$6.5 billion was paid out of pocket by the uninsured and another \$2.8 billion was paid through state and local subsidies to hospitals for uncompensated care. For the uninsured, spending would increase not only because most of the costs of services the uninsured now use would be paid, but also because they would use more services (an estimated 28.5 percent more) with insurance coverage.

SP2. Under this option, overall spending for hospital services would increase by 23.3 percent, or \$51.9 billion. Spending for Medicare enrollees would increase by 31.6 percent, or \$25.2 billion. This result incorporates an increase in payment levels and an increase in use of services expected to result from eliminating copayment requirements. By contrast, Medicaid recipients would be unaffected by copayment requirements because a residual Medicaid program would pay them. Hence, the increase in spending for them under this option would be the same as under SP1.

For the privately insured, spending would fall by 0.7 percent, or \$0.7 billion. This drop in spending would be smaller than under SP1 because use of services would be higher and bad debt would be eliminated if there were

TABLE 3. ESTIMATED CHANGES IN SPENDING FOR COVERED HOSPITAL SERVICES, 1991 (In billions of dollars)

	SP1	SP2	AP1	AP2
Medicare Enrollees				
Actual	80.0	80.0	80.0	80.0
Estimated ^a	87.4	105.2	87.4	87.4
Change	7.5	25.2	7.5	7.5
Percentage Change	9.3	31.6	9.3	9.3
Medicaid Beneficiaries				
Actual	38.1	38.1	38.1	38.1
Estimated	51.5	51.5	51.5	51.5
Change	13.4	13.4	13.4	13.4
Percentage Change	35.2	35.2	35.2	35.2
People with Private Insurance				
Actual	94.8	94.8	94.8	94.8
Estimated	74.0	94.1	74.0	74.0
Change	-20.7	-0.7	-20.7	-20.7
Percentage Change	-21.9	-0.7	-21.9	-21.9
Currently Uninsured People				
Actual	9.3	9.3	9.3	9.3
Estimated	18.2	23.2	18.2	9.3
Change	9.0	13.9	9.0	0
Percentage Change	96.6	149.8	96.6	0
Total				
Actual	222.1	222.1	222.1	222.1
Estimated	231.2	274.0	231.2	222.3
Change	9.1	51.9	9.1	0.1
Percentage Change	4.1	23.3	4.1	0.1

SOURCE: Congressional Budget Office based on data from the National Health Expenditure Accounts.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan;
AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage.

a. Estimates assume Medicare would no longer pay the bad debts of enrollees for hospital copayments.

no copayment requirements. For the uninsured, spending would increase by \$13.9 billion, a larger increase than under SP1 as a result of eliminating copayment requirements and bad debt.

AP1. The effects on hospital spending under this option would be identical to those under SP1, since the two variants assume the same payment rates, the same copayment requirements, and the same universal coverage with actuarial equivalence in benefits.

AP2. The effects of this option would differ from those under SP1 only for the group that is currently uninsured. Because the group would remain uninsured in this case, hospital spending for them would not change. As a result, the overall increase in spending for hospital services under this option--\$0.1 billion--would be lower than under SP1.

Changes in Spending for Physician Services

About 93 percent of spending for physician services would be affected under the options examined here. For those services affected, the change in spending would range from a decrease of \$5.6 billion under AP2 to an increase of \$25.2 billion under SP2 (see Table 4). Spending on physician services would increase for Medicaid beneficiaries under all options. For the uninsured, it would increase under all options that would achieve universal coverage.

SP1. Overall, spending for physician services would rise by \$7.3 billion under this option. Since Medicare's payment rates for physician services would be unchanged (before extracting savings on providers' overhead), spending for Medicare enrollees would change only because of the prohibition on balance-billing. In 1991, balance-billing amounts were an estimated \$1.8 billion. Elimination would reduce spending for physician services to Medicare enrollees by \$0.8 billion, under the assumption that higher use of services would offset 55 percent of the reduction in balance-billing.

Applying Medicare payment rates to those who currently receive Medicaid benefits would increase spending for physician services to this group by \$5.5 billion. The growth would result from the 56 percent increase in payment rates that would occur under this approach, which would not only raise payments for services Medicaid recipients now receive, but would also increase their use of services by improving access.

Spending for physician services for the privately insured would decrease by \$10.3 billion. On average, payment rates would be only 70 percent of what

TABLE 4. ESTIMATED CHANGES IN SPENDING FOR COVERED PHYSICIAN SERVICES, 1991 (In billions of dollars)

	SP1	SP2	AP1	AP2
Medicare Enrollees				
Actual	48.5	48.5	48.5	48.5
Estimated	47.7	55.6	47.7	47.7
Change	-0.8	7.1	-0.8	-0.8
Percentage Change	-1.7	14.5	-1.7	-1.7
Medicaid Beneficiaries				
Actual	4.1	4.1	4.1	4.1
Estimated	9.6	9.6	9.6	9.6
Change	5.5	5.5	5.5	5.5
Percentage Change	134.4	134.4	134.4	134.4
People with Private Insurance				
Actual	75.3	75.3	75.3	75.3
Estimated	65.0	70.9	65.0	65.0
Change	-10.3	-4.4	-10.3	-10.3
Percentage Change	-13.7	-5.8	-13.7	-13.7
Currently Uninsured People				
Actual	4.1	4.1	4.1	4.1
Estimated	17.0	21.1	17.0	4.1
Change	12.9	17.0	12.9	0
Percentage Change	314.9	415.8	314.9	0
Total				
Actual	132.0	132.0	132.0	132.0
Estimated	139.3	157.2	139.3	126.4
Change	7.3	25.2	7.3	-5.6
Percentage Change	5.5	19.1	5.5	-4.3

SOURCE: Congressional Budget Office based on data from the National Health Expenditure Accounts.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan;
AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage.

private insurers pay now, and the fall in spending would be nearly half this difference under the assumption that 55 percent of the reduction in payment rates would be offset by increased volume. Spending on physician services for the uninsured would increase by \$12.9 billion. Physician charges for the uninsured were an estimated \$14.9 billion in 1991. Of this amount, \$4.1 billion was paid out of pocket by the uninsured. Spending would increase not only because more of the costs of services the uninsured now receive would be paid (all but a small amount for bad debt), but also because they would use more services (an estimated 97.2 percent more) with insurance coverage.

SP2. In this case, overall spending for physician services would rise by \$25.2 billion. Spending for Medicare enrollees would increase by \$7.1 billion--the combined effects of greater use of services in the absence of copayments and elimination of balance-billing. As with hospital services, Medicaid beneficiaries would be unaffected by copayment requirements because the residual Medicaid program would pay them; hence, the increase in spending for this group would be the same as under SP1. For the privately insured, spending on physician services would fall by \$4.4 billion, a smaller drop than under SP1 because of higher use of services in the absence of copayment requirements. For the uninsured, spending would increase by \$17.0 billion--more than under SP1 as a result of eliminating copayment requirements and bad debt.

AP1. As with hospital services, the effects of this all-payer option on spending for physician services would be identical to those for SP1. Spending would increase by \$7.3 billion.

AP2. The effects of this option differ from those for SP1 only for the group that currently lacks insurance coverage. Because the uninsured would still lack coverage, their spending for physician services would be unchanged. Consequently, total spending for physician services would be lower than under SP1 by \$12.9 billion.

Changes in Spending for Other Insured Services

The estimates assume that the percentage change in use of other insured services would equal the percentage change in use of physician services under each option, with analogous reductions in payment rates as well (about 13 percent). These assumptions generate an increase of 4.5 percent under SP1 and AP1, an increase of 16.1 percent under SP2, and a decrease of 3.6 percent under AP2 (see Table 5). Actual increases would be smaller if changes in use of these other services were less than proportional to use of physician services.

TABLE 5. ESTIMATED CHANGES IN SPENDING FOR OTHER COVERED SERVICES, 1991 (In billions of dollars)

	SP1	SP2	AP1	AP2
Actual	77.8	77.8	77.8	77.8
Estimated	81.3	90.3	81.3	75.0
Change	3.5	12.5	3.5	-2.8
Percentage Change	4.5	16.1	4.5	-3.6

SOURCE: Congressional Budget Office based on data from the National Health Expenditure Accounts.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan; AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage.

Changes in Overhead Costs

The combined effects of changes in providers' and insurers' overhead costs would reduce total overhead costs by \$34.1 billion under SP1, which would have copayment requirements and case-specific hospital billing (see Table 6). Under SP2--the Canadian-style system--total overhead costs would fall by \$52.0 billion. Under AP1, total overhead costs would increase by \$3.4 billion, while they would fall by \$1.6 billion under AP2.

Providers' Overhead. Providers' overhead costs would decrease by \$9.8 billion under SP1, \$25.2 billion under SP2, \$2.8 billion under AP1, and \$4.4 billion under AP2. The differences result from different assumptions about how much hospitals' management information system (MIS) costs and providers' billing costs would fall for each option.

Under SP1, hospital MIS costs as a percentage of revenues would remain at current levels. Hospitals would submit case-specific bills both to the single payer and to patients for reimbursement. The estimates assume that billing costs per claim would be half of those under the current system. Savings would occur because there would no longer be the need to bill many different insurers, each with its own claims requirements, although potential savings would be partially offset by the additional costs associated with higher use of services. Physicians and other providers would need to bill both the single payer and patients for reimbursement. The estimates assume that this

requirement would double billing rates relative to a Canadian-style single-payer plan, because two bills must be sent for each service. Put another way, billing costs as a percentage of revenues would be about half of current levels, with savings arising because there would no longer be the need to bill many different insurers. Again, potential savings would be partially offset by the additional costs associated with higher use of services.

TABLE 6. ESTIMATED CHANGES IN SPENDING FOR OVERHEAD EXPENSES, 1991 (In billions of dollars)

	SP1	SP2	AP1	AP2
Providers				
Actual	31.0	31.0	31.0	31.0
Estimated	21.2	5.9	28.2	26.6
Change	-9.8	-25.2	-2.8	-4.4
Percentage Change	-31.7	-81.1	-9.0	-14.2
Insurers				
Actual	40.3	40.3	40.3	40.3
Estimated	16.0	13.5	46.5	43.1
Change	-24.3	-26.8	6.2	2.8
Percentage Change	-60.2	-66.5	15.4	6.9
Total				
Actual	71.3	71.3	71.3	71.3
Estimated	37.2	19.3	74.7	69.7
Change	-34.1	-52.0	3.4	-1.6
Percentage Change	-47.8	-72.9	4.8	-2.2

SOURCE: Congressional Budget Office based on data from the National Health Expenditure Accounts.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan; AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage.

Under SP2, the estimates assume that the higher MIS and billing costs as a percentage of revenues typical of U.S. hospitals, compared with hospitals in Canada, would be eliminated, reducing hospital overhead by 6 percent of revenues.²⁴ Some billing costs would remain, however, just as they do in Canada, because hospitals would have to bill for amenities not covered by the single payer and they would have to coordinate reimbursement with workers' compensation programs. The estimates assume that billing rates for physicians and other providers would fall to one-fourth of current levels, accounting for about 2 percent of revenues.²⁵ Physicians would need to bill only the single payer for most services.

Under AP1 and AP2, hospital MIS rates would remain at their current levels, while providers' billing rates would fall to 75 percent of current levels. Providers would still have to bill patients for copayments and a multitude of insurers for covered benefits. A reduction in billing rates of 25 percent is assumed to result because of uniform payment rates (making it easier to collect patient copayments at the time of service) and because of the greater standardization of claims procedures that would occur under an all-payer system. The difference in estimates for the two all-payer variants is entirely the result of differences in use of services by the uninsured between the two options, affecting the overhead costs of both providers and insurers.

Insurers' Overhead. For insurers, overhead costs would fall by \$24.3 billion under SP1 and by \$26.8 billion under SP2, the net result of substantially lower costs per claim paid but a larger number of claims. Overhead costs would increase by \$6.2 billion under AP1 and by \$2.8 billion under AP2. The estimates assume no change in costs per claim paid under these two all-payer options, compared with current amounts, but costs would be higher nevertheless because the number of claims would increase.

Under SP1, insurance overhead costs would drop from the current level (6.1 percent of personal health expenditures) to 2.4 percent, reducing these costs by \$24.3 billion. This estimate assumes that overhead costs for the single payer would be comparable to those for Medicare, currently equal to about 1.9 percent of the cost of covered services. It also assumes continuation of current overhead costs for Medicaid and all other public health programs except Medicare.

Under SP2, insurance overhead costs would fall to 1.9 percent of personal health expenditures, saving \$26.8 billion. Greater savings would

24. General Accounting Office, *Canadian Health Insurance: Lessons for the United States*.

25. Grumbach and others, "Liberal Benefits, Conservative Spending."

occur under this option than under SP1 because Medicaid overhead costs would be only 20 percent of their current level. The savings in overhead costs for Medicaid would occur because Medicaid would cover only long-term care costs under this option; there would be no copayment costs to pay for low-income people. As a result, the Medicaid case load would be only about 9 percent of current levels. Overhead costs associated with the remaining case load would be higher than average, however.

Under AP1 and AP2, the overhead costs of insurers would increase--by \$6.2 billion under AP1 and by \$2.8 billion under AP2. These increases would be entirely the result of higher use of services by various groups compared with current levels of use, because the estimates assume that overhead costs of insurers per claim would be unchanged.

Uncompensated Costs. In 1991, costs for uncompensated care were an estimated \$20.3 billion (see Table 7). These costs would fall under all options but AP2, since bad debt for privately insured people and those currently without insurance would decrease. Bad debt would fall for the privately insured, even under the assumption that their bad-debt rates would be unchanged, as a result of lower charges for services. Bad debt would fall for those currently without insurance once they were covered because their bad-debt rates would decline to the much lower rates typical of those with insurance. By contrast, bad debt would increase for Medicare enrollees under all but SP2, under the assumption that Medicare would no longer compensate hospitals for the failure of enrollees to pay statutory copayment liabilities.

Under SP1 and AP1, costs for uncompensated care would fall by \$14.7 billion, to \$5.6 billion. Of this amount, less than \$1 billion would represent bad debt for previously uninsured groups.

Under SP2, uncompensated costs would be eliminated. This option would provide universal first-dollar coverage, so there would be no copayments on which patients might default.

Under AP2, costs for uncompensated care would increase by \$0.9 billion, to \$21.2 billion. Under this option, the uninsured population would remain and so would the large amounts of uncompensated care provided to them. The uninsured would account for nearly 80 percent of uncompensated costs in this case.

TABLE 7. ESTIMATED CHANGES IN COSTS OF UNCOMPENSATED CARE, 1991 (In billions of dollars)

	SP1	SP2	AP1	AP2
Medicare Enrollees				
Actual	0.3	0.3	0.3	0.3
Estimated ^a	1.7	0	1.7	1.7
Change	1.4	-0.3	1.4	1.4
Percentage Change	539.7	-100	539.7	539.7
Medicaid Beneficiaries				
Actual	0	0	0	0
Estimated	0	0	0	0
Change	0	0	0	0
Percentage Change	0	0	0	0
People with Private Insurance				
Actual	3.7	3.7	3.7	3.7
Estimated	3.2	0	3.2	3.2
Change	-0.5	-3.7	-0.5	-0.5
Percentage Change	-13.6	-100.0	-13.6	-13.6
Currently Uninsured People				
Actual	16.4	16.4	16.4	16.4
Estimated	0.8	0	0.8	16.4
Change	-15.6	-16.4	-15.6	0
Percentage Change	-95.2	-100.0	-95.2	0
Total				
Actual	20.3	20.3	20.3	20.3
Estimated	5.6	0	5.6	21.2
Change	-14.7	-20.3	-14.7	0.9
Percentage Change	-72.3	-100.0	-72.3	4.6

SOURCE: Congressional Budget Office based on data from the National Health Expenditure Accounts.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan; AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage.

a. Estimates assume Medicare would no longer pay the bad debts of enrollees for hospital copayments.

OTHER CONSIDERATIONS AND IMPLICATIONS

The estimates presented above suggest that if the nation adopted either a single-payer or an all-payer system that paid providers at Medicare's rates (adjusted to cover hospitals' costs and for savings to providers on overhead), the population that is currently uninsured could be covered without dramatically increasing national spending on health. This result would be possible because of savings in overhead costs and lower average payment rates for physician services. The prospects for controlling the growth of health care expenditures in future years would also be improved under either system.

Why then does the United States retain its current complex and costly system of health insurance? One reason is that adopting either system would be a big change, one that would generate substantial costs during the transition and have profound and sometimes negative effects over the longer run. The government's role as a health insurer would increase, thereby reducing the market for private insurance. Resources would be redistributed among consumers, providers, and others employed in the health care sector. Further, if either system were combined with effective cost control mechanisms, some of the advantages of the current health insurance system (for those with coverage) would be undermined. These advantages, which include ready access to care, unrestricted choice of providers and treatment alternatives for patients, and rapid development and dissemination of new technologies, are highly valued by most Americans.

Expanding the Role of Government as a Health Insurer

Even though national health expenditures would not change much under the approaches this paper examines, costs would be shifted from the private sector to government (see Table 8). Expansion of the government sector--and the corresponding contraction of the private insurance market--would be much larger under a single payer than under an all-payer system, but the potential for reducing national health expenditures would also be greater.²⁶

Under a single-payer system, private insurers would be prohibited from offering any coverage for basic medical services, although they could offer insurance for services not covered by the universal plan. This restriction would severely limit their market and could cause significant shifts of investment dollars and employment to other sectors of the economy. If,

26. The calculations here treat the premiums paid by Medicare enrollees as government revenues rather than as private-sector payments.

TABLE 8. ESTIMATED CHANGES IN SPENDING FOR HEALTH BY GOVERNMENT, THE PRIVATE SECTOR, AND NATIONWIDE, 1991

	SP1	SP2	AP1	AP2
Change in Billions of Dollars				
Direct Spending				
Government	224.4	330.7	75.2	37.5
Private sector	-238.5	-293.0	-51.8	-47.3
Nationwide	-14.2	37.6	23.3	-9.9
Direct Spending and Tax Expenditures				
Government	145.0	251.3	75.2	37.5
Private sector	-159.2	-213.7	-51.8	-47.3
Nationwide	-14.2	37.6	23.3	-9.9
Percentage Change				
Direct Spending				
Government	67.8	99.9	22.7	11.3
Private sector	-57.2	-70.2	-12.4	-11.3
Nationwide	-1.9	5.0	3.1	-1.3
Direct Spending and Tax Expenditures				
Government	35.4	61.3	18.3	9.1
Private sector	-47.1	-63.2	-15.3	-14.0
Nationwide	-1.9	5.0	3.1	-1.3

SOURCE: Congressional Budget Office based on data from the National Health Expenditure Accounts.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan; AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage.

however, the single payer used private insurers to process claims, as Medicare does now, shifts in employment would be smaller.

An all-payer system would not greatly change the private insurance industry. Private insurers would continue to provide coverage for basic medical services to those who are now privately insured, but the federal government would set their payment rates for hospital and physician services. Because these rates would typically be lower than the rates they pay now, insurers could either reduce premiums or increase benefits for their insured populations, thereby passing the benefits on to consumers. If insurers increased their profits instead, as they might in the short run, the mismatch in the distribution of benefits and costs that might occur under this approach would be greater.

SP1. Under a single-payer system with copayment requirements, government direct spending for health would increase by \$224 billion, or 67.8 percent. Federal direct spending would increase by \$244 billion, but federal tax expenditures for health would fall by about \$70 billion as employers would no longer have deductible expenses for employee health benefits.²⁷ State direct spending would be reduced by about \$20 billion, and state tax expenditures for health would fall by another \$9 billion. These results assume that states would retain financial responsibility only for their portion of the costs of a residual Medicaid program. In this case, Medicaid would pay the universal plan's copayment requirements and the cost of medical services excluded from the plan (such as long-term care) for eligible people. Many alternatives, however, could be designed for sharing the costs of a single-payer system among levels of government.

On average, people would have an additional \$54 to spend under this single-payer plan, although actual effects on individuals would vary greatly around this average. More specifically, the increase in taxes necessary to finance additional costs under this plan would be about \$856 per capita. Tax revenues would increase automatically to some degree if employers increased taxable forms of compensation (such as wages) as their health benefit costs were transferred to the public sector. Because private-sector costs would decrease by \$910 per capita, the net cost of achieving universal insurance coverage under this single-payer system would be negative.

SP2. Under a single-payer system without copayment requirements, people would have \$144 a year less to spend than they have now, on average. That is, there would be a net cost to achieve universal first-dollar insurance coverage. Government costs would increase by \$331 billion (99.9 percent),

27. These tax expenditures include forgone revenues from income and payroll taxes.

while private sector costs would fall by \$293 billion (70.2 percent). Consumer payments for health would fall by \$1,118 per capita, but taxes would have to increase by \$1,261 per capita to finance this plan.

AP1. Under an all-payer system with universal coverage, government spending for health would increase by about \$75 billion, or 22.7 percent. This estimate assumes that only those who are currently uninsured would take advantage of the option to enroll in Medicare. Of this increase, \$70 billion would be federal spending, and the rest would be state spending. In this case, there would be no reduction in federal and state tax expenditures because employers would continue to provide employee health benefits from before-tax income. Federal spending would increase for Medicare because of its extension to the uninsured, and for Medicaid because payment rates would be higher. State spending would increase for Medicaid, but this increase would be partly offset by eliminating payments to hospitals for uncompensated care.

If these additional government costs for health care were financed through taxes, tax bills would be about \$287 higher per capita in 1991. Nearly 70 percent of this increase in taxes, however, would be offset by lower private health care payments. The population as a whole would pay about \$89 more per capita to achieve universal health insurance coverage. Those who would pay most of the additional costs, though, would probably not receive additional benefits except for the guarantee of coverage.

AP2. Under an all-payer system without universal coverage, government spending for health would increase by \$37 billion (11.3 percent), while private sector spending would fall by \$47 billion (11.3 percent). Taxes would have to increase by \$143 per capita to pay higher government costs, while private sector payments would drop by \$181 per capita. Hence, people would have an additional \$38 per capita to spend.

Distributional Effects

One consideration in deciding whether or not to change the current health care system is how much the new system would redistribute resources among health care consumers, providers, and others employed in the health care sector. To facilitate comparison of these effects for single-payer and all-payer systems, only the first option of each system is discussed here because they are comparable--both would retain copayment requirements and provide universal coverage.

Effects on Consumers. The effects on consumers would depend not only on the change in their insurance benefits, but also on the net change in their

payments for insurance coverage. A shift from private toward public financing would not necessarily require that consumers pay more, as a group, for health insurance. It could, however, imply a substantial redistribution of the costs among individuals. The potential for redistribution would be much greater under a single-payer than under an all-payer approach, because the shift to public financing would be much greater.

Under the present system, those with private health insurance are already paying virtually all of the costs of that coverage--either as premiums or through lower wages that compensate for the cost of employment-based health insurance benefits. Private insurance, then, is effectively financed by a flat tax on each insured individual. This implicit tax probably varies with the size of the insured household and the choice of insurance coverage, but not much with income. If explicit taxes were used to finance an expansion in public health insurance, they would probably not be as regressive as the implicit tax that is now imposed on the privately insured.

If revenues to pay for expanding the role of government as health insurer were obtained through any of the usual taxes, high-income people would pay a relatively large proportion of them. People in this group are typically well insured now, and would be unlikely to receive more generous coverage under either approach examined here. They would receive some financial benefits, such as lower cost-sharing expenses, although those benefits would often fall short of the increased taxes they would pay.

Either of the approaches examined here, however, would also offer nonfinancial benefits. Insurance coverage would be guaranteed, in contrast to the current situation in which changes in employment or marital status threaten continuity of coverage. Such a guarantee would eliminate uncertainty and anxiety about coverage and would remove a barrier to changing jobs that exists now. Further, especially under a single payer, the difficulties of collecting insurance benefits that are often encountered under the current system would be greatly reduced.

Effects on Providers. Since Medicare's payment rates would be used for all covered services under both approaches examined here, the two approaches would have the same redistributive effects on providers. On average, payment rates for physician services would be reduced by 13 percent, while payment rates for hospital services would be increased by 0.5 percent if Medicare rates were paid for all services. Revenues to providers as a group, net of costs, would increase because payments would be made for care that had previously been provided without full reimbursement and because use of services would rise. Despite this increase, some providers would see their net revenues fall

because the effects of lower payment rates for privately insured patients would be larger than the effects of higher payments for others.

The effects on net revenues for individual providers would differ, depending on their current mix of patients by source of payment. Those who had been serving low-income, largely uninsured populations would find their net revenues rising and the demand for their services increasing. Physicians in areas where the population was already well insured and physicians who had refused to accept uninsured patients would collect less unless they were able to offset lower payment rates by changing their practice or billing patterns. (Another way to recover lost revenues--billing patients for amounts that exceeded approved payment rates--would be prohibited in the options examined here.)

The effects on hospitals would be similar. Large urban hospitals that provide substantial services at a loss to Medicaid recipients and patients without insurance would be financially better off under a system with universal coverage and uniform payment rates. These hospitals would receive higher payments for services to Medicaid patients and previously uninsured individuals. Both patient groups would probably also use more hospital services. Uniform payment rates would have very different effects, however, on hospitals located in areas where most of the population was already well insured through private plans. Since Medicare's payment rates (even after adjustment to cover costs) are lower than private rates, on average, these hospitals would receive less for their existing mix of patients, although greater use by those who were previously uninsured and by Medicaid recipients would offset some of this loss in net income.

Effects on Employment in the Health Care Sector. Under either a single-payer or an all-payer system, providers would need less billing staff and more health care personnel. The increased need for health care personnel--attributable to greater use of services--would be the same under both systems. But the decrease in demand by providers for billing staff would be greater under a single-payer system than under an all-payer approach because billing procedures would be simpler under a single payer.

The demand for administrative personnel in the private insurance industry would not be expected to change under an all-payer system, while a substantial fall in demand could take place under a single payer. The size of the potential decline under a single payer would depend on two factors: how aggressively private insurers moved into the insurance market for services not covered by the universal plan, and how extensively the public plan used private insurers as administrative agents for processing claims. If the public plan used private insurers as administrative agents, most personnel who now

process claims for private insurers would simply begin processing claims for the public insurer.

Introducing either a single-payer or an all-payer system could cause temporary dislocations in the labor market, with more extensive disruption under a single-payer system. These dislocations would adversely affect some workers and could temporarily raise the costs of unemployment insurance.

Potential for Cost Control

Adopting either a single-payer or an all-payer system could improve control of health care costs because the government would set prices and could limit their rate of increase. Both approaches might also permit more effective control over total spending by making it easier to limit the volume of services. Although the potential for control of total spending would be inherent under a single payer, the same potential could be achieved under an all-payer system if it included comprehensive and coordinated controls for all payers on the volume of services as well as prices. Under either system, though, realizing the potential for cost containment would depend on how effectively controls were applied.

Under either system, it would be easier to reduce the rate of increase in health care costs through price controls, whether or not other cost containment methods were adopted. Even if the new payment rates were applied in a spending-neutral fashion for the first year, price increases that were permitted in the future could be well below those that would have occurred under the current system. The magnitude of savings achieved by limiting price increases would depend both on allowed increases and on the extent to which increases in volume would offset some of the potential savings from price controls. Although a substantial volume offset seems to occur now when prices are controlled, this response might abate over time. In other words, although increases in volume might partially offset price controls initially, the potential for further expansion of services per capita might gradually be exhausted.

Under either a single-payer or an all-payer system with coordination among payers, other cost control measures would also be more effective. For example, either system could be designed to produce data on the practice patterns of physicians. If these data were available, the treatment practices of physicians could be monitored to identify and influence those whose practices were significantly more costly than the norm. Similarly, a comprehensive data base derived from a uniform payment system could provide the means for health planning and capital controls. Administrators could identify

hospitals and other facilities that were not using their equipment optimally, as well as those that needed more capacity.

Control over price increases and the availability of uniform data on specific aspects of providers' operations would also provide a stronger foundation for establishing realistic expenditure targets or caps for the health care system. Increases that exceeded the targets could be broken down by type of provider and geographic area, which could permit penalties to be focused on problem areas rather than applied broadly.

Successful control over prices and the volume of services would, however, also mean that providers would receive less for each service, that the average consumer might receive fewer services, and that there might be less employment in the health sector unless increased demand by the newly insured was great enough to offset the effects of cost controls. Moreover, some of the desirable features of the current health care system could be undermined. In particular, cost controls could impede research and development, reduce access to new technology, and restrict consumers' choices about providers and treatment alternatives. Whether these trade-offs would be acceptable depends on whether the nation places a higher priority on controlling costs or on maintaining other desirable characteristics of the current health care system.

APPENDIXES

APPENDIX A. OTHER STUDIES OF CANADIAN-STYLE SINGLE-PAYER SYSTEMS

Heightened interest in how other countries finance health care has been one response to rapidly rising health care costs in the United States. Considerable interest has focused on the Canadian system, where each province provides universal coverage to its residents through a public insurance plan that is largely tax-financed.

A number of studies have appeared recently that develop estimates of the effects on insurers' and providers' overhead costs under a Canadian-style single-payer system. Some of the studies also estimate the increase in spending for health care services that would result. All of the studies assume there would be global budgeting for hospitals and no copayments collected from patients. Hence, hospitals would have virtually no billing costs (only for amenities and workers' compensation benefits), and physicians would bill only the single public insurer.

This appendix examines recent estimates for a Canadian-style single payer and discusses reasons for differences among them. It also compares the estimates with analogous estimates developed by CBO in this paper (for option SP2). Estimates from three studies are shown, including all those with estimates both for the change in overhead costs and for newly induced spending on health care services (see Table A-1). Other more preliminary and less complete studies that have been published are not shown in the tables.

The three studies examined are Grumbach, Bodenheimer, Himmelstein, and Woolhandler (GBHW), "Liberal Benefits, Conservative Spending: The Physicians for a National Health Program Proposal;"²⁸ General Accounting Office (GAO), *Canadian Health Insurance: Lessons for the United States*;²⁹ and Sheils, Young, and Rubin (SYR), "O Canada: Do We Expect Too Much from Its Health System?"³⁰

These studies typically derive estimates for the change in overhead costs by comparing those costs as a percentage of health care spending in Canada and the United States, and assuming that the Canadian percentage would apply in the United States if the latter adopted a Canadian-style single-

28. *Journal of the American Medical Association*, vol. 265, no. 19 (May 15, 1991).

29. General Accounting Office, HRD-91-90 (June 1991).

30. *Health Affairs*, vol. 11, no. 1 (Spring 1992).

TABLE A-1. PREVIOUS ESTIMATES OF SPENDING CHANGES UNDER A CANADIAN-STYLE SINGLE-PAYER SYSTEM

Study	Change in Overhead Costs for				Newly Induced Spending	Overall Change in National Health Expenditures
	Insurers	Hospitals	Physicians	Total		
As a Percentage of National Health Expenditures						
GBHW ^a	-3.8	-4.4	-1.3	-9.5	1.7	-7.8
GAO ^b	-4.6	-2.5	-2.0	-9.1	8.7	-0.4
SYR ^c	-3.0	-1.8	-1.5	-6.4	10.6	4.2
In Billions of Dollars for 1991						
GBHW ^a	-27	-31	-9	-67	12	-55
GAO ^b	-34	-18	-15	-67	64	-3
SYR ^c	-23	-13	-11	-47	78	31

SOURCE: Congressional Budget Office.

- a. K. Grumbach, T. Bodenheimer, D. Himmelstein, and S. Woolhandler, "Liberal Benefits, Conservative Spending: The Physicians for a National Health Program Proposal," *Journal of the American Medical Association*, vol. 265, no. 19 (May 15, 1991), Table 1.
- b. General Accounting Office, *Canadian Health Insurance: Lessons for the United States* (June 1991), Table 5.1.
- c. J. Sheils, G. Young, and R. Rubin, "O Canada: Do We Expect Too Much from Its Health System?" *Health Affairs*, vol. 11, no. 1 (Spring 1992), Tables 1-3.

payer system. By contrast, earlier studies by Woolhandler and Himmelstein (WH) assumed that the Canadian level of overhead costs per capita would apply.³¹

In her study on this issue, Danzon argues that the method used in the WH studies overstates the estimated savings because it fails to control for differences in the level of health care benefits between the two countries.³² If, for example, overhead costs were 10 percent of health spending in both countries, the WH method would generate savings because per capita health spending is higher in the United States than in Canada, while the method used by the other studies would show no savings.

Which method is more accurate, however, depends critically on whether higher spending in the United States reflects higher service prices or more real use of services compared with Canada. Because the number of services used per capita is higher in Canada despite lower per capita spending (as a result of lower service prices), and because overhead costs are probably most closely related to the number of services provided, percentage comparisons may tend to understate savings on overhead.

Insurers' Overhead Costs

If a Canadian-style single-payer system were put in place in the United States, overhead costs of insurers would be lower for a number of reasons. There would be no marketing expenses for basic health insurance, no costs associated with setting premiums, and no profits claimed by insurers. Assuming that the public health plan was financed largely through taxes or tax-like premium assessments collected by employers, collection costs would be minimal. Further, because basic coverage would be universal and there would be no overlapping coverage by different insurers, the costs of determining eligibility and of coordinating among multiple payers would be virtually eliminated. (Only coordination with workers' compensation programs would remain.)

Published estimates of savings on insurers' overhead lie in a narrow range, although they differ in the methods used. The GBHW study (with

31. D. Himmelstein and S. Woolhandler, "Administrative Waste in U.S. Health Care," *New England Journal of Medicine*, vol. 314, no. 7 (February 13, 1986); S. Woolhandler and D. Himmelstein, "The Deteriorating Administrative Efficiency of the U.S. Health Care System," *New England Journal of Medicine*, vol. 32A, no. 18 (May 2, 1991).

32. P. Danzon, "Hidden Overhead Costs: Is Canada's System Less Expensive?" *Health Affairs*, vol. 11, no. 1 (Spring 1992).

savings equal to 3.8 percent of national health expenditures) compared the ratio of insurance overhead to health expenditures for Canada and the United States for 1987, while the GAO study (4.6 percent of NHE) made a similar comparison for 1989, when overhead costs represented a higher proportion of health spending in the United States. The SYR study (3.0 percent of NHE) did not rely on a comparison with Canada. Instead, SYR assumed that the overhead rate under Medicare would apply to a single payer in the United States and compared that to current overhead costs for insurers in the United States, averaged over the insurance cycle. Each of these studies assumed some continued overhead costs for private insurers who would offer coverage for services not covered by the public plan and for continuing public health programs.

Because of the cyclical nature in which insurance reserves are built up and depleted over a six-year period, the SYR study probably has a better measure of average overhead costs for insurers, and it may have another advantage as well.³³ The cost of insurers' overhead reported in the national health expenditure accounts for the United States and Canada that were used for the GBHW and GAO estimates may not be comparable in significant ways, as noted by Danzon. Some items, such as premium taxes, that appear as overhead expenses for private insurers in the United States should not appear in a comparison with public insurance, since the taxes are simply an income transfer, not a real expense. Other items--such as the cost of capital--are explicit overhead expenses for private insurers that ought to be added in for public insurers as well but are not in the Canadian accounts.

Although none of the studies adjusted the U.S. costs for premium taxes, the SYR study did include the cost of public capital in its single-payer overhead costs. It used Medicare's overhead rate as representative of a single payer's costs in the United States, and an implicit cost of capital is included in those costs as reported in the national health expenditure accounts.

Hospitals' Overhead Costs

Savings on overhead costs for hospitals would result under a Canadian-style single-payer system because, with global budgeting, hospitals would have virtually no billing costs and little need to maintain patient-specific financial information. Both the GBHW and GAO studies estimate potential savings by comparing expenses, as a percentage of revenues, for a partial set of overhead items in Canadian and U.S. hospitals, assuming that all of the difference could

33. J. Gabel, R. Formisano, B. Lohr, and S. DiCarlo, "Tracing the Cycle of Health Insurance," *Health Affairs*, vol. 10, no. 4 (Winter 1991).

be saved. The SYR study makes line-by-line assumptions about which overhead cost items would be reduced for hospitals under a single-payer system and by how much. Under the assumptions made in the SYR study, overhead for hospitals would be reduced by 4.7 percent of revenues, or by 1.8 percent of national health expenditures.

According to the GBHW study, savings on hospitals' overhead would be 4.4 percent of NHE, while the GAO estimate is 2.5 percent of NHE. This difference is the result of differing assumptions about overhead costs as a percentage of hospital revenues in the United States (see Table A-2). Both studies assume that the overhead items included in the comparison average 9 percent of hospital revenues in Canada, using data from the Canadian government. GAO assumes the comparable figure for U.S. hospitals is 15 percent, using nationwide hospital data. The GBHW study assumes the comparable figure is 20 percent, based on data from California hospitals.

The GAO estimate of potential savings on hospitals' overhead expenses is more apt to be reliable than the GBHW estimate--because the overhead items included are more comparable and because both the Canadian and the U.S. data are nationwide estimates. It may also be more accurate than the SYR estimate, since it does not rely on perhaps arbitrary assumptions about what costs would be eliminated under a single-payer system.

However, only about half of the savings estimated by GAO is the result of billing costs for hospitals in the United States that do not exist for Canadian hospitals.³⁴ The rest might be obtained only if U.S. hospitals discarded the more detailed management information systems they currently maintain, and this development seems unlikely. In fact, Canadian hospitals are now working to develop patient-specific financial accounting systems similar to those used in the United States to improve management and budgeting.

Physicians' Overhead Costs

The billing costs of physicians would be reduced under a single-payer plan because physicians would no longer have to deal with many different insurers, each with its own requirements for making claims. Further, without copayment requirements, there would be no need to bill patients.

34. Billing-related costs account for about 3 percent of revenues, according to unpublished data from the American Hospital Association. A similar estimate was obtained by the SYR study (counting patient billing costs and half of admitting costs as shown in its Exhibit 3).

TABLE A-2. ASSUMPTIONS BEHIND ESTIMATES FOR INSURERS' AND PROVIDERS' OVERHEAD, AS A PERCENTAGE OF BASE

Study	Approach Used to Measure Difference	U.S. System	Canadian-Style System	Savings	Base Used
Insurers					
GBHW ^a	Percentage of PHE going to overhead (U.S. vs. Canada)	5.9	1.4	4.5	PHE for 1987
GAO ^b	Percentage of NHE going to overhead (U.S. vs. Canada)	5.8	1.2	4.6	NHE for 1989
SYR ^c	Specific assumptions about current U.S. costs to retain, adjusted for insurance cycle	5.9	2.4	3.5	PHE for 1991
Hospitals					
GBHW ^a	Percentage of revenues spent for selected administrative functions (California vs. Canada)	20.2	9.0	11.2	Revenues
GAO ^b	Percentage of revenues spent for selected administrative functions (U.S. vs. Ontario)	15.0	9.0	6.0	Revenues
SYR ^c	Specific assumptions about current U.S. costs to retain	33.4	28.6	4.8	Revenues

(Continued)

TABLE A-2 Continued.

Study	Approach Used to Measure Difference	U.S. System	Canadian-Style System	Savings	Base Used
Physicians					
GBHW ^a	Percentage of revenues going to billing (U.S. vs. Canada)	8.3	2.0	6.3	Revenues
GAO ^b	Percentage of revenues going to nonphysician personnel plus specific billing activities	22.3	12.0	10.3	Revenues
SYR ^c	Specific assumptions about current U.S. costs to retain	31.6	23.5	8.1	Revenues

SOURCE: Congressional Budget Office.

NOTES: PHE = personal health expenditures; NHE = national health expenditures.

- a. K. Grumbach, T. Bodenheimer, D. Himmelstein, and S. Woolhandler, "Liberal Benefits, Conservative Spending: The Physicians for a National Health Program Proposal," *Journal of the American Medical Association*, vol. 265, no. 19 (May 15, 1991).
- b. General Accounting Office, *Canadian Health Insurance: Lessons for the United States* (June 1991), and *Canadian Health Insurance: Estimating Costs and Savings for the United States* (April 1992).
- c. J. Sheils, G. Young, and R. Rubin, "O Canada: Do We Expect Too Much from Its Health System?" *Health Affairs*, vol. 11, no. 1 (Spring 1992).

The GBHW study indicates that savings on physicians' overhead would be about 1.3 percent of NHE, while GAO estimates savings of 2.0 percent of NHE, and the SYR estimate is 1.5 percent of NHE. The GBHW study attempts to isolate the difference in billing costs using survey information. For the United States, this information comes from the American Medical Association. For Canada, it comes from the Ontario Medical Association. By contrast, the GAO study uses the difference in all costs for nonphysician personnel to approximate differences in costs resulting from billing. As with hospitals' overhead, the SYR study makes line-by-line assumptions about which overhead cost items would be reduced and by how much.

The GAO results probably overstate potential savings because not all of the difference in nonphysician personnel costs between the United States and Canada stems from billing requirements. For example, Canadian physicians are less likely to have laboratory and radiology equipment in their offices than are physicians in the United States. Hence, the higher costs for nonphysician personnel in the United States reflect, in part, the additional staffing costs of these in-office facilities.

The GBHW results may understate the potential savings on billing costs, however, for two reasons. First, the estimate of Canadian billing costs (2 percent of revenues) is purposely a generous one. Second, the estimate of billing costs in the United States (8.3 percent of revenues) accounts only for patients insured by Medicare and Blue Shield, ignoring billing costs for about 40 percent of patients. However, the SYR study reaches essentially the same estimate of billing costs in the United States as a percentage of revenues.³⁵

Spending for Health Care Services

The studies examined in this paper all assume that universal insurance coverage would increase use of hospital and physician services among those who are currently without insurance by approximately the same amounts, based on comparisons between insured and uninsured people in a 1980 survey of medical expenditures (see Table A-3).³⁶ Unlike the others, the SYR study assumes an increase in use of nursing home and home health services as well (not shown).

35. Adding together the amounts for claims filing/billing, claims adjudication, and utilization management from Exhibit 2 in the SYR study.

36. Reported in the SYR study.

TABLE A-3. ASSUMPTIONS BEHIND ESTIMATES OF NEWLY INDUCED SPENDING FOR HOSPITAL AND PHYSICIAN SERVICES (In billions of dollars)

Study	Coverage for the Uninsured			Eliminating Copayments		
	Current Use by Uninsured	Increase in Use		Increase in Use		
		Percent	Amount	Percent	Amount	Services
GBHW ^a	36	34	12	0	0	Total
GAO ^b	36	34	12	10	n.a.	Hospital
				17	n.a.	Physician
				n.a.	52	Total
SYR ^c	33	34	11	10	n.a.	Hospital
				31	n.a.	Physician
				n.a.	50	Total

SOURCE: Congressional Budget Office.

NOTES: n.a. = not available. Increase in use includes changes in the number and the complexity of services, measured by spending at current prices.

- a. K. Grumbach, T. Bodenheimer, D. Himmelstein, and S. Woolhandler, "Liberal Benefits, Conservative Spending: The Physicians for a National Health Program Proposal," *Journal of the American Medical Association*, vol. 265, no. 19 (May 15, 1991).
- b. General Accounting Office, *Canadian Health Insurance: Lessons for the United States* (June 1991). Percentage increase in use from eliminating copayments was applied to all insured people.
- c. J. Shells, G. Young, and R. Rubin, "O Canada: Do We Expect Too Much from Its Health System?" *Health Affairs*, vol. 11, no. 1 (Spring 1992). Percentage increase in use from eliminating copayments was applied only to people now in plans with copayments.

The GBHW study allows only for an increase in use of hospital and physician services by those who are now without insurance, assuming that increased demand from eliminating copayments would be entirely offset by providers' responses. Although they recognize that patients' demand for services would increase if copayments were eliminated, the authors argue that the supply of services would shift toward those now poorly served with no significant increase in the total--based on experience in Quebec before and after implementation of national health insurance there.³⁷

The GAO and SYR studies make the more conservative assumption that overall use of services would increase as a result of eliminating copayments, allowing either no offset by providers (SYR) or only a partial offset (GAO). Both studies assume that use of hospital services would increase by 10 percent, consistent with results from the RAND Health Insurance Experiment.³⁸ The SYR study assumes that use of physician services would increase by 31 percent, using the RAND results, while the GAO study assumes an increase of only 17 percent (the average of the 31 percent increase predicted by the RAND results and the 3 percent average increase predicted by Canadian experience). For both hospital and physician services, GAO's percentage increases are applied to all spending, while the SYR study assumes more appropriately that spending would rise only for those now in plans with copayment requirements.

Comparison with CBO's Estimates

Table A-4 compares CBO's estimates for a Canadian-style single payer (SP2) with those presented in previous studies. In each case, only the estimated changes as a percentage of NHE are reported because each study used a different projection for NHE in 1991, making comparison of dollar amounts problematic. CBO's estimate for health spending under a Canadian-style single-payer system is larger than the other estimates. As discussed in the text, however, the conservative assumptions underlying CBO's estimate may overstate spending.

Although estimation methods differed in a number of ways, CBO's estimate for the overall effect on national health expenditures is closest to the

37. See P. Enterline, V. Salter, A. McDonald, and J. McDonald, "The Distribution of Medical Services Before and After 'Free' Medical Care: The Quebec Experience," *New England Journal of Medicine*, vol. 289, no. 22 (November 29, 1973). See also GAO, *Canadian Health Insurance: Lessons for the United States*, pp. 77-79.

38. See W. Manning and others, "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment," *American Economic Review*, vol. 77, no. 3 (June 1987).

TABLE A-4. COMPARISON OF CBO AND OTHER ESTIMATES OF SPENDING CHANGES UNDER A CANADIAN-STYLE SINGLE-PAYER SYSTEM, AS A PERCENTAGE OF NATIONAL HEALTH EXPENDITURES

Study	Changes in Overhead Costs for				Newly Induced Spending	Overall Change in National Health Expenditures
	Insurers	Hospitals	Physicians	Total		
GBHW ^a	-3.8	-4.4	-1.3	-9.5	1.7	-7.8
GAO ^b	-4.6	-2.5	-2.0	-9.1	8.7	-0.4
SYR ^c	-3.0	-1.8	-1.5	-6.4	10.6	4.2
CBO	-4.2	-1.8	-1.1	-7.1	12.2	5.0

SOURCE: Congressional Budget Office.

- a. K. Grumbach, T. Bodenheimer, D. Himmelstein, and S. Woolhandler, "Liberal Benefits, Conservative Spending: The Physicians for a National Health Program Proposal," *Journal of the American Medical Association*, vol. 265, no. 19 (May 15, 1991).
- b. General Accounting Office, *Canadian Health Insurance: Lessons for the United States* (June 1991).
- c. J. Sheils, G. Young, and R. Rubin, "O Canada: Do We Expect Too Much from Its Health System?" *Health Affairs*, vol. 11, no. 1 (Spring 1992).

SYR estimate--an increase of 5.0 percent compared with SYR's estimated increase of 4.2 percent. CBO's estimated savings on overhead costs are about 11 percent larger than SYR's as the result of various differences in estimating assumptions. CBO's estimates of spending on health care services are higher than SYR's for two reasons--CBO assumed higher increases in use for the uninsured and an offsetting increase in the volume of physician services among those providers whose revenues would fall. CBO's estimates of spending for services would be even higher, compared with the SYR estimate, except for CBO's assumption that Medicare's (adjusted) rates would be used to pay for hospital and physician services. Although this assumption implies no significant change in average hospital payment rates, it would reduce average physician and other payment rates by about 13 percent. By contrast, the SYR study assumes no change in average payment rates for any covered services.

Both the CBO and SYR estimates are higher than those developed by GBHW and GAO for several reasons. First, the CBO and SYR results include estimated effects on insured services other than hospital and physician care, while the other two studies do not. Second, neither the CBO nor the SYR study assumes a favorable offset in volume in response to policies that would increase providers' revenues, while the GBHW study assumes that providers would entirely offset the increased demand for services resulting from eliminating copayment requirements, and the GAO study assumes that about half of that increased demand would be offset. Third, the CBO and SYR studies make more stringent, albeit different, assumptions about savings on total overhead costs.

**APPENDIX B. ALTERNATIVE ESTIMATES
USING A TWO-SIDED VOLUME OFFSET**

This appendix presents summary results for the options examined in the text under alternative assumptions about the offset in volume--the offsetting change in the volume of services provided in response to policy changes that would alter providers' revenues.

The assumptions used for the results presented in the text (CBO's usual estimating assumptions for proposals affecting all payers) were that 55 percent of the potential loss in revenues to physicians would be offset by an increase in the volume of services provided, but that there would no favorable offset to policies that would increase physicians' revenues. Under these assumptions, SP1 would reduce national health expenditures (NHE) by 1.9 percent; SP2 would increase NHE by 5.0 percent; AP1 would increase NHE by 3.1 percent; and AP2 would reduce NHE by 1.3 percent.

If, instead, a two-sided volume offset was assumed, the effects on NHE would be more favorable for each of the four options examined. Table B-1 shows summary results under the assumption that physicians whose revenues fell would offset 55 percent of the loss, while those whose revenues rose would offset 35 percent of the increase.³⁹ In this case, NHE would fall by 3.2 percent under SP1; increase by 2.9 percent under SP2 and by 1.6 percent under AP1; and fall by 1.7 percent under AP2.

Table B-2 shows results under the assumption of a symmetric volume offset--50 percent for all physicians' practices whether they would see their revenues increase or fall under the policy change.⁴⁰ Under this assumption, results are still more favorable. SP1 would reduce NHE by 4.1 percent; SP2 would increase NHE by 1.9 percent; AP1 would increase NHE by 0.7 percent; and AP2 would reduce NHE by 2.2 percent.

39. These are the estimates developed in S. Christensen, "Volume Responses to Exogenous Changes in Medicare's Payment Policies," *Health Services Research*, vol. 27, no. 1 (April 1992).

40. The study of a symmetric 50 percent volume offset is consistent with the evidence presented in the Christensen study.

TABLE B-1. ESTIMATED CHANGES IN NATIONAL HEALTH EXPENDITURES AND UNCOMPENSATED COSTS, 1991, ASSUMING A 55 PERCENT OFFSET FOR LOSERS AND A 35 PERCENT OFFSET FOR GAINERS
(In billions of dollars)

	SP1	SP2	AP1	AP2
Payments to Affected Providers for Services				
Actual	400.9	400.9	400.9	400.9
Estimated	411.4	475.3	411.4	389.8
Change	10.5	74.3	10.5	-11.1
Percentage Change	2.6	18.5	2.6	-2.8
Payments to Affected Providers for Overhead Expenses				
Actual	31.0	31.0	31.0	31.0
Estimated	20.8	5.5	27.6	26.4
Change	-10.2	-25.5	-3.4	-4.6
Percentage Change	-33.0	-82.2	-11.0	-14.8
Total Payments to Affected Providers				
Actual	431.9	431.9	431.9	431.9
Estimated	432.2	480.8	439.0	416.3
Change	0.2	48.8	7.0	-15.7
Percentage Change	0.1	11.3	1.6	-3.6
Overhead Expenses of Insurers				
Actual	40.3	40.3	40.3	40.3
Estimated	15.9	13.2	45.5	42.9
Change	-24.4	-27.1	5.2	2.6
Percentage Change	-60.6	-67.3	12.8	6.6
Uninsured Spending				
Actual	275.9	275.9	275.9	275.9
Estimated	275.9	275.9	275.9	275.9
Change	0	0	0	0
Percentage Change	0	0	0	0
National Health Expenditures				
Actual	748.2	748.2	748.2	748.2
Estimated	724.0	769.9	760.4	735.2
Change	-24.2	21.7	12.2	-13.0
Percentage Change	-3.2	2.9	1.6	-1.7
Uncompensated Costs^a				
Actual	20.3	20.3	20.3	20.3
Estimated	5.6	0	5.6	21.2
Change	-14.7	-20.3	-14.7	0.9
Percentage Change	-72.5	-100.0	-72.5	4.6

SOURCE: Congressional Budget Office based on data from the National Health Expenditure Accounts.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan; AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage.

a. Includes uncompensated costs only for covered hospital and physician services.

TABLE B-2. ESTIMATED CHANGES IN NATIONAL HEALTH EXPENDITURES AND UNCOMPENSATED COSTS, 1991, ASSUMING A 50 PERCENT OFFSET FOR BOTH GAINERS AND LOSERS (In billions of dollars)

	SP1	SP2	AP1	AP2
Payments to Affected Providers for Services				
Actual	400.9	400.9	400.9	400.9
Estimated	405.6	468.0	405.6	386.8
Change	4.6	67.1	4.6	-14.1
Percentage Change	1.2	16.7	1.2	-3.5
Payments to Affected Providers for Overhead Expenses				
Actual	31.0	31.0	31.0	31.0
Estimated	20.5	5.4	27.2	26.2
Change	-10.5	-25.6	-3.8	-4.8
Percentage Change	-33.9	-82.7	-12.3	-15.4
Total Payments to Affected Providers				
Actual	431.9	431.9	431.9	431.9
Estimated	426.1	473.4	432.8	413.1
Change	-5.9	41.4	0.8	-18.9
Percentage Change	-1.4	9.6	0.2	-4.4
Overhead Expenses of Insurers				
Actual	40.3	40.3	40.3	40.3
Estimated	15.7	13.0	44.8	42.7
Change	-24.5	-27.2	4.5	2.4
Percentage Change	-60.9	-67.6	11.2	5.8
Uninsured Spending				
Actual	275.9	275.9	275.9	275.9
Estimated	275.9	275.9	275.9	275.9
Change	0	0	0	0
Percentage Change	0	0	0	0
National Health Expenditures				
Actual	748.2	748.2	748.2	748.2
Estimated	717.8	762.4	753.5	731.7
Change	-30.4	14.2	5.3	-16.5
Percentage Change	-4.1	1.9	0.7	-2.2
Uncompensated Costs^a				
Actual	20.3	20.3	20.3	20.3
Estimated	5.5	0	5.5	21.2
Change	-14.7	-20.3	-14.7	0.9
Percentage Change	-72.7	-100.0	-72.7	4.5

SOURCE: Congressional Budget Office based on data from the National Health Expenditure Accounts.

NOTES: SP1 = Single-payer plan with copayment requirements; SP2 = Canadian-style single-payer plan; AP1 = All-payer plan with universal coverage; AP2 = All-payer plan without universal coverage.

a. Includes uncompensated costs only for covered hospital and physician services.