

**Statement of**  
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**before the**  
**Subcommittee on Health**  
**Committee on Finance**  
**United States Senate**

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Mr. Chairman, there is widespread concern that hospitals serving a disproportionately large share of low-income patients are placed at a disadvantage under Medicare's Prospective Payment System (PPS), which does not directly adjust for the potentially higher costs incurred in treating such patients. Many people fear that if additional payments are not made to these hospitals, they might be placed under financial stress or they might undertreat or refuse to treat low-income Medicare patients.

This testimony addresses two main issues:

- o The effect of serving a large proportion of low-income patients on a hospital's costs for treating Medicare beneficiaries; and
- o Options for modifying Medicare's PPS to reflect these costs.

#### BACKGROUND

The Social Security Amendments of 1983 established the current prospective payment system under which Medicare compensates hospitals for inpatient services provided to its beneficiaries. The basic goal was to introduce incentives for efficient delivery of health services by restricting reimbursement differentials to those related to unavoidable differences in costs, and thereby to slow the growth in Medicare's payments for hospital care. Payment rates are now set in advance for 468 diagnostic categories, known as diagnosis-related groups (DRGs); thus, hospitals must bear the loss if their costs exceed these amounts. After a phase-in period--during which the prospective rates are based on a combination of regional, national, and hospital-specific amounts--the system will only have national rates,

calculated separately for urban and rural areas. These rates will, however, continue to be adjusted for area wage levels and for the size of any teaching program. The latter is called the indirect teaching adjustment.

While the current system does not contain a separate adjustment for hospitals with a disproportionately large share of low-income patients (often called "disproportionate share" hospitals), the Congress took a first step in this direction when it structured the indirect teaching adjustment. Teaching hospitals now receive twice the increment to their payment rates that was originally estimated as necessary to compensate them for higher costs related to their teaching programs. This doubling was justified as an interim step to pay for a variety of legitimate factors not otherwise accounted for by the PPS--including severity of illness, inner city location, and disproportionate share of low-income patients--all of which are associated with large teaching hospitals.

Several legislative actions, however, have indicated the Congress' concern for an improved adjustment that would be better targeted. The Social Security Amendments of 1983 gave the Secretary of the Department of Health and Human Services (HHS) the authority to modify payments under the PPS to take into account the special needs of public and other hospitals that serve a high proportion of Medicare beneficiaries or of patients who have low incomes. In addition, the Deficit Reduction Act of 1984 directed the Secretary of HHS to publish a definition of disproportionate share hospitals and to provide the Congress with a list of hospitals meeting this

criterion. Recently, the House Ways and Means Committee approved a bill that would make a specific "disproportionate share" adjustment to the PPS rates.

#### THE RELATIONSHIP BETWEEN THE SHARE OF LOW-INCOME PATIENTS AND HOSPITAL COSTS

There are two distinct sources of potentially higher costs for hospitals that treat a large share of low-income patients:

- o Greater severity of illness for low-income Medicare patients within a given DRG; and
- o Higher operating and overhead costs that result from two factors--meeting the special needs of both elderly and nonelderly low-income patients and the hospital's location.

Low-income Medicare patients have longer hospital stays and higher treatment costs than higher-income beneficiaries within the same DRG, possibly because of being in poorer health and possibly because of having fewer alternatives to the hospital for convalescence. Preliminary findings from a Congressional Budget Office (CBO) analysis of Medicare claims in 33 high-volume DRGs, which account for 46 percent of Medicare discharges, suggest that low-income patients, on average, stay in the hospital about 6 percent longer than their higher-income counterparts in the same DRGs.

In addition, hospitals that serve a large share of low-income patients--whether Medicare beneficiaries or others--may also incur higher costs because they provide specialized services to meet these patients' needs.

These hospitals may employ additional staff--for example, nutritional technicians and language interpreters--relative to hospitals with higher-income patients. They may also be more likely to incur higher overhead costs related to special departments, such as social work services, and to be located in areas where more security services are necessary.

Possible Measures of a Hospital's Share of Low-Income Patients

Measures of a hospital's share of low-income patients are relevant to estimating the impact on hospital costs and to designing an adjustment to PPS rates. The two potential sources of higher hospital costs--greater severity of illness, and special operating and overhead costs--give rise to two corresponding conceptual measures of a hospital's share of low-income patients:

- o The proportion of a hospital's **Medicare** patient load that is low-income; and
- o The proportion of a hospital's **total** patient load that is low-income. 1/

Unfortunately, direct information on patients' incomes is not available from either hospital records or Medicare claims and enrollment files. Therefore, the income levels of a hospital's patients must be measured indirectly.

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1. In either case, patient load could refer to the number of patients or to the number of days of care.

One indirect indicator of low income among Medicare patients is whether or not the Medicare Supplementary Medical Insurance (SMI) premium is directly paid for a beneficiary by a state Medicaid program. Medicaid "buy-in" status is available from the Medicare enrollment files and could be used without delay. It is important to note, though, that it would not be strictly comparable across states because of differences in the income-eligibility requirements for Medicaid. 2/

If, instead, the Congress wishes to adjust for costs attributable to all low-income patients, then some measure of nonMedicare low-income patients must also be used. One possibility is the number of nonMedicare patients for whom Medicaid is the primary payer. This measure is presently available from the American Hospital Association and is being collected by the Health Care Financing Administration (HCFA) as part of the 1984 Medicare Cost Report from each hospital. While it is also imperfect, again because of varying income eligibility requirements among the states, no

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2. The principal basis for Medicaid eligibility among Medicare beneficiaries is receipt of Supplemental Security Income (SSI). Because about half the states supplement the federally guaranteed benefit levels, people with higher incomes are eligible for Medicaid in some states but not in others. The extreme case is California, where the maximum benefit is about twice the federally guaranteed level. In addition, "medically needy" programs in about two-thirds of the states provide eligibility for individuals meeting all the SSI requirements except that their incomes are somewhat too high. Many medically needy recipients qualify because they have large medical expenses relative to their incomes. These patients are more severely ill, but have somewhat higher incomes than the typical Medicaid recipient.

currently available alternative appears to be better. <sup>3/</sup>

#### Findings on Hospital Costs

The CBO estimates that both measures of the proportion of a hospital's patients who have low incomes--the one for Medicare patients only and the one for all low-income patients--are associated with significantly higher costs for treating Medicare beneficiaries. <sup>4/</sup> There appear to be two thresholds at which the cost impacts manifest themselves, as shown in Figure 1. The first threshold is at about 15 percent of patients having low incomes--which corresponds to the median hospital's low-income share under either measure; the second is at an extremely high concentration of low-income patients--55 percent and above. There is a

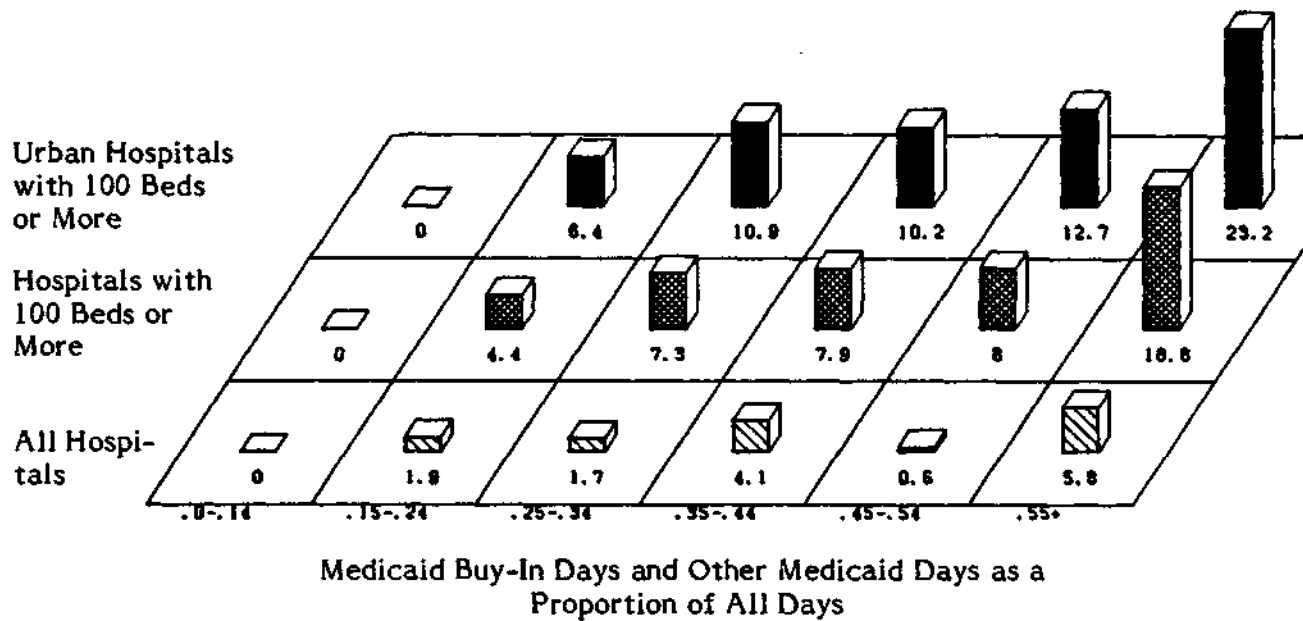
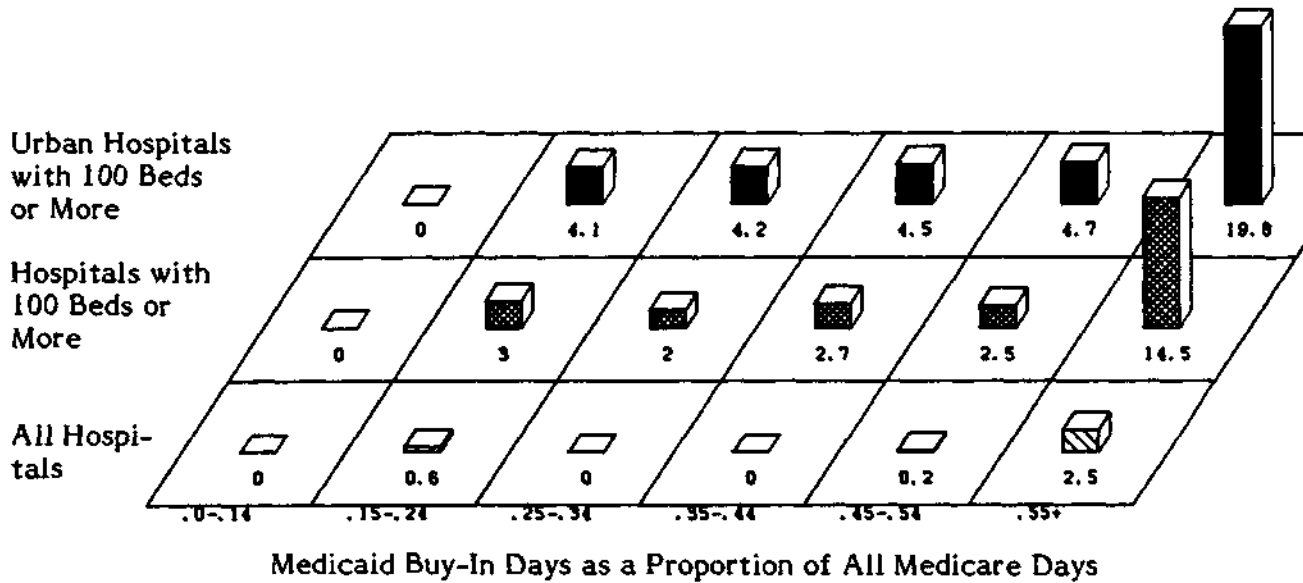
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3. Although the number of nonelderly Medicaid patients could be adjusted by an index designed to measure the relative expansiveness of state Medicaid eligibility policies, this would not yield an accurate hospital-specific measure, because the distribution of the Medicaid-ineligible, low-income population varies within states and across hospitals within communities. The CBO is currently examining possible modifications that would vary among geographic areas within states, but these analyses are not yet complete.

Another adjustment would be to include bad-debt and charity care, but this approach could not be implemented quickly because such information is confidential and is not reported by all hospitals. Moreover, the lack of uniform accounting principles to measure bad-debt and charity care means that, for some hospitals, these categories include charges for some higher-income patients.

4. These results are based on multivariate regression analyses that account for the effects on costs of other factors such as the area's wage level and the hospital's case mix, size of teaching program, location, and number of beds, as well as whether or not it is a public hospital. Costs were measured by Medicare's allowable amounts as reported on the Medicare Cost Reports for 1981, the same data as used to develop the DRG payment system.

FIGURE 1

RELATIONSHIP BETWEEN SHARE OF LOW-INCOME PATIENTS AND HOSPITAL COSTS a/



SOURCE: Congressional Budget Office analysis based on data from the 1981 Medicare Cost Reports, the Medicare History Sample File for 1974 to 1981, and the 1981 American Hospital Association Annual Survey of Hospitals.

a. Shaded blocks and corresponding figures represent the percent increase in Medicare's cost per discharge relative to similar hospitals serving less than 15 percent low-income patients.



modest increase in costs at the first threshold--less than 5 percent using the Medicare-only measure and between 2 percent and 12 percent using the combined Medicare-Medicaid measure. But a substantially larger effect--up to 20 percent and more--occurs at the second threshold. Most of the cost impact occurs in urban hospitals with 100 beds or more. The CBO's analyses show little or no increase in costs for small urban hospitals or for rural hospitals.

Because it is not possible to be certain that the relationship between concentrations of low-income patients and higher hospital costs is solely caused by the factors discussed above, these estimates should be used with caution. Particular care should be exercised when considering extremely high concentrations of low-income patients because other cost-increasing factors may be reflected in these estimates and the Congress might or might not want to account for them in the PPS rates.

### ISSUES AND OPTIONS

This section examines the issues the Congress must resolve, should it wish PPS payments to reflect costs related to serving a disproportionate share of low-income patients, and then analyzes four specific alternatives. All of the options would have two aspects--modifying the current indirect teaching adjustment and adding a new adjustment that would be more directly related to the share of a hospital's patients with low incomes.

### Issues in Designing An Adjustment

The principal decision for the Congress--if it chooses to adjust the PPS rates for disproportionate share--is whether to pay only for costs related to treating low-income Medicare beneficiaries, or to reflect costs attributable to staff and facilities serving all low-income patients in the hospital. Proponents of the former approach contend that Medicare should be responsible only for costs directly associated with treating Medicare beneficiaries. Supporters of the latter approach point out that, because cost-accounting methods do not allow all costs to be allocated to specific patients, Medicare paid for a portion of the special operating and overhead costs associated with serving low-income nonMedicare beneficiaries under the previous cost-reimbursement system. Moreover, they argue that these costs are beyond the hospitals' control and hence should be reflected in the PPS rates.

Even after this basic decision has been made, however, several other issues remain. Perhaps the most important concerns how closely an adjustment should follow the empirical cost analyses shown above. The underlying rationale of the PPS argues for reflecting differences in average costs attributable to serving high concentrations of low-income patients, but several other factors might lead the Congress to diverge from precisely following the cost relationships.

For example, the Congress would have to define "disproportionate"--that is, it would have to specify the concentration of low-income patients at

which an adjustment would be made. Extra payments might be made to all hospitals for which analyses show any cost impact, or the adjustment might be restricted to those for which the impact is substantial.

An important consideration in making this decision is that similar hospitals should be affected in similar ways, which suggests that hospitals just below any threshold for an adjustment not be paid significantly less than those just above it. Especially in view of the data limitations described above, an adjustment might be "smoothed" over adjacent ranges of disproportionate share values, rather than reflecting the sharply different amounts from the cost analyses, but then hospitals would receive payments that differed from the estimates of the costs they actually experience.

Another issue is how to minimize unintended behavioral responses. For example, an adjustment classification that would only pay hospitals above a certain size might induce slightly smaller ones with large low-income patient loads to expand. This possibility could be minimized, however, by choosing any size cutoffs so that there were relatively few hospitals that were only slightly smaller. 5/

Maintaining consistency with other aspects of the PPS would require careful examination of the relationship between any disproportionate share

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5. In addition, state "certificate of need" laws that regulate growth in the numbers of hospital beds and other forms of capital might limit strategic reactions of this sort.

adjustment and the indirect teaching adjustment because the latter was intended, in part, to perform the function of a disproportionate share adjustment. Finally, ease of administration would argue for an adjustment that would be easy to calculate and that would be based on accurate, easily audited, and relatively up-to-date measures of a hospital's share of low-income patients.

### Specific Options

A variety of reasonable disproportionate share adjustments could be designed that would reflect differing judgments on the issues discussed above. Four specific ones, described in Table 1, are analyzed here to illustrate some of the choices available to the Congress. The first two examples are based on the share of low-income Medicare patients only, to reflect the concern for costs arising from severity of illness. Option 1 would follow the cost analyses quite closely, by providing adjustments for just over 800 urban hospitals with 100 beds or more that serve at least 15 percent low-income Medicare patients. Two separate adjustments to the DRG rates would be made--a 4.5 percent increase for hospitals with shares of low-income patients between 15 percent and 45 percent, and a 10 percent increase for hospitals with larger shares. These amounts and ranges would not exactly parallel the cost analyses, however, to reflect the concern that the estimated cost impact for hospitals with extremely high concentrations of low-income patients--almost 20 percent--is actually being raised by other factors, as discussed earlier.

TABLE 1. CHARACTERISTICS OF FOUR ILLUSTRATIVE OPTIONS FOR A DISPROPORTIONATE SHARE ADJUSTMENT AND RELATED CHANGES IN THE INDIRECT MEDICAL EDUCATION ADJUSTMENT

	Option 1	Option 2	Option 3	Option 4
Definition of Low-Income Share	Inpatient days of Medicaid buy-ins as a percent of all Medicare inpatient days	Inpatient days of Medicaid buy-ins as a percent of all Medicare inpatient days	Inpatient days of Medicaid buy-ins and other Medicaid patients as a percent of total hospital inpatient days	Inpatient days of Medicaid buy-ins and other Medicaid patients as a percent of total hospital inpatient days
Eligible Group	Urban hospitals with 100 beds or more and low-income share of 15 percent or more	All hospitals with low-income share of 55 percent or more	Urban hospitals with 100 beds or more and low-income share of 15 percent or more	All hospitals with 100 beds or more and low-income share of 15 percent or more
Increase in DRG Rates for Disproportionate Share	4.5 percent for low-income share between 15 percent and 45 percent; 10 percent for share of 45 percent or more	2.5 percent	2 percent plus 4 percent for each 10 percentage point increase in low-income share above 15 percent	4.3 percent for each 10 percentage point increase in low-income share above 15 percent
Maximum Adjustment	10 percent	2.5 percent	18 percent	13 percent
Number of Hospitals That Would Receive Disproportionate Share Adjustment <u>a/</u>	830	330	780	1,060
Resulting Indirect Medical Education Adjustment <u>b/</u>	7.8 percent <u>c/</u>	8.2 percent <u>c/</u>	6.7 percent <u>c/</u>	7.0 percent <u>c/</u>

SOURCE: Congressional Budget Office.

a. The figures shown include 330, 30, 380, and 360 teaching hospitals, respectively.

b. This adjustment would be paid to approximately 900 teaching hospitals.

c. Percent increase in the federal portion of hospital payments related to a 10 percent increase in the ratio of interns and residents to beds.

Option 2 would provide an adjustment regardless of size or location, but only for hospitals with exceptionally high proportions of low-income patients--55 percent or more. The relatively low level of the adjustment for these 300 hospitals--2.5 percent--reflects the fact that many smaller, rural hospitals with high proportions of low-income patients do not have significantly higher costs.

The other two options are based on the measure of all low-income patients, thereby reflecting the concern about costs arising both from greater severity of illness and from higher staffing and overhead expenses. Option 3 would follow the cost analysis to some extent, by targeting payments to the group on which the impacts are concentrated--urban hospitals with 100 beds or more that serve at least 15 percent low-income patients. (About 60 percent of these hospitals would also be eligible under Option 1 which is based on the other measure of low income.) The adjustment would be smoothed, however, in order to reflect the pattern of cost impacts found using this measure of low-income patients. It would start at 2 percent for hospitals with a 15 percent share and then increase gradually to a maximum of 18 percent for hospitals serving 55 percent or more low-income patients.

The fourth option would be somewhat less targeted than the third, because it would reimburse over 1,000 large hospitals, located in both urban and rural areas. It would also be the smoothest of the adjustments examined

here--gradually increasing from zero as the share of low-income patients rises above 15 percent, reaching a maximum of 13 percent for hospitals with shares of low-income patients of 45 percent or more. Using a smoothed adjustment, as in Options 3 and 4, would reimburse some hospitals differently than the cost analyses suggest, however.

#### Impacts on Components of the PPS and on Federal Outlays

The CBO simulated the impact that the four illustrative options would have on components of the PPS. The indirect teaching payment was initially estimated by statistical analysis, which allowed it to reflect the impacts of all factors not now considered in determining PPS payment rates--that is, all factors other than the case mix, the wage index, and urban-rural location. In this case, the indirect teaching adjustment would be 8.4 percent, compared with the current adjustment of 11.59 percent. This technical correction would have the same effect on payments under all four options, yielding savings of \$510 million in fiscal year 1986, as shown in the top panel of Table 2.

The payments directly related to the four specific disproportionate share adjustments would range from \$10 million to \$370 million in fiscal year 1986, reflecting the differing number of hospitals that would be eligible and the differing increases that would occur in their DRG rates (see the middle panel of Table 2). If a disproportionate share adjustment were to be

TABLE 2. IMPACTS OF ILLUSTRATIVE OPTIONS ON COMPONENTS OF MEDICARE'S PPS OUTLAYS (In millions of dollars) a/

	1986	1987	1988	Cumulative 1986-1988
<b>Technical Correction to Indirect Teaching Adjustment b/</b>				
All Options	-510	-750	-1,020	-2,290
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<b>Option 1</b>				
Disproportionate Share Adjustment	300	440	600	1,340
Additional Correction to Indirect Teaching Adjustment c/	-90	-130	-170	-390
<b>Subtotal</b>	<b>210</b>	<b>310</b>	<b>430</b>	<b>930</b>
<b>Option 2</b>				
Disproportionate Share Adjustment	10	15	20	50
Additional Correction to Indirect Teaching Adjustment c/	-50	-70	-90	-205
<b>Subtotal</b>	<b>-40</b>	<b>-55</b>	<b>-70</b>	<b>-155</b>
<b>Option 3</b>				
Disproportionate Share Adjustment	370	540	730	1,630
Additional Correction to Indirect Teaching Adjustment c/	-250	-370	-490	-1,110
<b>Subtotal</b>	<b>120</b>	<b>170</b>	<b>240</b>	<b>520</b>
<b>Option 4</b>				
Disproportionate Share Adjustment	280	420	560	1,270
Additional Correction to Indirect Teaching Adjustment c/	-200	-300	-400	-910
<b>Subtotal</b>	<b>80</b>	<b>120</b>	<b>160</b>	<b>360</b>
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<b>Net Budgetary Impact</b>				
Option 1	-300	-440	-600	-1,340
Option 2	-550	-800	-1,090	-2,440
Option 3	-400	-580	-790	-1,770
Option 4	-430	-640	-860	-1,930

SOURCE: Congressional Budget Office.

- a. Negative entries denote savings. Details may not add to totals due to rounding.
- b. Reduction in the indirect teaching adjustment from 11.59 percent to 8.4 percent.
- c. Additional reduction from 8.4 percent to reflect payments made in accordance with the various disproportionate share adjustments.



made, however, a related reduction in the indirect teaching adjustment of between 0.2 percent and 1.7 percent would be required to avoid double payment. The resulting cut in indirect teaching payments would depend on the extent to which the specific disproportionate share adjustment were targeted toward teaching hospitals. In these four examples, corrections would range from \$50 million to \$250 million in fiscal year 1986, partially offsetting, and in one case exceeding, the direct disproportionate share payments.

The net budgetary impact of all three aspects of the options examined here would be reductions in Medicare PPS payments to hospitals of \$300 million to \$550 million in fiscal year 1986, as shown in the bottom panel of Table 2. Cumulative reductions over fiscal years 1986 to 1988 would range from \$1.3 billion to \$2.4 billion.

If the Congress were to make a disproportionate share adjustment and combine it with the corresponding correction to the indirect teaching adjustment, there would be some redistributions of federal PPS payments among hospitals, as shown in the upper panel of Table 3. <sup>6/</sup> As expected, major teaching hospitals--especially those not serving a disproportionate share of low-income patients--would generally lose, with the federal portion

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6. These estimates do not reflect the impact of the technical correction in the indirect medical education adjustment from 11.59 percent to 8.4 percent.

TABLE 3. IMPACT ON THE FEDERAL PORTION OF PPS PAYMENTS UNDER FOUR ILLUSTRATIVE DISPROPORTIONATE SHARE OPTIONS, BY TYPE OF HOSPITAL (In percent, fiscal year 1986) a/

	Option 1	Option 2	Option 3	Option 4
<b>Disproportionate Share Adjustment and Further Indirect Teaching Reduction Only</b>				
<u>Overall Change in Federal Outlays a/</u>	210	-40	120	80
Disproportionate Share Hospitals <u>b/</u>				
Major teaching <u>c/</u>	+1	-3	<u>e/</u>	-1
Minor teaching <u>d/</u>	+4	+1	+3	+2
Nonteaching	+4	+2	+5	+4
Nondisproportionate Share Hospitals				
Major teaching <u>c/</u>	-2	-4	-5	-4
Minor teaching <u>d/</u>	<u>e/</u>	-1	-1	-1
Nonteaching	0	0	0	0
<b>Disproportionate Share Adjustment, Further Indirect Teaching Reduction, and Change in DRG Rates for Budget Neutrality</b>				
<u>Overall Change in Federal Outlays a/</u>	0	0	0	0
Disproportionate Share Hospitals <u>b/</u>				
Major teaching <u>c/</u>	<u>f/</u>	-2	-1	-1
Minor teaching <u>d/</u>	+3	+1	+3	+2
Nonteaching	+4	+3	+5	+3
Nondisproportionate Share Hospitals				
Major teaching <u>c/</u>	-3	-4	-6	-5
Minor teaching <u>d/</u>	-1	<u>e/</u>	-2	-1
Nonteaching	-1	+1	<u>e/</u>	<u>e/</u>

SOURCE: Congressional Budget Office.

- a. These estimates do not reflect the impact on payments of the technical correction in the indirect medical education adjustment from 11.59 percent to 8.4 percent.
- b. For definitions and numbers of hospitals, see Table 1.
- c. Hospitals with ratios of interns and residents to beds exceeding 0.25.
- d. Hospitals with ratios of interns and residents to beds up to 0.25.
- e. Decline in reimbursements of less than 0.5 percent.
- f. Increase in reimbursements of less than 0.5 percent.

of their 1986 PPS payments falling by as much as 3 percent to 4 percent. Minor teaching hospitals would gain or lose, depending upon their eligibility for the disproportionate share adjustment. Nonteaching hospitals receiving an adjustment would gain up to 4 percent or 5 percent, while the others would not be affected by either aspect of these options.

Because of current fiscal pressures and to be consistent with the overall design of the PPS, the Congress might also want to consider a further adjustment to the DRG rates that would eliminate the budgetary effect of a disproportionate share adjustment and its related correction to the indirect teaching adjustment. One way this objective could be accomplished for Options 1, 3, and 4 would be to lower the DRG rates for all hospitals. <sup>7/</sup> The resulting distributional effects under the four illustrative options are shown in the lower panel of Table 3. The pattern of payment changes would be quite similar to that described above, with the magnitudes changed only slightly. The general effect would be to lower some gains and increase some losses, but usually by only a fraction of a percent.

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7. Another approach would be to lower the DRG rates for only one group of hospitals. For example, if a disproportionate share adjustment were targeted to urban hospitals, only the rates for all urban hospitals might be cut. Note also that, under Option 2, the further correction to the indirect teaching adjustment would lower payments by more than the increase that would directly result from the disproportionate share adjustment. Consequently, achieving budget neutrality in this case would require raising DRG rates.

CONCLUSION

Mr. Chairman, the Congress has expressed interest in adjusting the Medicare prospective payment system to recognize the higher costs of serving a disproportionate share of low-income patients. There are many ways in which the Congress might implement such an adjustment and, hence, many choices would have to be made--most notable among them is which sources of higher costs are to be compensated. Moreover, designing a specific disproportionate share adjustment would require several trade-offs, for example, between closely following the estimated cost impacts and treating similar hospitals in a similar way.