ANALYSIS OF MEDICARE HOSPITAL REIMBURSEMENT CHANGES IN THE TAX EQUITY AND FISCAL RESPONSIBILITY ACT OF 1982

Staff Memorandum

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The Tax Equity and Fiscal Responsibility Act of 1982 (P.L. 97-248), often referred to as "TEFRA," made significant changes in the system of Medicare hospital reimbursement. The existing Section 223 limits on reimbursement for routine costs were extended to include ancillary services. Limits were also placed on growth in Medicare reimbursements per discharge. In addition, hospitals below both limits will receive bonus payments. These changes are expected to reduce Medicare outlays by $10 billion over the fiscal year 1983-1986 period or 5 percent of what hospital reimbursements would otherwise be.

This memorandum analyzes the impacts of these provisions. The first section discusses the TEFRA provisions in more detail. The second section presents estimates of the proportion of hospitals affected by each of the limits, and the extent to which reimbursements will be reduced. The next two sections analyze the effects of the growth target and Section 223 limits, respectively, on different types of hospitals. The final section discusses the assumptions and methods underlying the analysis.

DESCRIPTION OF CHANGES IN MEDICARE REIMBURSEMENT INCLUDED IN TEFRA

TEFRA made three major changes in Medicare hospital reimbursement. First, the Section 223 limits on routine per diem costs were extended to cover total costs per discharge. Second, growth in reimbursements per discharge was limited for a three-year period. Finally, bonus payments were instituted for those hospitals under both limits. Hospitals exceeding both limits are reimbursed according to the lower of the two limits.

Section 223 Limits

Prior to TEFRA, the Section 223 limits, begun in 1974, placed limits on reimbursements to hospitals with relatively high routine (nursing, room and board) per diem costs. These limits were determined by grouping hospitals by bed size and whether they were located in a standard metropolitan statistical area (SMSA), and by establishing a limit--108 percent at the time TEFRA was passed--based on the group mean. Adjustments to each hospital's limit were also made to reflect area wage levels and the indirect costs of training interns and residents. Capital costs and direct teaching costs were excluded from the limits.

TEFRA extended these limits to include ancillary costs (laboratory tests and X-rays, for example) as well. The limits were changed from a per-diem to a per-discharge basis and a new adjustment was made to reflect the costliness of each hospital's case mix. The limits were established at 120 percent for hospital cost reporting years beginning in fiscal year 1983, to be lowered to 115 percent in 1984 and 110 percent in 1985. 1/ Hospitals with less than 50 beds and located outside an SMSA were exempted from the

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1. Both the TEFRA Section 223 limits and the growth target are phased in by hospital accounting year beginning on October 1, 1982. For example, hospitals with accounting years that begin in January were not subject to TEFRA until January 1983. These hospitals will be under the first year of the TEFRA limits until January 1984, when they will be subject to Section 223 limits of 115 percent and the second year of the growth target.

limits. In addition, penalties under the Section 223 limits are capped so that no hospital's reimbursement per discharge will be lower than it was in the year before the TEFRA limits took effect.

Growth Target

Under TEFRA, a three-year target rate of growth in Medicare costs per discharge was established. The target was set equal to an inflation factor plus one percentage point. Hospitals exceeding this target will be penalized. In the first two years, the penalty equals 75 percent of the costs above the target amount. In the third year, all costs above the target will be disallowed. The growth target tightens over the three-year period, because the target level is built on the previous year's target rather than on actual costs.

Bonus Payments

Hospitals are rewarded under TEFRA if they are below both their Section 223 limit and their growth target, but the bonuses are limited. These hospitals will receive half the difference between their actual costs and their growth target—up to a maximum of 5 percent of the target.

OVERALL EFFECTS OF THE TEFRA LIMITATIONS

The changes in TEFRA are expected to reduce Medicare hospital payments significantly--by $10 billion in fiscal years 1983-1986 (see Table 1).

TABLE 1. ESTIMATED SAVINGS FROM TEFRA HOSPITAL REIMBURSEMENT PROVISIONS, FISCAL YEARS 1983-1986 (In millions of dollars)

	1983	1984	1985	1986
Section 223 Limits a/	25	440	1,040	1,490
Growth Rate Target	930	1,690	2,910	1,590
Bonus Payment	-60	-120	-80	-20
Total	895	2,010	3,870	3,060

a. Savings are incremental above those that would have been achieved by the routine cost limits.

In fiscal year 1985, the reduction will represent 8 percent of what Medicare payments to hospitals would otherwise be. In 1986, the reduction will fall to 5 percent as the growth target provision is phased out.

All hospitals with Medicare patients will be affected by the TEFRA changes. Most--about 78 percent in the first year--will have their reimbursements reduced. 2/ The remaining 22 percent are expected to receive bonus payments (see Table 2).

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2. Estimates of the effects of the limits on individual hospitals are on a full-year basis, excluding the effects of the phase-in. For example, the 1983 estimates assume that all hospitals were subject to 120 percent Section 223 limits and a 9.6 percent growth target for all of fiscal year 1983. Effects of appeals and behavioral changes are also excluded from the analysis of individual hospital impacts, but are included in the aggregate savings estimates along with the effects of the phase-in.

TABLE 2. ESTIMATED PERCENT OF HOSPITALS ABOVE TEFRA LIMITS, FISCAL YEARS 1983-1985 a/

	1983	1984	1985
Above Section 223 Limits b/	21	27	32
Above Growth Target c/	71	75	90
Above Both Section 223 Limit and Growth Target	11	16	24
Receiving Bonus Payment	22	21	7

a. Estimates are on a full-year basis excluding effects of the phase-in and successful appeals. Do not include effects of changes in behavior.

b. Proportion of hospitals subject to the limits--non-SMSA hospitals with less than 50 beds are not counted in the base. Includes some hospitals that are also above the growth target. If all hospitals were included in the base, these proportions would be 17 in 1983, 21 in 1984 and 26 in 1985.

c. Includes some hospitals that are also above Section 223 limits.

The average penalty is greater than the average bonus payment, however. In the first year, the average penalty will be 6 percent of total costs, including teaching and capital costs, while those hospitals receiving a bonus will get only a 2 percent increase on average (see Table 3).

Both the proportion of hospitals affected and the average penalties increase over the three years the growth target is in place. By the third year, to the extent that hospitals do not take steps to reduce costs, 90

percent of hospitals are projected to exceed their growth target, almost a third to exceed their 223 limit, and only 7 percent to receive a bonus payment. The average penalty will be 13 percent for those hospitals penalized, and the average bonus 2 percent.

The growth rate target is the more stringent of the two TEFRA limits. In the first year, 71 percent of hospitals are expected to exceed their growth target, compared to 21 percent for Section 223. The average penalty for these hospitals is 6 percent, compared to 2 percent for those under the growth target but exceeding their Section 223 limits. In the first year, the 11 percent of hospitals exceeding both limits will have an average penalty of 12 percent. By the third year, the average penalty for this group will increase to 18 percent.

EFFECTS OF THE GROWTH TARGET PROVISION ON DIFFERENT TYPES OF HOSPITALS

There is no reason, in the long run, to expect the growth target provision to affect any type of hospital disproportionately to its effect on all hospitals. Analysis of Medicare cost report data shows that significant growth differences can exist between groups of hospitals in a single year, but there is no consistent pattern among groups from year to year, and the differences average out over a two-year period. As a result, there is no basis for predicting disproportionate effects on any group.

Although small hospitals (less than 100 beds) would as a group probably not be affected differently than other groups, individual hospitals in this group are more likely to be severely penalized by the growth target because they have more variation in their year-to-year cost growth rates. Small hospitals tend to have both the highest and lowest rates of increase. For example, 74 percent of hospitals with cost growth rates over the 90th percentile in 1979-1980 had less than 100 beds, although this bed size category accounted for only about half of all hospitals.

The extreme variation in rates of growth in costs per discharge in small hospitals may be due to the year-to-year variability in admissions. Because these hospitals have few Medicare cases each year, their case mix, and therefore their average cost per discharge, can change dramatically from one year to the next. In addition, because certain costs are fixed no matter how many patients are admitted, the fluctuation in the number of cases in small hospitals can cause larger than average swings in cost per discharge.

TABLE 3. HOSPITALS AFFECTED BY TEFRA PROVISIONS BY TYPE OF PENALTY, FISCAL YEAR 1983-1985[a/]

	1983	1984	1985
Above Growth Target Only			
Proportion of Hospitals	61	59	67
Average Penalty as Proportion of Costs [b/]	6	8	11
Share of Savings	63	49	47
Above Section 223 Limit Only			
Proportion of Hospitals	6	5	2
Average Penalty as Proportion of Costs [b/]	2	5	7
Share of Savings	3	3	2
Above Both			
Proportion of Hospitals	11	16	24
Average Penalty as Proportion of Costs [b/]	12	16	18
Share of Savings	34	48	51
Receiving Bonus			
Proportion of Hospitals	22	21	7
Average Bonus as Proportion of Costs	2	2	2

SOURCE: CBO estimates based on Medicare cost reports

a. Estimates are on a full-year basis excluding the effects of the phase-in and successful appeals. Do not include effects of changes in behavior.

b. Penalty as proportion of total costs including those for teaching and capital.

EFFECTS OF SECTION 223 LIMITS ON DIFFERENT TYPES OF HOSPITALS

Estimates of the proportion of hospitals exceeding Section 223 total cost limits vary considerably by hospital type. 3/ This section discusses variation by Section 223 group, bed size, region, ownership, teaching status, and urban or rural location.

The proportion of hospitals exceeding their Section 223 limit under TEFRA is not uniform among Section 223 groups (see Table 4). Under the previous limits on routine per diem costs, the proportions varied less across groups. This may indicate that these groupings are more useful in controlling for variation in routine costs than for variation in total costs.

The pattern of effects across Section 223 groups varies with the level of the limit. For example, small hospitals in SMSAs are most likely to be above a 120 percent limit, and large rural hospitals the least likely. At 110 percent, the most and least likely to be affected are hospitals with less than 100 beds regardless of location and urban hospitals with between 405 and 685 beds, respectively.

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3. Tables 4 and 5 were generated using 1980 Medicare cost report data. If 1978 or 1979 data were used, estimates of the proportion of hospitals penalized in each group would be slightly different. This is particularly true for the breakdowns by region and ownership. The pattern of relationships among the groups is consistent, however, enabling discussion of relative effects.

TABLE 4. PERCENT OF HOSPITALS EXCEEDING SECTION 223 COST-PER-CASE LIMITS, BY GROUP, FOR LIMITS AT 120, 115, AND 110 PERCENT OF GROUP MEAN, FISCAL YEARS 1983-1985 a/

		Urban Hospitals				Rural Hospitals			
Fiscal Year	Limit	Less Than 100 Beds	101-404 Beds	405-685 Beds	685+ Beds	50-100 Beds	101-169 Beds	170+ Beds	Total b/
1983	120	26	21	19	23	22	18	15	21
1984	115	29	27	23	25	28	24	25	27
1985	110	34	32	28	33	34	30	31	32

SOURCE: CBO estimates, based on Medicare cost reports for 1980.

a. Estimates are on a full-year basis excluding effects of the phase-in and successful appeals. Do not include effects of changes in behavior. Some hospitals exceeding Section 223 limits may be penalized by the growth rate target.

b. Total proportion of those hospitals subject to the limits, excluding rural hospitals with less than 50 beds.

The effects of the 223 limits vary by a number of hospital characteristics in addition to the 223 groupings. The estimates presented in Table 5 are highlighted below.

- Bed Size. Hospitals in the 50-99 bed category are more likely to exceed their limit. This differential may reflect the greater year-to-year variability in case mix and number of admissions experienced by smaller hospitals.

TABLE 5. ESTIMATED PERCENT OF HOSPITALS EXCEEDING SECTION 223 COST-PER-CASE LIMITS BY TYPE OF HOSPITAL AT 120, 115, AND 110 PERCENT a/

	120 Percent	115 Percent	110 Percent
Total	21	27	32
Bed Size			
Less than 50 b/	15	17	20
50-99	26	31	37
100-299	20	25	30
300+	21	26	32
Urban	22	27	33
Rural	20	26	32
Region			
Northeast	20	26	33
North Central	28	33	39
South	15	19	23
West	28	34	40
Ownership			
Nonprofit	21	27	32
Government	15	20	25
Proprietary	33	38	43
Urban Public	15	19	24
Teaching c/	29	35	41
Non-Teaching	8	12	15
Others	22	28	33
Teaching c/	26	32	38
Non-Teaching	21	26	32

SOURCE: CBO estimates based on Medicare cost reports for 1980.

a. Full-year effects, excluding phase-in. Estimates are of the proportion of hospitals subject to limit--excluding rural hospitals of less than 50 beds. Some hospitals exceeding Section 223 limits may be penalized by the growth rate target.

b. Urban hospitals only. If rural hospitals less than 50 beds were subject to the limits, the proportions affected would be 23 at 120 percent, 27 at 115 percent, and 32 at 110 percent.

c. Under TEFRA, all hospitals with intern and resident training programs receive an adjustment to their limit. This includes hospitals with small programs as well as university-affiliated teaching hospitals. The adjustment is proportional to the size of the program.

- Urban. Hospitals located in an SMSA are more likely to be over their limit than others, but this difference is not as dramatic as those for other characteristics.

- Region. Hospitals located in the North Central and West regions are more likely to be above their 223 limit than those in the Northeast and the South. Studies have shown considerable variation in practice patterns across regions that may be reflected here.

- Ownership. Proprietary hospitals are most likely to exceed the limits, and government hospitals least. Church-run and other nonprofit hospitals are in between. The high proportion of proprietary hospitals affected may reflect greater use of ancillary services in these hospitals.

- Teaching Status. Even with the adjustment to their limits to reflect the indirect costs of teaching hospitals, these hospitals are more likely to exceed their limit than others. The difference is much more dramatic for urban public hospitals than others.

Teaching hospitals may attract sicker patients, requiring greater use of resources. In addition, the difference may be due to practice patterns that reflect longer lengths of stay and greater use of ancillary services.

EFFECTS OF THE TEFRA BONUSES

Few hospitals are expected to receive bonus payments under TEFRA, and these will be small--averaging 2 percent of the target in each of the three years the growth target is in effect. In the first year of the limits, about 22 percent of hospitals are likely to receive a bonus, declining to 7 percent in the third year as the limits tighten. Because it is impossible to estimate the effects of the growth target by type of hospital, the amount of bonus by hospital type cannot be estimated either.

ASSUMPTIONS UNDERLYING THE ANALYSIS

The estimates presented here rely on a number of assumptions. Most critical are the distribution of growth rates in Medicare costs per discharge, the spread between projected increases in aggregate Medicare costs and the target growth rate factor, and changes in hospital behavior induced by the provisions.

The TEFRA provisions were modeled using Medicare cost report data for the years 1978-1980. Data from 1978 were inflated to fiscal year 1983

levels. Individual hospital growth rates for 1978-1979 and 1979-1980 were computed, and adjusted to be consistent with CBO projections of aggregate increases in Medicare hospital reimbursements for the years in which TEFRA will be in effect. These were then used to inflate 1983 estimates to 1984 and 1985, respectively. The model then computed the Section 223 limits and the growth targets for each hospital, and determined the reimbursements that will be paid under TEFRA.

Estimates of the proportion of hospitals exceeding the growth target are extremely sensitive to assumptions about the distribution of hospital growth rates. The estimates presented here maintained the shape of the actual distribution of rates of growth in Medicare costs per discharge over the 1978-1980 period. This was done by adjusting each hospital's rate by the same percentage-point differential to achieve CBO projections of the aggregate rates of increase in Medicare costs and discharges.

Other assumptions about the distribution of growth rates could result in very different estimates of the proportion of hospitals exceeding the growth target and, to a lesser extent, the Section 223 limits. For example, a distribution that placed fewer hospitals above the mean rate of increase would generate lower estimates of the proportion of hospitals exceeding the growth target. There is little information to use in developing such a distribution other than the historical rates of increase, however.

Assumptions about hospital intensity--increases in costs not attributed to inflation or increased admissions--are also important to the estimates. In particular, the spread between the average increase in costs per discharge and the target rate of increase directly influences estimates of the proportion of hospitals exceeding the limits, as well as estimates of the extent of the penalties. The CBO estimates of increases in costs per discharge and of the growth target for fiscal years 1983-1986 are presented in Table 6.

For example, if the growth target were tightened by one percentage point in fiscal year 1984, estimates of the proportion of hospitals over the growth target would be raised by about three percentage points, and savings would increase by about 5 percent. Because the target is cumulative, this difference would have out-year effects as well.

TABLE 6. PROJECTED RATE OF INCREASE IN MEDICARE COSTS PER DISCHARGE AND TARGET RATE OF INCREASE, FISCAL YEARS 1983-1986

	1983	1984	1985	1986
Cost per discharge	14.2	12.1	10.6	9.2
Target rate of increase	9.6	8.1	7.4	6.6

Finally, assumptions about hospital behavior in response to the TEFRA limits can affect the estimates. 4/ Hospitals may respond to the limits by reducing costs, by increasing admissions, or both. If hospitals reacted by reducing the rate of increase in Medicare costs per case, fewer of them would be penalized, the penalties would be smaller, and further savings would be gained due to the lowered costs. On the other hand, if hospitals increased admissions, particularly of low-cost cases, costs per discharge would be lower and hospitals would be less likely to exceed their limits, but reimbursements would increase due to the larger number of cases.

The savings estimates here assume that hospitals will both lower their rate of increase in costs and increase admissions. Hospitals are assumed to reduce growth in Medicare costs in proportion to the share of total costs represented by Medicare, up to a maximum reduction of two percentage points in the first year and four percentage points per year in subsequent years. For example, a hospital with a 40 percent share of Medicare costs is assumed to lower its increase in costs per discharge by 1.6 percentage points after the first year of the growth target. The increase in discharges induced by TEFRA is assumed to be 0.5 percent each year.

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4. Behavioral assumptions are built into the savings estimate, but not into the effects shown in Tables 2 through 5.

The effects of these behavioral assumptions are small. The slower rate of increase in costs raises estimated savings by about 1 percent over the three-year period the growth target is in effect. These extra savings come mostly from lowered costs and reduced penalties--few hospitals completely avoid penalties as a result of these assumed reductions. In contrast, the assumed increase in admissions would decrease savings by about 6 percent over the three years.

A further possible behavioral response would be to raise base-year costs. Because the TEFRA limits are phased in by hospital reporting period, some hospitals will have several months before the limits take effect. 5/During this time, hospitals will have an incentive to increase costs so that the base-year amount used for the growth target will be higher.

Such behavior could affect total reimbursements. If 75 percent of hospitals were able to increase their base costs by 1 percent, savings from the TEFRA provisions would be reduced by 5 percent over the three years the growth target is in effect.

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5. About one-third of hospitals begin TEFRA coverage in January 1983, and another one-third in July 1983. TEFRA was passed in August 1982.