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Effect of Durable Medical Equipment Fee Schedules on Six Suppliers' Profits

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The Honorable Lloyd Bentsen
Chairman, Committee on Finance
United States Senate

The Honorable Dan Rostenkowski
Chairman, Committee on Ways and Means
House of Representatives

The Honorable John D. Dingell
Chairman, Committee on Energy and Commerce
House of Representatives

Section 4062 of the Omnibus Budget Reconciliation Act of 1987 (OBRA 1987, P.L. 100-203, Dec. 22, 1987) established a Medicare fee schedule payment system for durable medical equipment (DME), such as wheelchairs and oxygen systems, used in beneficiaries' homes. The act required us to study the appropriateness of the payment amounts in the fee schedules. This report discusses DME suppliers' revenues and profits from their Medicare business and other lines of business, the effect of fee schedule reimbursement on suppliers' Medicare revenues, and major components of suppliers' costs. OBRA 1990 (P.L. 101-508, Nov. 5, 1990) made several significant changes to fee schedule requirements, and we considered these changes in our analyses.

DME suppliers do not maintain records in a manner that permits direct computation of costs and profits by DME item, and these data had to be individually developed for each supplier. Because of the amount of work involved in this process, we could not select enough suppliers randomly to yield projectable results. Rather, we judgmentally selected six suppliers to obtain national, regional, and local firms from different geographic areas of the nation.

The aggregate profit margin for the six suppliers in 1988 (before the fee schedules became effective) was 19 percent on Medicare business versus a 24-percent loss on other business. The overall loss was 2 percent. We estimate, using the same volume of services and constant 1989 dollars, that the six suppliers' aggregate profit margin on their Medicare business would be higher under both the original fee schedules and those as

revised by OBRA 1990 than under the reasonable charge payment method the fee schedules replaced.[1]

Background

DME includes items such as wheelchairs, hospital beds, walkers, canes, crutches, oxygen equipment, prosthetic and orthotic devices, and related supplies. In 1989, total Medicare payments to suppliers of DME were about $1.4 billion. The Health Care Financing Administration (HCFA), the agency within the Department of Health and Human Services (HHS) that administers Medicare, was responsible for overseeing the development and implementation of the DME fee schedules. Before the fee schedules, Medicare reimbursed DME suppliers on the basis of reasonable charges as determined by Medicare carriers.[2] OBRA 1987 separated DME into five categories and directed that fee schedules be established for each category. The purpose of this change was to make payment rates more uniform and to reduce Medicare costs.

Each of Medicare's 57 carriers calculated fee schedules, using reasonable charge data from 1986 and 1987, for each of the DME categories. Although the initial fee schedules were supposed to be effective on January 1, 1989, HCFA and the carriers did not complete development and full implementation until June 1989.

Because of wide variations in fee schedule amounts for the same DME items in different geographic areas and other problems with the initial fee schedule amounts identified by HHS and us,[3] the Congress modified the DME payment methods in OBRA 1990. These amendments

- required that the monthly rental rates for one category of DME be revised to reflect Medicare allowed amounts rather than supplier submitted charges,
- reduced the monthly rental rate for those same items after the third month of continuous need, and

[1]Under this method, Medicare paid 80 percent of the lowest of the actual, customary, or prevailing charge, and the beneficiary was responsible for the remainder. A supplier's customary charge is the amount usually charged for an item. The prevailing charge is set, for most items, at a level equal to the 75th percentile of all supplier customary charges.

[2]Medicare carriers are private insurance companies or Blue Shield plans that contract with HCFA to process and pay Medicare claims.

[3]See Medicare: Durable Medical Equipment Fee Schedules Have Widely Varying Rates (GAO-T-HRD-90-32, May 22, 1990).

- repealed the OBRA 1987 requirement for regional fee schedules, substituting national ceilings and floors for four of the five fee schedule categories.

The national ceiling for each item is the weighted average of all carrier fee schedules, and the floor is 85 percent of the ceiling. The ceiling and floor requirement is being phased in; payment rates for 1991 and 1992 will be based partially on the national ceiling and floor and partially on local rates. Beginning in 1993, the national ceiling and floor will be the controlling limits on payment rates for each carrier area.

Objectives, Scope, and Methodology

Our objectives were to compare DME suppliers' costs with revenues for Medicare and non-Medicare business, to assess the effect of the change from reasonable charge to fee schedule reimbursement on suppliers' revenues, and to analyze suppliers' costs.

Our methodology included determining (1) the number and types of DME items suppliers sold or rented during a specified period, (2) the per item costs suppliers incurred to provide those items, and (3) the reimbursement suppliers received from all payers for those items. To assess the effect of the fee schedules, we computed the revenues that suppliers would receive under the fee schedule payment rates and compared them with revenues they would have received under the reasonable charge system. For these comparisons, we computed estimated Medicare payments in constant 1989 dollars.

We judgmentally selected six DME suppliers for detailed review. The 1986 nationwide Medicare-allowed charges for these six suppliers ranged from about $150,000 to $57 million. At these six suppliers, we determined the number and types of DME items each supplier sold and rented during a 1- to 4-month period in 1988 and calculated their per item cost and revenue. Four of the six suppliers operated at multiple locations, and we focused our review on one branch location for each of these suppliers. The 1988 Medicare-allowed charges for the locations we included in our review ranged from about $140,000 to about $1.7 million.

In conducting analyses of the suppliers' per item cost and revenue, we used, for the most part, unaudited financial data provided by the suppliers. (See app. I for a more detailed discussion of our scope and methodology.)

At the conclusion of our work at each location, we discussed with supplier representatives the results of our revenue and cost analyses. We revised our analyses where necessary to address issues raised by the supplier representatives. The profit and loss analyses in this report are based on these revenue and cost data. Because we discussed each supplier's data with supplier representatives, we did not take the additional time that would have been needed to obtain written comments from the suppliers on a draft of this report.

Medicare Business for All Six Suppliers Was More Profitable Than Non-Medicare Business

In 1988, all six suppliers had higher profit margins for their Medicare business than for their non-Medicare business. The average profit margin for the six suppliers' Medicare business was 19 percent, their non-Medicare profit margin was −24 percent, and their overall profit margin was −2 percent (see table 1).

Table 1: Medicare and Non-Medicare Profit Margins Based on Suppliers' 1988 Annualized Revenue and GAO-Calculated Per Item Costs

Numbers in percent

Supplier[a]	Total revenue obtained from Medicare[b]	Profit margins		
		Medicare	Non-Medicare	Overall
A	73	20	15	18
B	38	12	10	11
C	91	3	−2	2
D	65	14	−42	−6
E	44	26	−38	−10
F	29	−11	−18	−16
Weighted average	**49**	**19**	**−24**	**−2**

[a]To preserve confidentiality of suppliers' business data, the order of suppliers is scrambled.

[b]These percentages are based on annualized supplier revenues of $7,072,000 for 1988. Revenues by supplier are in appendix I, table I.2.

Medicare Revenues Increased for Four of Six DME Suppliers Following Implementation of the Fee Schedule

We estimate that 1989 Medicare revenues for four of the six suppliers were greater under the fee schedule system than they would have been had the reasonable charge payment system remained in effect. These revenue increases occurred because the fee schedule payment amounts in the suppliers' geographic areas were higher than the reasonable charges would have been for the mix of items furnished by the suppliers.[4]

In OBRA 1990, the Congress made several changes to the fee schedules. Some of these changes became effective in 1991 and others are being phased in and will become fully effective in 1993. Using the rates that will be effective in 1993 (excluding inflation adjustments), we estimate that two of the six suppliers will realize higher revenues from the Medicare DME fee schedule than they would have realized if the reasonable charge payment system had remained in effect. The changes contained in OBRA 1990 will reduce Medicare revenues from the levels achieved under OBRA 1987, but, overall, Medicare will still pay more to these six suppliers under the fee schedule in 1993 than if the reasonable charge system had remained in effect.

Effect of Fee Schedules on Supplier Medicare Revenues

We compared our estimate of each supplier's 1989 fee schedule revenue with our estimate of the revenue the supplier would have received had the reasonable charge payment system remained in effect. This comparison showed that for the items included in our review, the combined total estimated annual Medicare payments to the six suppliers would have been about $4,595,000 under the fee schedule system compared with about $3,709,000 under the reasonable charge system; that is, the suppliers' estimated 1989 fee schedule revenues were about 24 percent greater than our estimate of their revenues under the reasonable charge system for the same year.

We also compared our estimate of each supplier's 1993 fee schedule revenue with the revenue the supplier would have received had the reasonable charge payment system remained in effect.[5] This comparison showed that the combined total estimated 1993 Medicare payments to

[4]Depending on charging patterns and other circumstances in an area, fee schedule amounts for particular items can be either higher or lower than reasonable charge amounts. We are also reviewing overall changes in Medicare payments as a result of fee schedule implementation, and the results of that review will be reported later.

[5]We used the 1993 rates, not considering any inflation adjustments that may be made, to estimate the final effect of OBRA 1990 on supplier revenue. This includes the rates subject to the national ceiling and floor.

the six suppliers would be about $3,854,000 using the fee schedule as modified by OBRA 1990, or about 4 percent greater than our estimate of their 1993 revenue under the reasonable charge system. A comparison, by supplier, of estimated fee schedule and reasonable charge revenues in 1989 and 1993 is shown in table 2.

Table 2: Effect of DME Fee Schedule Payment on Six Suppliers' Medicare Revenues

Dollars in thousands (1989 dollars)

		1989 fee schedule			1993 fee schedule		
			Change from reasonable charge			Change from reasonable charge	
Supplier[a]	Reasonable charge	Revenue	Dollars	Percent	Revenue	Dollars	Percent
A	$1,857	$2,630	$773	42%	$2,136	$279	15%
B	798	815	17	2	739	−59	−7
C	310	390	80	26	345	35	11
D	288	414	126	44	286	−2	−1
E	287	184	−103	−36	190	−97	−34
F	170	163	−7	−4	159	−11	−6
Total	**$3,709**	**$4,595**	**$886**		**$3,854**	**$145**	
Weighted average				**24%**			**4%**

Note: Figures may not add to totals because of rounding.

[a]To preserve confidentiality of suppliers' business data, the order of suppliers is scrambled.

Effect of Fee Schedules on Suppliers' Medicare Profits

We estimated supplier profits under (1) the 1989 reasonable charge rates that would have been in effect had the fee schedule not been implemented and (2) the 1989 and 1993 fee schedules. In estimating these profits, we assumed costs were the same as the costs we used in our profit and loss analysis. The results of this analysis (presented in table 3) show that even though the fee schedules reduced revenues for certain suppliers, all six suppliers, under these schedules, would continue to have a positive profit margin for their Medicare business.

Table 3: Effect of DME Fee Schedule on Six Suppliers' Profits From Medicare

Numbers in percent

	Profit margins under		
	Reasonable charge	Fee schedules	
Supplier[a]	1989	1989	1993
A	41	58	48
B	25	27	19
C	42	10	12
D	30	27	25
E	8	36	8
F	4	24	14
Weighted average	**31**	**45**	**34**

[a]To preserve confidentiality of suppliers' business data, the order of suppliers is scrambled.

One category of DME, commonly called the capped rental category, includes items that were both purchased and rented under the reasonable charge reimbursement system. Under the fee schedule, these items are only rented. Rental payments are limited to 15 consecutive months for one beneficiary, after which the beneficiary retains the equipment as long as needed. When comparing reasonable charge revenue with fee schedule revenue for this category, we used average rental periods for items that were rented under the reasonable charge system; we assumed that under the fee schedule system, the same number of items would be rented for the same length of time. For items that were purchased under the reasonable charge system, we used a present value analysis for the stream of rental payments under the system.[6] This analysis is described in appendix I.

OBRA 1990 requires that during the 10th month of rental, the supplier must offer to sell the item to the beneficiary. If the beneficiary elects to purchase the item, the supplier can receive monthly payments through the 13th month of continuous need, after which the item will belong to the beneficiary. We did not consider this change in reimbursement method in our analysis because no data exist to predict how many beneficiaries will elect the purchase option.

[6]For profits under OBRA 1990 rates, our estimate of supplier fee schedule revenue for capped rental DME reflects the lower monthly payments for months 4 through 15 of continuous rental.

Suppliers' Cost Mix Was Varied

In determining suppliers' costs for each item sold or rented, we separated the six suppliers' total costs into three categories:

- direct costs, or what the supplier paid for the item;
- indirect costs, which are costs related to providing DME to the beneficiary, but which are not direct costs (examples include delivery and setup, instructing the beneficiary or care-giver in operating the equipment, repair and maintenance of rented equipment, and retrieval of equipment when it is no longer needed); and
- overhead costs, which include space and utilities, marketing, and interest.

A description of how these categories of costs were allocated to the items is in appendix I.

For the six suppliers we reviewed, the mix of costs between the three categories varied, as shown in table 4.

Table 4: Percentage of Six Suppliers' Total Costs That Are Direct, Indirect, and Overhead

Numbers in percent

	Costs		
Supplier[a]	**Direct**	**Indirect**	**Overhead**
A	11	12	77
B	22	14	64
C	23	14	63
D	22	17	61
E	43	10	47
F	36	22	42
Weighted average	**36**	**13**	**51**

[a]To preserve confidentiality of suppliers' business data, the order of suppliers is scrambled.

Although the percentages varied between the suppliers, these data show that the largest portion of each suppliers' costs were for overhead (that is, administrative) expenses. A comparatively small portion was for indirect costs.

Conclusions

Under the reasonable charge system, each of the six suppliers we reviewed realized a higher profit from its Medicare business than from its non-Medicare business. Applying the 1989 fee schedule system rates to these suppliers, we estimate their combined Medicare revenues increased 24 percent over what their revenues would have been had the

reasonable charge system remained in effect. Changes to the fee schedule enacted in OBRA 1990 removed some of the revenue gains, and we estimate that the suppliers included in our analysis will experience an aggregate increase of 4 percent over the reasonable charge reimbursement rates when the OBRA 1990 changes are fully implemented in 1993. Under the fee schedules, the six suppliers will continue to realize profits from their Medicare business.

We are sending copies of this report to the Director, Office of Management and Budget; the Secretary of Health and Human Services; interested congressional committees; and other interested parties. This report was prepared under the direction of Janet Shikles, Director, Health Financing and Policy Issues. Please call her on (202) 275-5451 if you have any questions. Other major contributors to this report are listed in appendix II.

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Abbreviations

DME	durable medical equipment
HCFA	Health Care Financing Administration
HHS	Department of Health and Human Services
OBRA	Omnibus Budget Reconciliation Act

Objectives, Scope, and Methodology

Objectives

In the Omnibus Budget Reconciliation Act (OBRA) of 1987 (P.L. 100-203, Dec. 22, 1987), the Congress mandated a fee schedule payment system, effective January 1, 1989, as the basis for paying suppliers of durable medical equipment (DME) provided to Medicare beneficiaries under part B of the program. In section 4062(c), OBRA also required that

"(5) The Comptroller General shall conduct a study on the appropriateness of the level of payments allowed for covered [DME] items under the medicare program and shall report to Congress on the results of such study."

We discussed the definition of appropriateness with the staffs of the three congressional committees that have primary responsibility for Medicare.[1] It was agreed that for the purpose of our study, appropriateness meant determining the effect of the DME fee schedules on (1) suppliers' revenues and profits and (2) overall beneficiary and Medicare program payments. In this report, we address the first effect. Early results of our work on the second effect were presented in testimony before the Subcommittee on Health, House Committee on Ways and Means.[2]

Scope

OBRA 1987 grouped DME items into six categories:

- inexpensive or routinely purchased items,
- items requiring frequent and substantial servicing,
- orthotic and prosthetic devices,
- oxygen and oxygen equipment,
- other DME items,[3] and
- items uniquely constructed or substantially modified to meet the needs of individual patients.

[1]The Subcommittee on Medicare and Long Term Care, Senate Committee on Finance; the Subcommittee on Health, House Committee on Ways and Means; and the Subcommittee on Health and the Environment, House Committee on Energy and Commerce.

[2]See Medicare: Durable Medical Equipment Fee Schedules Have Widely Varying Rates (GAO-T-HRD-90-32, May 22, 1990).

[3]This category includes DME (such as wheelchairs and hospital beds) that do not fit any of the other five categories. Because these items are rented under Medicare and rental payments are generally limited to 15 months, DME items in this category are commonly called capped rental items. A service and maintenance payment is allowed every 6 months for continuous use of equipment after the rental period has expired.

A fee schedule was not required for uniquely constructed or substantially modified items because these items, by definition, are one-of-a-kind devices. When unique or substantially modified items are prescribed for Medicare beneficiaries, the carriers must determine the amount to pay for those items on a case-by-case basis.

To determine whether DME suppliers maintained accounting records that would identify per item cost and revenue for DME items sold or rented to Medicare and non-Medicare patients, we visited 12 DME suppliers in eight states. None of the 12 suppliers had accounting records that included the per item costs of DME items, nor did the suppliers maintain their cost records in a manner that would allow us to readily calculate per item cost. Only 2 suppliers had a records system that captured revenue data in a manner that would allow us to readily determine the per item revenue of specific items sold or rented during 1988, the last full year that Medicare paid for DME under the reasonable charge system.

Our experience at those 12 suppliers was what we expected, based on information we received from trade association representatives when we began our work. This was confirmed in a June 20, 1990, letter to the Chairman, Subcommittee on Health, House Committee on Ways and Means, from the president of a DME supply company. On behalf of the industry, he stated, "...most suppliers do not have the historic data needed to accurately set [a]...per item price...." Because suppliers did not maintain financial records in a format that captures per item cost and revenue data and considering our resource constraints, we limited our comprehensive analyses of costs and revenues to six suppliers.

Selecting Suppliers

To select suppliers, we obtained the names, addresses, and Medicare billing numbers of over 1,900 suppliers, identified in the Medicare carriers' claims payment systems as having over $150,000 in Medicare-allowed charges during 1986 (the latest information available at the time we began our work). After eliminating apparent duplications and consolidating payments made to one supplier from multiple carriers, we identified 1,583 individual Medicare DME suppliers with 1986 Medicare-allowed charges of over $150,000.

The time and resources needed to carry out comprehensive reviews for each supplier made it impractical for us to cover a statistical sample of suppliers that could be used to project to the universe; therefore, we selected a judgmental sample representing a cross section of suppliers, based on the following criteria:

- geographic diversity,
- states with a high Medicare enrollment, and
- a mixture of different size suppliers based on revenue from Medicare.

To provide geographic diversity and to include states with large Medicare populations, we initially selected California, Florida, and Texas. These states included about 22 percent of Medicare enrollees. To help obtain a mixture of different size suppliers and to obtain additional geographic diversity, we included suppliers from Georgia, North Carolina, and Maryland.

We grouped the 1,583 suppliers into five strata based on Medicare-allowed charges in 1986, selecting one supplier from each of these states and at least one from each stratum. The five strata, the total number of suppliers in each, and the number of suppliers that we reviewed are shown in table I.1.

Table I.1: Supplier Selection Strata

	Range of allowed charges[a]		Suppliers	
Stratum	From	To	Numbers	Reviewed
I	$2 million	$59 million	34	2
II	1,000,000	1,999,999	87	1
III	400,000	999,999	365	1
IV	220,000	399,999	562	1
V	150,000	219,999	535	1
Total			**1,583**	**6**

[a]The intervals of the ranges are not uniform. The break-points were selected to reflect natural divisions within the universe.

The 2 suppliers reviewed in stratum I are national firms; 1 supplier has branches in 39 states and the other, in 21 states. The remaining 4 suppliers are 2 full-service regional suppliers and 2 full-service local suppliers. We did not include small part-time or specialty suppliers.

At each of the national and regional firms, we concentrated our analysis on one supplier location. The location selected at each national firm was one which we and the supplier agreed was representative of the firm's business. At the regional firms, we selected the location that generated the most revenue.

Methodology

To assess how the fee schedules affected the six suppliers, we compared the 1989 fee schedule payment rates with the Medicare reasonable

charge payment rates that would have been in effect in 1989, had the fee schedule system not been implemented. During the course of our work, the Congress enacted OBRA 1990 (P.L. 101-508, Nov. 5, 1990), which made several changes in the fee schedules. Because of the significance of the changes contained in OBRA 1990, we also compared fee schedule payment rates under the OBRA 1990 revisions with the Medicare reasonable charge payment rates. For this comparison, we used fee schedule rates that will be in place in 1993 (excluding any inflation adjustments), when the OBRA 1990 changes will be fully phased in. Additionally, we compared the suppliers' non-Medicare revenue and profits with their Medicare revenue and profits and separated suppliers' costs into major descriptive components.

Calculating Costs

Because DME suppliers do not maintain financial record systems that allocate costs to individual DME items, we devised a method of estimating the total per item costs that suppliers incurred to provide DME. Our basic approach at each supplier was to

- select a period within calendar year 1988 and identify the equipment sold and rented during that period,
- determine the supplier's direct costs for each item of equipment sold and rented,
- identify the supplier's nondirect costs during the fiscal year that included the period of our review and separate those nondirect costs into indirect and overhead costs, and
- allocate the indirect and overhead costs to the period covered by our review and then to each item sold and rented during the review period.

Although these general steps were followed at all six suppliers, the specific steps that we used varied depending on how each supplier maintained its cost and revenue records.

Revenues Included in Analyses

At each supplier, we selected a period ranging from 1 to 4 months during calendar year 1988. The suppliers claimed their financial data were confidential and proprietary, and we agreed to preserve the confidentiality of those data. The annualized 1988 Medicare and non-Medicare revenues included in our review for each of the six suppliers are shown in table I.2.

Table I.2: Total Supplier Revenues Included in GAO's Analyses, Annualized for 1988

Dollars in thousands

	Total supplier revenues		
		Used in GAO profit/loss analyses	
Supplier[a]	Annualized total	In dollars[b]	In percent
A	$4,209	$3,947	94%
B	1,214	985	81
C	1,164	1,059	91
D	553	480	87
E	337	301	89
F	306	300	98
Total	**$7,783**	**$7,072**	
Weighted average			**91%**

[a]*To preserve confidentiality of suppliers' business data, the order of suppliers is scrambled.*

[b]At each supplier, we had to exclude a small percentage of transactions because sufficient data were not available. Generally, the transactions excluded were those for which no direct cost could be obtained or estimated, such as for sales of used DME.

Direct Costs

Direct costs are what the suppliers paid for items of DME. Four of the suppliers provided us with either vendor invoices or inventory management system data to document the direct costs for the equipment sold or rented during the period of our analysis. The data of the other two suppliers (1) lacked either vendor invoices or inventory management system data to support their direct costs or (2) understated the supplier's direct costs; for example, one supplier bought some DME from its parent firm at prices substantially lower than those normally charged to nonrelated parties. For these two suppliers, we estimated direct costs based on available invoices and other data (such as catalog prices and typical discounts) provided by the vendors.

Only one supplier was able to provide us with realistic estimates of the useful life of items for depreciation purposes, and we used that supplier's estimates of useful life as the basis for depreciating all rental equipment included in our review.

Indirect Costs

Indirect costs include costs that are related to providing DME to the patient, but these costs are not direct. Examples are costs for delivery, setting up the equipment in the patient's home, patient and care-giver education, repair and maintenance of rental equipment, and retrieval of equipment when it is no longer needed. The amount of indirect costs varied for different items. For example, the indirect costs associated

with providing an oxygen concentrator in a patient's home were generally greater than the indirect cost of providing a wheelchair or hospital bed to the same patient's home.

To allocate indirect costs to individual items, we asked suppliers to assign a numerical factor to each item sold or rented during the review period. The factor represented the supplier's judgment of the relative amount of indirect cost associated with a particular item. For example, a supplier believed that delivering a wheelchair required relatively little indirect cost and assigned a factor of 1; this supplier believed that an oxygen concentrator required more indirect cost and assigned a factor of 7. We compared the suppliers' rankings, and their relative rankings for the high-volume items that were common to most suppliers were similar.

We multiplied each item's indirect cost factor by the total number of units sold or rented to obtain an indirect cost weight per item. Indirect costs were allocated to each item by multiplying total indirect costs by the proportion of each item's indirect cost weight to the total of all indirect cost weights.

Overhead Costs

Overhead costs are those costs that are not directly related to providing equipment to patients. Examples of such costs are marketing, office space, utilities, and interest expenses.

Four suppliers operated multiple locations; therefore, total company overhead costs had to be allocated to the branch that we reviewed. At three of those suppliers, we consulted with company officials to identify and reach agreement on a method for allocating overhead costs to the items sold and rented. For example, headquarters, regional, and district offices' overhead costs were allocated to the branches based on (1) the number of company employees at the branch as a proportion of all company employees or (2) the number of patients served at the branch as a proportion of all patients. Once the total company overhead cost allocated to the branch was obtained, that allocated cost was added to the branch's own overhead cost to derive the branch's total overhead costs. At the fourth supplier, the headquarters unit assessed each branch a management fee, which we added to the branch's overhead to obtain the branch's total overhead costs.

Overhead costs were next allocated to DME items based on accumulated direct and indirect costs. That is, for each item, we summed its direct and indirect costs and computed the total of all these costs. To obtain the overhead cost for each item, we multiplied total overhead costs by

each item's proportion of direct and indirect costs to the total of all direct and indirect costs.

To the extent possible, we verified the supplier's direct costs with invoices. We did not verify other costs reported in the supplier's financial records, nor did we attempt to (1) determine whether the reported costs were actually related to providing equipment to patients or (2) evaluate the reasonableness of suppliers' costs. Of the records we relied on, only two of the six suppliers' financial statements had been audited by independent public accounting firms.

Calculating Revenues

We used the following methodology to calculate suppliers' Medicare fee schedule and reasonable charge per item revenue, all of which are stated in constant 1989 dollars.

Bases for Fee Schedule Revenue

All fee schedule rates used in our analyses were obtained from the suppliers' Medicare carrier, except sales for DME items in the category commonly called capped rental. Medicare reimbursement rules for DME items in that category changed, with enactment of OBRA 1987, to require patients to rent those items. Before the fee schedule, many of these items had been purchased. Because these items could no longer be purchased, there was no fee schedule purchase rate available from the carriers to compare with the reasonable charge purchase rates in effect during the periods covered by our analyses.

We compared the lump-sum payment the supplier received when an item was sold with the present value of total payments received through a stream of monthly rental payments over a 15-month period. The present value factor we used discounted the stream of 15 monthly payments to July 1988, the midpoint of the last year that these items would have been sold under the former reasonable charge system. In this analysis, we used an interest rate of 6.92 percent, the average yield on 6-month U. S. Treasury bills in 1988.

Under the fee schedule system as established in OBRA 1987, suppliers may receive up to 15 monthly rental payments for continuous rental of other DME items to a Medicare patient. The monthly rental payment amount was equal to 10 percent of the reasonable charge system submitted purchase price for the item. If the patient continues to need the equipment after 15 months, the supplier may receive a service and maintenance payment every 6 months, beginning with the 22nd month of continuous need, for as long as the patient needs the item.

This provision was modified in OBRA 1990 to provide that during the 10th month of continuous need, suppliers must offer a beneficiary the option of purchasing the item. If a beneficiary opts to purchase the item, the supplier must transfer title of the item to the beneficiary after the 13th month of continuous rental, which essentially converts the 13 rental payments into installment payments for purchase of the item. Effective for items furnished on or after January 1, 1991, OBRA 1990 required carriers to reduce the fee schedule amounts, (1) bringing them more in line with reasonable charge system allowed charges instead of basing the fee schedules on submitted charges and (2) reducing the payment rate from 10 percent of the purchase price to 7.5 percent for months 4 through 15 (or 4 through 13 if the beneficiary opts to purchase the item).

In our comparisons of revenue under the reasonable charge and fee schedule payment systems, we assumed that if an item was purchased under the reasonable charge system, the patient was expected to need it for a long time. When converting the number of purchases into rental months for estimating revenue under the fee schedule system, we counted a purchase under the reasonable charge system as a 15-month rental under the fee schedule.

We believe this is a reasonable and conservative method of estimating revenue. This method counts only the first 15 months of rental, ignoring the service and maintenance fees that may be collected if the patient continues to need the equipment for longer periods of time. In addition, this method assumes that a single item rented will generate only 15 months of rental income; however, in practice, items can generate income for more than 15 months. For example, a single piece of equipment can be rented to beneficiary A for 6 months, retrieved, rented to beneficiary B for 10 months, retrieved, rented to beneficiary C for 12 months, and so on. In this way, an item may generate rental revenue practically every month of its useful life. Many items in this category, a supplier said, have a useful life of about 60 months. No data were available to allow us to determine how many months of payments suppliers actually receive for an item in this category.

For our comparisons, we did not consider the purchase option in OBRA 1990 because no data exist to allow us to predict how many beneficiaries will elect to purchase items.

Basis for Reasonable Charge Revenue

We calculated suppliers' 1989 reasonable charge revenue from data provided by the Medicare carriers serving the six suppliers. Using computer

tapes containing the data carriers used to calculate the fee schedules, we calculated the average allowed amounts carriers authorized for each type of DME item. Because these calculations were based on 1986 data, we increased the average allowed amounts by 5.768 percent—the total inflation adjustment Medicare used—to express reasonable charge amounts in 1989 dollars. In instances where the tapes did not contain sufficient transactions on which to base reasonable charge payment rates, we obtained 1986 payment rates directly from the carriers and adjusted them for inflation.

When comparing reasonable charge revenue with fee schedule revenue, we assumed that suppliers would collect deductibles and coinsurance, as applicable.[4]

Revenues for Oxygen Contents and Rented Oxygen Equipment

Medicare's basis for paying DME suppliers for oxygen and oxygen equipment changed when the program shifted to the fee schedules. Under the reasonable charge system, Medicare carriers paid for oxygen and oxygen equipment through nearly 50 different billing codes. Under the fee schedule, Medicare converted those billing codes into the following four classes of service:

- stationary oxygen systems (includes oxygen contents),
- portable oxygen systems (includes oxygen contents),
- oxygen contents for a patient who owns a stationary system, and
- oxygen contents for a patient who owns a portable system.

The Medicare fee schedule has four monthly rates (one for each of the oxygen system classes listed above).[5] By contrast, under the reasonable charge system, Medicare (1) paid for oxygen according to the volume consumed and (2) either rented or purchased several different kinds of oxygen equipment, resulting in many different purchase and rental rates.

[4]Coinsurance is the portion of the Medicare-approved charge, or the fee schedule amount, that the beneficiary is responsible for paying. Generally, for services covered under part B of Medicare, such as DME, the coinsurance is 20 percent. The part B deductible is the amount the beneficiary is responsible for in any calendar year before Medicare pays for covered services. In 1989, the deductible was $75.

[5]These rates are subject to volume adjustments upward or downward depending on the oxygen flow rate prescribed for a beneficiary.

Because the pre- and post-fee schedule payment methods were not comparable, we reconfigured the reasonable charge payment rate calculations so that reasonable charge revenues could be compared with fee schedule system revenues.

First, we identified instances where a Medicare beneficiary rented an oxygen system (oxygen equipment and oxygen contents) during our review period, and determined the volume of oxygen purchased during that period. Next, we calculated the average monthly volume of oxygen purchased for each type of oxygen equipment (stationary liquid, stationary gaseous, portable liquid, and portable gaseous) included in our review. Using the monthly equipment rental and the average monthly oxygen volume associated with the equipment, we calculated the total monthly oxygen system (equipment and contents) revenue under the reasonable charge system. We compared this average oxygen system revenue under the reasonable charge system with the monthly oxygen system payments under the fee schedule.

In those instances where oxygen was purchased but no oxygen equipment rental payments were made, we treated the transaction as if the beneficiary owned his or her oxygen equipment. We calculated the average monthly quantity of oxygen purchased for each type of beneficiary-owned equipment. To identify revenue differences between the two payment methods for oxygen contents, we compared the revenue for the average monthly quantities of oxygen with the fee schedule monthly payments.

Revenue Excluded From Our Analyses

We excluded from our analyses revenues related to DME items for which neither a fee schedule nor a reasonable charge rate was available. The total amount excluded ranged from less than 1 percent to about 16 percent of each supplier's Medicare revenue. We believe that excluding these revenues did not materially affect our analyses.

No Substantial Difference Between Medicare and Non-Medicare Claims-Processing Costs

Suppliers' claims-processing costs consist primarily of preparing and submitting claim forms and providing documentation to the carriers (such as the physician's prescription and diagnosis and the certificate of medical necessity) in support of a claim. Although some DME suppliers and trade association representatives said that suppliers' costs of doing business with the Medicare program are higher than their costs of dealing with other payers, they could not support their claims with studies or analyses of suppliers' costs.[6]

Medicare carriers are commercial insurance companies and Blue Shield plans. These companies often market their own health insurance plans and contract with other third-party payers, such as employer-sponsored health plans, to process and pay claims. These insurance companies, Blue Shield plans, or other third-parties often establish their own requirements for claim forms and supporting documentation.

We contacted the Medicare carriers serving the six suppliers included in our review to determine the documentation requirements and procedures used to process both Medicare and non-Medicare claims. The documentation required to support Medicare claims is similar to that required to support non-Medicare claims, carrier officials said. Concerning claims-processing procedures, carriers provided information showing that similar procedures were followed for Medicare and non-Medicare claims.

Based on our analysis of the carrier-provided information and lacking documentary evidence from DME suppliers that supported higher costs for processing Medicare claims, we concluded that suppliers' costs associated with processing DME claims were similar for both Medicare and non-Medicare claims. Therefore, when allocating costs between suppliers' Medicare and non-Medicare business, we assumed no difference in suppliers' claims-processing costs between Medicare claims and non-Medicare claims.

We did our field work during the period from September 1988 through July 1991 and, except as noted above, our review was carried out in accordance with generally accepted government auditing standards.

[6]In contrast to this general claim of higher cost, one supplier said that his company's cost for processing Medicare claims was less than for non-Medicare claims because the carrier accepted Medicare claims electronically, an option not available for non-Medicare claims.

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