Reimbursement for Durable Medical Equipment

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The use of durable medical equipment in the home, while not a recent development, was formally recognized by the Congress with the passage of the original Medicare legislation. Since that time the statute has been amended to provide for a more workable, economical, and desirable interface among the administrative, supplier, and user communities.

To assist in achieving this end, a research project was begun in October 1976 that has yielded data on Federal expenditures for reimbursement of rental and purchase costs of this equipment. Data were extracted from the Beneficiary History Files of five Part B carriers in 11 geographic areas covering the period 1976-1977. These data included the type of equipment; rental or purchase decision; submitted charges; allowed charges; and reimbursement by Medicare. Some 1.3 million individual records, from approximately 400,000 beneficiaries, were tabulated and analyzed. The exploratory nature of this research has provided a benchmark for future research and policy considerations. This article details various characteristics of the data collected for the project.

Introduction

In 1976, the Health Care Financing Administration's Office of Research, Demonstrations, and Statistics (ORDS) awarded a 3-year contract to Exotech Research and Analysis, Inc. to conduct a durable medical equipment (DME) research and demonstration project (Janssen, 1980). The project was conducted under the authority of section 245 of Public Law 92-603.

One of the major functions of this activity was to provide, for the first time on a large scale, primary data and analyses relating to Medicare DME reimbursement. This research focused on several aspects of DME use and reimbursement.

First, the dimensions and magnitude of reimbursement for DME were previously unknown. Second, the exact types of equipment and services used by beneficiaries were also largely unknown. Furthermore, patterns of use over time were of major concern; especially as they related to the rental of equipment for prolonged periods.

This article describes the results of analyzing the claims information from the Medicare users of DME. Relevant background information and the statutory provisions that prevailed during the time period that these data were assembled are also included.

Background

The Social Security Act provides for reimbursement for the rental or purchase of durable medical equipment to Medicare beneficiaries enrolled in the Part B, Supplementary Medical Insurance (SMI) program.

DME is defined as equipment that can withstand repeated use; is primarily and customarily used to serve a medical purpose; is generally not useful to a person in the absence of an illness or injury; *and* is appropriate for use in the home. Traditional examples of DME include such items as wheelchairs, hospital beds, canes, crutches, commodes, walkers, oxygen therapy equipment, and the supply of oxygen gas, etc. Expenses incurred by a beneficiary are reimbursable by Medicare if the equipment meets the definition of DME; the equipment is necessary and reasonable for the treatment of the beneficiary's illness or injury; *and* the equipment is used in the beneficiary's home.

Reimbursement for DME is based on a philosophy of "reasonable charges." The statutory requirements for the determination of reasonable charges are contained in section 1842(b)(3) of Title XVIII of the Social Security Act (Public Law 89-97 as amended).

Regulations and administrative procedures are formulated by the Health Care Financing Administration (HCFA) and are carried out by contractors known as carriers. The carriers' responsibilities include the processing and payment of claims, determination of rates and amounts of payment, and consideration of the medical necessity of the equipment or services as a condition for payment.

Statutory Provisions

Section 1842(b)(3) of the Social Security Act states: "No charge may be determined to be reasonable in the case of bills submitted or requests for payment made under this part . . . if it exceeds the higher of (i) the prevailing charge recognized by the carrier and found acceptable by the Secretary for similar services in the same locality . . . or (ii) the prevaling charge level that, on the basis of statistical data and methodology acceptable to the Secretary, would cover 75 percent of the customary charges made for similar services in the same locality during the last preceding calendar year elapsing prior to the start of the fiscal year in which the bill is submitted or the request for payment is made .... With respect to power-operated wheelchairs for which payment is made in accordance with section 1861(s)(6) charges determined to be reasonable may not exceed the lowest charge at which power-operated wheelchairs are available in the locality. In the case of medical services, supplies, and equipment (including equipment servicing) that, in the judgment of the Secretary, do not generally vary significantly in quality from one supplier to another, the charges determined to be reasonable may not exceed the lowest charge levels at which such services, supplies, and equipment are widely and consistently available in a locality except to the extent and under the circumstances specified by the Secretary ...."

The first part of this section deals with the general methodology that is applied to all Part B claims. In its basic form, the methodology has existed since the inception of the program. It is the basis of payment for services furnished by physicians, medical groups, independent laboratories, suppliers of ambulance transportation and suppliers of durable medical equipment. The section refers to "reasonable charges" in the context of customary and prevailing charges that are accumulated over an annual period. These latter charges are then the basis for comparison with the submitted charges or actual amount requested by the claimant.

Subsequent to the general description of reasonable charges in section 1842 are criteria that are applicable specifically to durable medical equipment and other medical supplies. Whereas the previous language refers to customary and prevailing charges without regard to quality or availability, section 1842 also refers to the determination of lowest charge levels for equipment items of similar quality that are widely and consistently available.

The net result of the statutory provisions for DME reimbursement is that the charge allowed by Medicare is the result of a comparison among: the actual or submitted charge; the customary charge of the individual supplier; the prevailing charge in the locality; and, the lowest charge level for those items which are subject to these provisions. Elsewhere in section 1842 is included an additional basis for comparison in the determination of reasonable charges; that is, the charge for a comparable service to the policyholders and subscribers of the carrier.

One other statutory provision of section 1842 has a major bearing on Medicare reimbursements. It provides for the "assignment" of benefits to a physician or other provider of services. In this context an assignment is an agreement between a supplier of DME and a beneficiary. Under these terms, the beneficiary transfers to the supplier the right to claim benefits based on covered services. The supplier, in return, agrees to accept as full payment the reasonable charge as determined by the carrier.

In effect, the supplier who accepts assignment is precluded by law from charging the beneficiary more than the deductible (if applicable) and coinsurance based on the reasonable charge determination. The supplier's bill for the DME is considered paid in full when the reasonable charge has been paid.

Administrative Provisions

Instructions to the carriers from HCFA require that a physician's prescription accompany a claim for reimbursement of the cost of DME items. The prescription should include a diagnosis and prognosis of the patient's condition, the reason for prescribing the equipment, and an estimate of the number of months the equipment will be needed (the period of medical necessity). Further, when any of this information is missing from existing documentation or correspondence with the beneficiary, supplier, or physician, the carrier may seek more detailed corroborative information, or infer the needed information. When the physician estimates that a patient needs an item of equipment indefinitely or when a time estimate is not furnished, a reevaluation of medical necessity is made six months after the original determination is made, providing claims are still being received on behalf of the beneficiary. (Technically, a reevaluation of medical necessity is made every six months for the duration of the beneficiary's episode with DME.)

Under the Medicare Part B procedures that were in effect during the period in which the data presented in this paper were developed, and if the beneficiary elected to purchase, there were two basic methods of reimbursement for DME. Payment for purchase of inexpensive equipment (items for which the allowed charge was $50 or less) were made in a lump sum, subject to the deductible and coinsurance, when it was determined to be less costly or more practical than payment for rental. For purchase of expensive items (those having an allowed charge of more than $50), benefits were paid in monthly installments equivalent to the payment that would have been made had the equipment been rented. These payments were, of course, restricted to the established period of medical necessity or until the program's share of the allowed purchase price had been paid, whichever first occurred. Payment in either case could be made directly to the beneficiary or assigned to the DME supplier. Where payment was made for the rental of DME (subject to the deductible and coinsurance), monthly benefits also continued for as long as the medical necessity existed. Here again, payment could be made directly to the beneficiary or assigned to the supplier.

Sources and Extraction of Data

In an attempt to obtain a distribution of carrier service areas that would represent broad geographic population areas, a large number of carriers were contacted. Of 19 carriers who were specifically requested to participate, five agreed to furnish data for the project under separate contract with HCFA. These five were carriers for Medicare Part B in 11 states as follows: The Equitable Life Assurance Society of the U.S. (Idaho, New Mexico, Tennessee, and Wyoming), Group Health Incorporated (Florida and New York), Occidental Life of California (California), The Travelers Insurance Company (Minnesota, Mississippi, and Virginia), and Washington Physicians Service (Washington).

These carriers supplied computer tapes containing either records of DME claims processed, or records of the entire experience of the Medicare Part B beneficiaries. That is, the records could have contained charges relating to physicians, DME, ambulance usage, laboratory fees, and all other services covered by Part B. From this extremely large data base (20 million records), approximately 1.3 million were extracted on the use of DME.

The first step in the extraction process necessitated identifying appropriate DME claims or individual line items of DME from claims forms. Each carrier maintains a list of "procedure codes" which classify DME by type of item. It was found that these classification schemes varied widely from carrier to carrier both in the depth with which they classified DME and in the volume of items classified. These lists of DME procedure codes were as small as 40 items and as large as 250 items. The lack of comparability of the various procedure code schemes led to the presentation of data by generic categories of DME.

Characteristics of the Project Sample

As of July 1, 1976 there were 24,555,578 beneficiaries enrolled in the Medicare Part B (SMI) program. Of this number 3,724,384 were included in the service areas of the participating carriers. This constituted a 15.17 percent sample of the universe of Part B enrollees. Table 1 reflects the distribution of these enrollees by HCFA Region. These data reveal that the distribution of enrollees in the participating carrier service areas, relative to regional enrollment, was not uniform throughout the country. Rather, enrollees in the participating carrier service areas ranged from zero to 62.8 percent of regional enrollment. It should also be noted that the distribution of Medicare SMI enrollment is likewise not uniform across regions.

TABLE 1

SMI Enrollment by Region and Participating Carriers as of July 1, 1976

	Total Persons Enrolled	Persons Enrolled by Participating Carriers	Enrollment by Participating Carrier as a Percent of Regional Enrollment
Region			
I - Boston	1,450,934	-0-	0.0
II - New York	3,088,132	252,021	8.2
III - Philadelphia	2,569,183	407,278	15.9
IV - Atlanta	4,205,461	987,868	23.5
V - Chicago	4,720,073	196,807	4.2
VI - Dallas	2,320,238	97,924	4.2
VII - Kansas City	1,459,668	-0-	0.0
VIII - Denver	578,449	32,231	5.6
IX - San Francisco	2,565,056	1,282,195	50.0
X - Seattle	745,072	468,060	62.8
Railroad Retirement Board	853,312		0.0
Total Enrollment	24,555,578	3,724,384	15.2

Table 2 shows SMI enrollment by service area, carrier, total for each carrier, and percentages of these to total SMI enrollment. The table illustrates the project sample percentages for each of the geographic locations included in the total sample. A wide range—0.13 percent to 5.22 percent—in the density of Part B enrollees per service area can clearly be seen in the table.

The factors mentioned above, combined with the lack of a rigorous statistical sampling procedure, restrict the statistical representativeness of the data that are presented. However, the data represent a massive sample of the Part B experience with DME and in certain areas strong inferences may be drawn which may or may not support popular conceptions of the DME program.

Presentation of the Data

DME Use by Part B Beneficiaries

Subsequent to the extraction of DME claims, various aspects of the information contained in the claims records were investigated. Of primary interest was the number of DME users in the Medicare Part B beneficiary population. The intensity of DME use by beneficiaries may be measured only by proxy, that is, by counting the number of beneficiaries who had, in the past, submitted claims for reimbursement. Table 3 shows DME users by both the participating carriers and their service areas. In total, the DME experiences of 403,818 beneficiaries were analyzed.

This table also presents percentages of DME users enrolled with each carrier by service area. An average of almost 11 percent of the beneficiaries in the participating carrier service areas had some experience with DME.

TABLE 2

SMI Enrollment by Participating Carrier and Service Area as of July 1, 1976

Carrier and Service Area	Persons Enrolled By Service Area	Persons Enrolled By Carrier	Enrollment By Participating Carrier as a Percent of Total SMI Enrollment
Equitable Life		694,470	2.83
Tennessee	481,467		1.96
New Mexico	97,924		0.40
Wyoming	32,231		0.13
Idaho	82,848		0.34
Group Health Inc.		479,968	1.96
New York	252,021		1.03
Florida	227,947		0.93
Occidental Life		1,282,195	5.22
California	1,282,195		5.22
The Travelers		882,539	3.59
Virginia	407,278		1.66
Mississippi	278,454		1.13
Minnesota	196,807		0.80
Washington Phys. Svc.		385,212	1.57
Washington	385,212		1.57
Total Enrollment for All Participating Carriers		3,724,384	15.17
Total Enrollment for All SMI Carriers		24,555,578	100.00

Notable are the relatively large percentages of users associated with the service areas in California, Florida, and Idaho, and the differences among the various geographic locations in DME usage.

Another measure of DME use is the volume of services for which requests for payment were received by the carriers. This is most accurately reflected by the tabulation of line items of claims. An alternative measure might be the volume of claims; however, claims often contain requests for multiple items or other services which are not necessarily related to the DME line items. Table 4 integrates the tabulation of line items with the numbers of claimants. A ratio is calculated which indicates the intensity of DME use from the standpoint of reimbursement requests. On the average, for the claims volume generated during the course of 1976-1977, 3.2 line items of DME reimbursement requests were filed by the Part B beneficiaries. It is interesting to note the small line item volume per beneficiary in the Occidental Life of California service area compared to all the other carrier service areas.

TABLE 3

DME Users by Participating Carrier and Service Area

Carrier and Service Area	DME Users in Service Area	DME Users by Carrier	Percentage of DME Users in Service Area	Percentage of DME Users by Carrier
Equitable Life		32,864		4.73
Idaho	11,702		14.13	
New Mexico	7,328		7.97	
Tennessee	12,943		2.69	
Wyoming	891		2.77	
Group Health Inc.		31,234		6.51
Florida	23,229		10.19	
New York	8,005		3.18	
Occidental Life		281,217		21.93
California	281,217		21.93	
The Travelers		46,313		5.63
Minnesota	8,302		4.22	
Mississippi	18,817		6.76	
Virginia	19,194		4.71	
Washington Phys. Svc.		12,190		3.17
Washington	12,190		3.17	
	Total	403,818		10.86

Considering the data presented in Tables 3 and 4, one can postulate two models of DME use. One model, supported by the California experience, has a relatively large proportion of Medicare beneficiaries using a relatively small amount of DME. The other model, supported by data from the other carriers, has a much smaller population using a larger number of services or items.

Several factors that are largely unknown could contribute to the differences found in these data sets from the various locations. A prominent factor could the effects of State-operated Medicaid programs and their policies concerning coverage and reimbursement of DME. Certainly medical practice differences concerning hospitalization or other institutionalization rather than home care could be another causal factor. A third could be general socioeconomic characteristics or folkways of the beneficiaries concerning institutionalization versus home care. Although it was assumed from the outset of the project that a variety of regional differences would be encountered, no systematic attempt was made during the project to determine the causes of these differences.

TABLE 4

DME: Line Items, Beneficiaries, and Line Items Per Beneficiary by Participating Carrier and Service Area

Carrier and Service Area	Line Items	Beneficiaries	Line Items Per Beneficiary
Equitable Life	217,399	32,864	6.6
Idaho	54,394	11,702	4.6
New Mexico	61,066	7,328	8.3
Tennessee	97,359	12,943	7.5
Wyoming	4,580	891	5.1
Group Health Inc.	291,163	31,234	9.3
Florida	234,782	23,229	10.1
New York	56,381	8,005	7.0
Occidental Life	432,293	281,217	1.5
California	432,293	281,217	1.5
The Travelers	258,477	46,313	5.6
Minnesota	52,469	8,302	6.3
Mississippi	104,909	18,617	5.6
Virginia	101,099	19,194	3.2
Washington Phys. Svc.	78,341	12,190	6.4
Washington	78,341	12,190	6.4
Total	1,277,673	403,818	
Average			3.2

Claims Flow and Payment

Quantitative aspects of the flow of claims and statistics relating to the makeup of claims are described in this section and shown in the accompanying figures. Figure 1 illustrates a simplified view of the functional process of the claims flow and the ultimate determination of payment or non-payment. Noted in the figure are percentages of line items resulting from action taken in the processing of claims.

Following receipt of the claim, a query is made to HCFA files to determine the eligibility of the beneficiary and his/her status concerning liability for the annual deductible. At this point, the claim may be denied due to ineligibility of the beneficiary. Next, the validity of the claim itself is considered. Specifically, the medical necessity of the benefit or service being claimed is scrutinized. Again, the claim may be denied because the equipment is not covered by the program or because of its inappropriateness for the condition of the patient. Some 14 percent of the line items of claims for DME were denied by the carriers. Of the remaining 86 percent of the line items that were not denied, a determination of payment was undertaken. Calculation of the reasonable or allowed charge was made for the particular item in question. Any amount of the annual deductible that was still due was deducted from the allowed charge calculated for the claim. Finally, the coinsurance amount was calculated and deducted. A reimbursement check was then issued to either the beneficiary or—if assignment was taken—to the supplier.

As indicated, only 77 percent of the submitted line items resulted in reimbursement by the Medicare Part B program. Nine percent of the line items that continued through the processing system did not result in payments by the program because the deductible had not been satisfied, that is, the remaining deductible was greater than the allowed charge for the claim.

Figure 2 illustrates the effects of denials, reasonable charge reductions, deductible payments, and coinsurance payments on the actual or submitted charges of claims. The net result of these four steps was the payment of only 52.3 percent of all submitted charges for DME. This result, however, must be viewed with some caution because it is based on all submitted claims, including those subsequently denied. The figure also includes several alternative views of this process. Perhaps the middle column best illustrates the effects of these aspects of the program on the payment of claims for covered services. In this case, it can be seen that reimbursement for covered services by the Part B program accounted for approximately 60 percent of the charges for those covered services and items of equipment. The third column illustrates the effects of the deductible and coinsurance only (after the reasonable charge determination of the claim has been made), that is, the percentage of reimbursement of allowed charges.

Reimbursement by Monetary Class Interval

Information relating to the DME claims volume by monetary class intervals is of use in understanding the beneficiaries' liability for the deductible and coinsurance. These data may be helpful in analyzing policy changes that affect these amounts.

Table 5 lists the frequency of line items and dollar amounts paid for those line items in $50 intervals. Figure 3 illustrates the frequency of these data. Considering the rental data first, it can be seen that some 99 percent of the line items and 92 percent of the associated reimbursements were $100 or less. Only 1 percent of the line items of claims for rental were ever reimbursed more than $100. The situation with purchases is somewhat different, however. Here, 97 percent of the line items but only 73 percent of the associated reimbursements were found on claims for $100 or less. Thus, some 3 percent of the line items found on claims for purchase reimbursement, accounting for 27 percent of the total reimbursement for purchase, were in excess of $100.

Regulations in effect at the time the data were developed provided for lump-sum payments for purchases of only inexpensive items, that is, those having an allowed charge of less than $50. Therefore it is not surprising that almost all purchase reimbursements were less than $50. Larger payments could take place on purchases only if similar items rented for larger monthly amounts. But the proportion of rental reimbursements

FIGURE 1
Administrative Disposition of DME Claims for 1976 and 1977 Combined

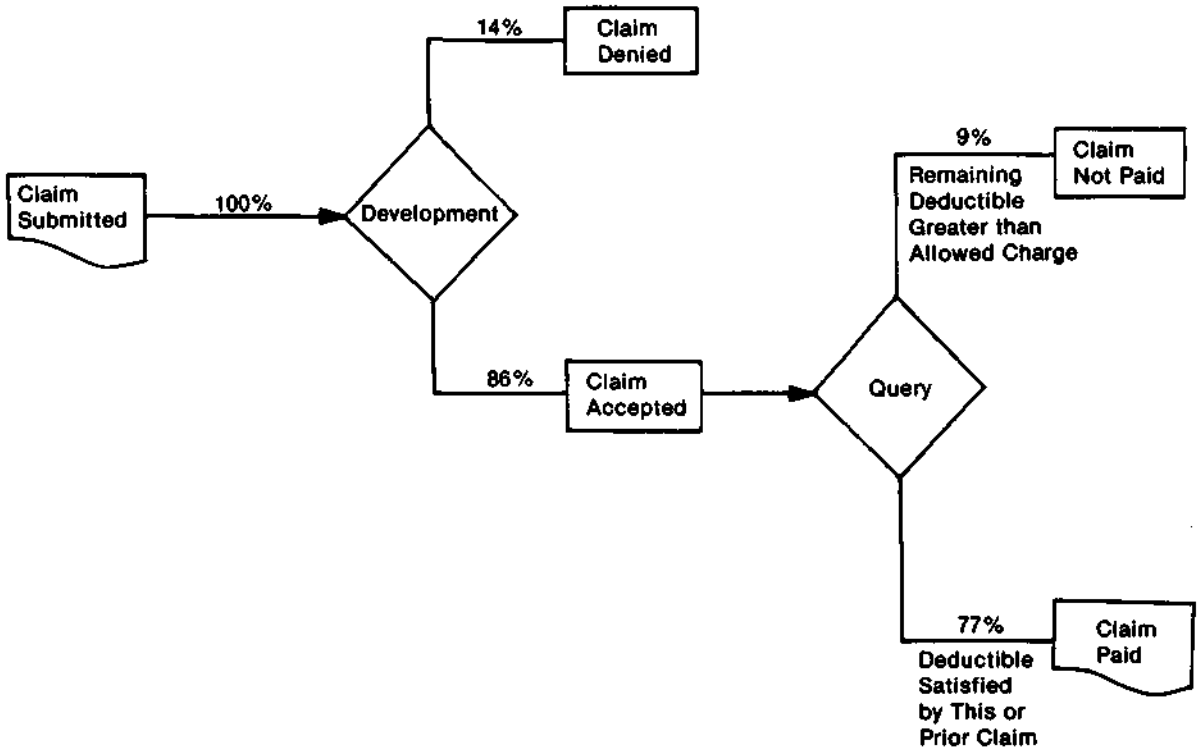


FIGURE 2
Charge and Reimbursement Relationships for DME in Medicare Part B

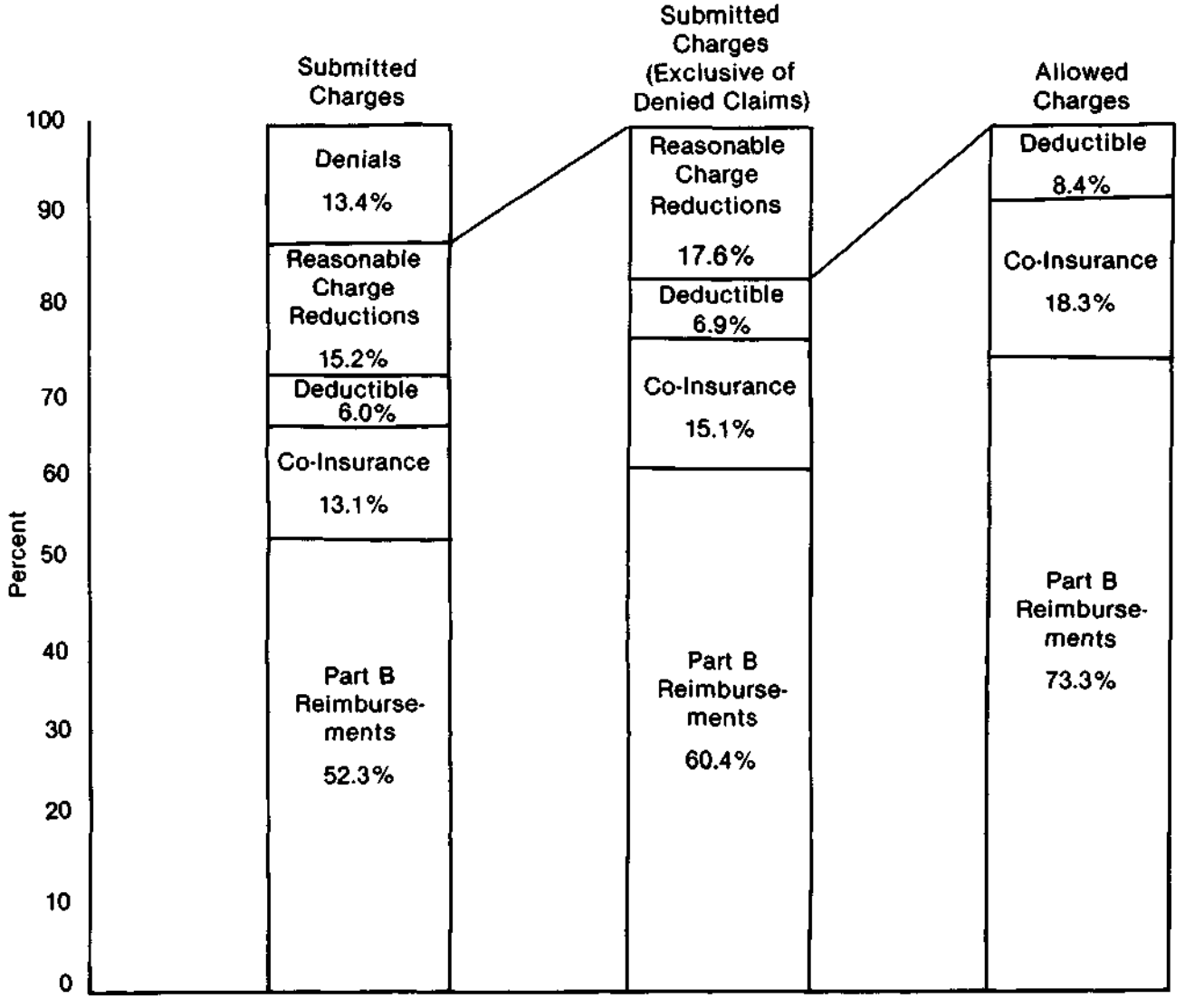


TABLE 5

DME Reimbursement by $50 Class Intervals by All Participating Carriers (1976-1977)[1]

Line Item Reimbursement Interval	Rental		Purchase	
	Percent of Line Items	Percent of Dollars Paid	Percent of Line Items	Percent of Dollars Paid
$ 0.01 - $050.00	94.80	78.34	91.81	56.00
$ 50.01 - $100.00	4.27	13.97	5.17	14.79
$100.01 - $150.00	0.57	3.70	1.51	7.80
$150.01 - $200.00	0.22	2.02	0.61	4.48
$200.01 - $250.00	0.07	0.87	0.29	2.73
$250.01 - $300.00	0.03	0.43	0.18	2.06
$300.01 - $350.00	0.01	0.19	0.11	1.52
$350.01 - $400.00	0.01	0.17	0.07	1.09
$400.01 - $450.00	0.01	0.06	0.05	0.90
$450.01 - $500.00	0.00	0.03	0.04	0.82
$500.01 and above	0.01	0.22	0.16	5.79

[1]1977 data not available from Equitable Life Tennessee site.

over $50 was also quite small; certainly smaller than the corresponding percentage for purchases. Therefore, the accumulation of claims before submittal by beneficiaries and suppliers is presumed to have allowed for larger payments in these cases. Of particular interest was the monetary value associated with purchase claims in excess of $450. These few claims (0.2 percent) accounted for some 6.6 percent of the total purchase reimbursements. Perhaps extraordinary circumstances allowed for these payments prior to the issuance of regulations by the Medicare program (early in 1978) that allowed for lump-sum payments up to $600.

Amounts Reimbursed for Rental and Purchase of DME

The following categories were used to aggregate and present the data:

1. Hospital beds and accessories
2. Commode chairs, bedpans, urinals, and toilet accessories
3. Canes, crutches, and accessories
4. Traction equipment and accessories
5. Walkers and walking aids
6. Wheelchairs and accessories
7. Oxygen
8. Pads and cushions
9. Miscellaneous DME
10. Oxygen therapy equipment
11. Repair/maintenance
12. Unspecified DME

Although ten of these categories are fairly obvious as to their constituent items, two may need some clarification. The Miscellaneous DME category contains items of DME that are readily identifiable in the records as specific items of DME. Each item in the category carries with it a specific procedure code. The Unspecified DME category contains items which are all coded with one or just a small number of procedure codes which do not individually identify the type of equipment. These codes are frequently used for new items of DME or in cases in which no charge screens exist for a particular item. It should be noted that there is no way in which the computerized Beneficiary History File can be used to determine the types of items in the Unspecified DME category. Only the hard-copy claim form originally submitted would contain this particular information.

Table 6 presents reimbursement data for 1976 and 1977 for the participating carriers. The amounts shown may be considered to be maximal amounts paid for DME. Because of the configuration of the Beneficiary History Files maintained by the carriers, it was not possible to account for the deductible on a claim-by-claim basis. Therefore, it was assumed that the deductible was not applied.

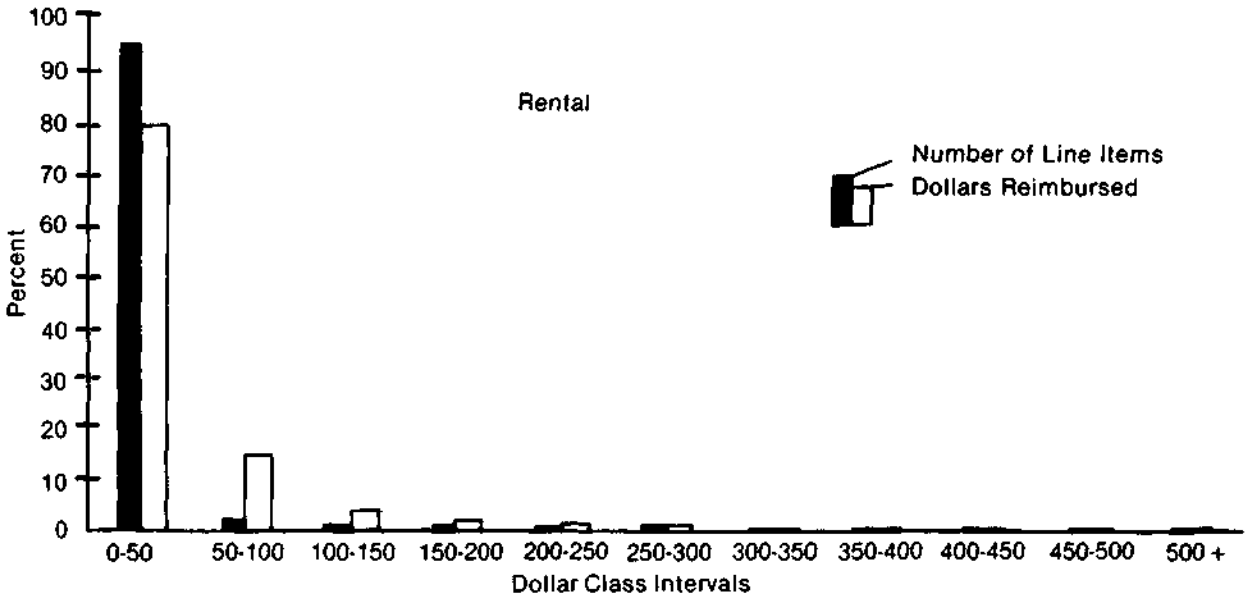
The data are complete for all five carriers for the year 1976. However, for 1977, data are not included from the Equitable Life Tennessee site and data from the Washington Physicians Service cover only the period January 1, 1977 through October 31, 1977.

In the past, it was generally thought that almost all of the cost of DME was made up of reimbursement for items such as wheelchairs, hospital beds, bedpans, walkers, etc. These tabulations indicate the magnitude of expenditures for oxygen, oxygen therapy equipment, and related items. For all carriers, a sizeable portion of the DME dollar was spent on these types of life-support systems. The implications of these findings are certainly far-reaching with regard to reimbursement policies for DME under Medicare since oxygen and the associated therapy equipment account for a large portion of total DME reimbursements.

It was expected that regional and local differences would occur with respect to the rental and purchase of DME. These differences have been thought to be due to many variables in the structure of the DME marketplace as well as differing medical treatment regimens. Although the tabulations provide some insight into the distribution of rentals versus purchases within the major category classifications provided, no causes for these differences were investigated during the course of the project.

The data collected during the course of the project indicate that the distribution of reimbursement for given categories of equipment is fairly stable. However, the proportion of rental versus purchase reimbursements for the two years studied varied considerably. Earlier, it was thought that this ratio was quite stable, but these data (as can be derived from Table 6) indicate that for 1976, 53 percent of the dollars were reimbursed for rentals and the remaining 47 percent for purchases. In 1977, the proportion of rental reimbursement dropped to 40 percent and purchases (which seem to have been greatly influenced by oxygen purchases) rose to 60 percent.

FIGURE 3
Frequency Distribution of Reimbursement for DME



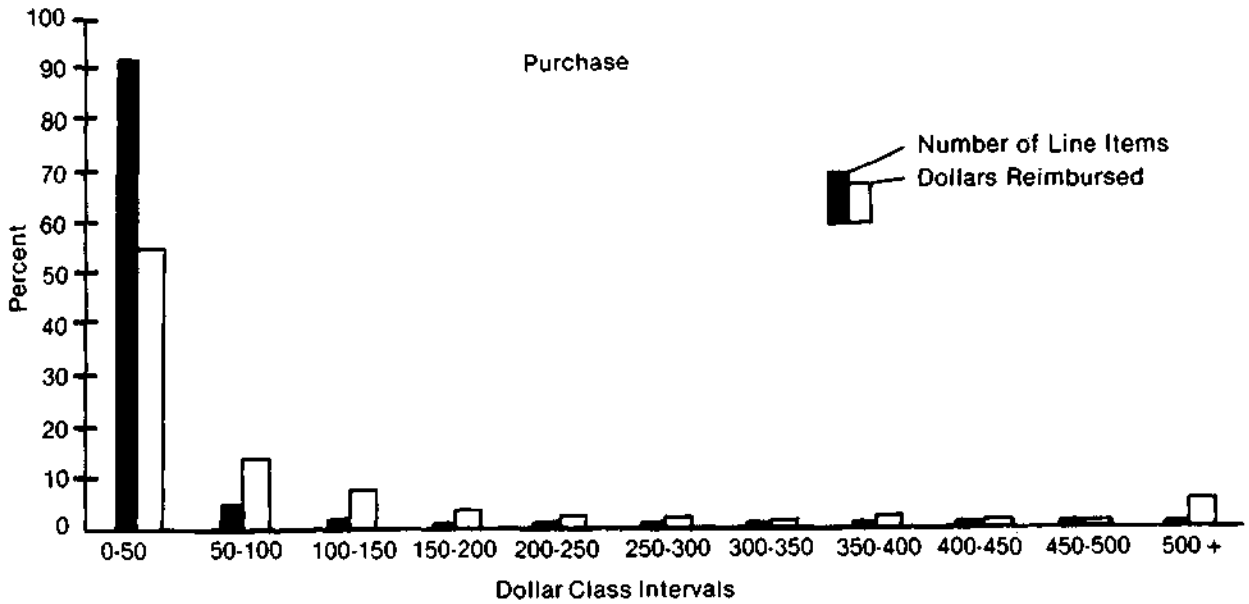


TABLE 6

DME Rental and Purchase Reimbursement Expenditures by Major Category All Participating Carriers (1967-1977)[1]

Category Description	1976				1977			
	Rental		Purchase		Rental		Purchase	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Hospital Beds and Accessories	$1,591,925	26.53	$520,023	9.85	$798,338	19.43	$867,895	13.81
Commode Chairs, Bedpans, Urinals, and Toilet Accessories	232,862	3.88	158,948	3.01	148,765	3.62	218,369	3.47
Canes, Crutches, and Accessories	31,149	0.52	31,656	0.60	33,919	0.83	24,887	0.40
Traction Equipment and Accessories	175,114	2.92	77,044	1.46	75,780	1.84	108,429	1.73
Walkers and Walking Aids	202,821	3.38	170,110	3.22	151,566	3.69	172,573	2.75
Wheelchairs and Accessories	1,091,624	18.19	536,966	10.17	736,903	17.93	644,866	10.26
Oxygen	—	0.00	2,598,333	49.21	—	0.00	2,323,585	36.98
Pads and Cushions	147,831	2.46	25,911	0.49	45,628	1.11	91,427	1.45
Miscellaneous DME	16,570	0.28	18,077	0.34	188,614	4.59	19,450	0.31
Oxygen Therapy Equipment	1,963,170	32.72	816,872	15.47	1,183,791	28.81	1,349,534	21.48
Repair/Maintenance	347,758	5.80	40,611	0.77	344,094	8.38	36,201	0.58
Unspecified DME	199,920	3.33	285,558	5.41	401,552	9.77	426,464	6.79
Total	6,000,744	100.01	5,280,109	100.00	4,108,950	100.00	6,283,680	100.01

[1]Data not included from Equitable Tennessee for 1977 or from Washington Physicians Service from November 1 through December 31, 1977.

Also of note were the amounts paid either for rentals or purchases that were classified as Unspecified DME. Although constituting a relatively small proportion, these amounts varied significantly from one carrier to another, presumably as a result of the complexity and completeness of the procedure code systems in use by the carrier.

Duration of Rental Episodes

Tabulations were made of several basic statistics on the duration of rental episodes. These tabulations included: the number of episodes of a given duration, the number of months in which reimbursement was made for episodes of a given duration (rental-months), and the average duration of rental episodes. Table 7 shows the average length of rental by each of the five carriers and an overall average.

Several important facets of the rental portion of the DME program became readily apparent. First, the rental experience, in terms of duration, was vastly different from one geographic area to another. Also, in many cases individual rentals were relatively short. However, when the number of months involved in the longer rentals were considered, a significant fact was discovered. Here the aggregate number of months, and consequently monthly payments by the program and the beneficiaries, amounted to a significant proportion of the total. The data revealed that rental durations of one year or less accounted for 85 percent of the reimbursement expenditures for 92 percent of the episodes. Conversely, longer rentals—of more than a year's duration—constituted 8 percent of the episodes and 15 percent of the reimbursements.

TABLE 7

Average Length of Rental Episodes

Participating Carrier	Number of Months of Rental Per Episode
Equitable Life	4.88
Group Health Inc.	5.16
Occidental Life	2.88
The Travelers	4.91
Washington Phys. Svc.	3.89
Average	4.29

Assignment Status

Assignment rates for both rentals and purchases were tabulated. Table 8 shows the assignment status of DME claims for all of the carriers participating in the project. Separate tabulations were performed for the rental claims and the purchase claims as special problems are known to impede the acceptance of assignment by suppliers for purchases. These problems generally relate to the transfer of title for the equipment which occurs at the time of the transaction. The risk borne by the supplier in this instance is that the claim may be denied by Medicare and, if so, a lengthy and costly legal process is usually necessary to retrieve the item or reacquire the title to the equipment.

TABLE 8

DME Assignment Status by All Participating Carriers (1976–1977)

		Percent of Reimbursement
Rentals:	Assigned	68.4
	Unassigned	31.6
		100.0
Purchases:	DME Assigned	29.8
	Oxygen Assigned	26.8
	DME Unassigned	24.3
	Oxygen Unassigned	19.1
		100.0

The data show that few purchases of durable equipment (other than oxygen) were reimbursed under the assignment provisions of Medicare. While two-thirds of the dollars spent on rentals were assigned, slightly less than one-third of the dollars spent on durable equipment purchases were assigned. Assignments for oxygen, however, were almost as great a total as for purchases of DME. The grand total of assigned purchases was still only 57 percent. The rental assignment rate was quite high when compared to the assignment rates of other providers involved in the Part B program. Here again, large differences were seen between the 11 carrier service areas both for rental assignment and purchase assignment.

Comments and Implications

Data were developed during the project, primarily in response to a Congressional mandate, as specified by the Scope of Work provided to the contractor by HCFA. However, the project as a whole was subject to a number of limitations. For example, interviews were *not* conducted with individual beneficiaries or individual physicians. Initial claims submitted for reimbursement by suppliers or beneficiaries were not examined; rather, resulting payment records were analyzed. The decision-making considerations regarding procurement or provision of DME by beneficiaries, physicians, or suppliers were not investigated. The consequence of these limitations is that there are large areas where one can only surmise the nature and effect of these factors. A number of areas were identified in which additional research was recommended.

However, for the first time, a large sample of data relating to reimbursement for DME has become available to HCFA. The amounts for DME reimbursement, although not accurately known in the past, are much larger than generally thought. In addition, the administrative effort and cost associated with DME claims were reported to be several times that of other claims handled by the carriers.

It became clear that the field of DME is more complex than realized. Timing, availability of equipment, supplier involvement in the provision of health care, and the interaction among the prescribing physician, the beneficiary or his/her representative, the supplier, the carrier, and the State and Federal governments are all operating in the chain of DME provision.

The younger, physically disabled population poses a special problem with respect to provision of DME and reimbursement for it. In interviews with State Medicaid personnel, the point was made that amounts authorized for payment under HCFA rules were frequently insufficient, particularly for customized, heavily-used equipment required for this special population. When the amount authorized for the Medicare/Medicaid reimbursement does not cover the total cost and if the beneficiary is indigent, he/she may effectively be denied access to the needed equipment.

Moreover, there is a vast array of equipment for which reimbursement is made. Experience with claims for equipment has led the Part B carriers to develop classification schemes or procedure code systems for DME in a manner that reflects their experience with claims. As a consequence, all of these carrier systems are different. In fact, some multi-State carriers have different systems for each of the several areas in which they are the Medicare carrier. These classification schemes are the basis for the reasonable charge calculations and subsequent reimbursement. In this context they are a major source of confusion to beneficiaries and to suppliers seeking reimbursement, particularly if multiple States are involved. Since these procedure code systems are quite different, comparative analysis of reimbursement data must be undertaken with extreme caution and at a high level of aggregation of items.

An important finding of the study was that approximately one-half of the reimbursement for DME involved oxygen gas and related delivery or therapy equipment. Adequate availability and delivery of this type of life-support equipment may be critical to the immediate health needs of the beneficiary. Unique problems with respect to training, service, maintenance, operation and availability of equipment for *either* rental *or* sale complicate the transactions for this type of DME and require special consideration in the development of policy and procedures for reimbursement. Care must be taken in devising administrative procedures for such services so that the availability and timeliness of needed oxygen equipment, gas, and supplies will not be adversely affected.

This research confirms some of the findings of a 1972 General Accounting Office (GAO) report which found the existence of extended rentals in approximately the same proportion. Factors inhibiting the purchase of DME seemed also to be substantially the same as those found by GAO, although as noted, this study did not investigate this issue in depth. Another area of agreement with the GAO findings was the proportion of beneficiaries who used DME. Only a small percentage of Part B beneficiaries were found to have filed claims for DME during the period studied. On this point, however, one must remember the large proportion of users in California. One finding that differs sharply from GAO is the proportion of rental reimbursement to purchase reimbursement. GAO found that reimbursements were about 82 percent for rentals and 18 percent for purchases. This study found a nearly fifty-fifty split in 1976, and almost 60 percent spent for purchases in 1977. Whether or not there is a clear trend toward purchase rather than rental is unknown.

The General Accounting Office, Congress, and HCFA have continually focused on the extended rental as a source for program savings. However, great care must be given to estimating possible savings that could accrue to the program if reimbursement procedures were changed. A significant factor involved in this determination is the lack of knowledge about the length of medical necessity for an item of DME. Often statements such as "indefinite" or "indeterminate" are cited. Given this uncertainty concerning the length of time an equipment item may be needed, the beneficiary is disadvantaged in determining whether it would be prudent to purchase rather than rent the item. Consequently, rental is frequently chosen. In some cases, in fact in the vast majority of rental situations, the rental episode ends fairly soon and the beneficiary has, by default, chosen the more economical method for obtaining the needed equipment. This decision process is not well understood because no information is available as to whether the patient recovered, obtained care in a setting other than the home, or died. Nor are data available that indicate whether or not beneficiaries continued to have a valid medical necessity after purchase transactions occurred. In the latter case, presumably the estimated period of medical necessity was sufficient to warrant purchase and the actual term of need was long enough to support that decision.

The complex reasoning and decision-making undertaken by physicians in prescribing DME for use in the home is another area in which little is known. This project did not attempt to determine physicians' requirements for DME home use or factors that enter into the estimation of the length of medical necessity. Certainly, however, the latter factor can be seen to be the single most important determinant of prudent rent versus purchase decisions.

Durable medical equipment assists the beneficiary in coping with a physical condition in a home environment. Physicians release patients from the hospital with prescriptions for DME as appropriate. It has been conjectured that greater understanding and use of DME might have the effect of shortening hospital stays. National hospital costs are substantial and represent the largest segment of HCFA expenditures. Thus, the question may be raised as to whether DME use in the home could substitute for institutional care at an earlier point than may be current practice. A one-week hospital stay incurs costs that, if they could be avoided, would provide for rental or purchase of DME and potential savings to the beneficiary and program. Data are not available at the present, however, to support this conclusion.

In late 1977, section 16 of P.L. 95-142 provided that the Secretary of Department of Health and Human Services (through HCFA and the carriers), rather than the beneficiary, make the decision of rental versus purchase with regard to reimbursement. The Secretary is dependent on physicians' prescriptions with respect to individual patients in carrying out this decision-making process. It is unfortunate that no data are available that relate the physicians' estimated period of medical necessity of DME with the actual term of use by the patient. Procedures interpreting and implementing this section were issued that make numerous changes to the prior system. The experience of beneficiaries under these new provisions should be followed closely to determine the impact both on the beneficiary and the program. In particular, the possible creation of a financial burden on the beneficiary or the disruption of appropriate access to care should be considered carefully.

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