

Comprehensive Medical Insurance

*a study of costs, use, and attitudes
under two plans*

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Highlights of the Study

THIS IS A SURVEY of members of three New York trade unions who were permitted individually to choose between two health insurance plans, both of which cover the full range of physicians' services. The two plans were Group Health Insurance, Inc., which permits its enrollees free choice of physician and reimburses physicians in accordance with a payment schedule, and Health Insurance Plan of Greater New York, which provides care to its enrollees without charge at any of 31 medical groups and, within each panel group, allows free choice of a family physician. This "dual choice" for the union members involved created a unique opportunity for study of subscriber attitudes and use of services under two different methods of organizing medical services. Identical Blue Cross hospital benefits were provided members of both groups.

The survey, conducted by the National Opinion Research Center, determined the reasons for the union members' choice, the amount of health services used by those in each plan over a period of a year, the extent to which the two plans paid for these services, and the attitudes of the enrollees toward the plan of their choice after some experience with it.

Because the samples of subscribers in the two plans were, for comparison purposes, matched for age, sex, family size, and educational level, the survey data cannot be generalized in terms of the total membership of GHI or HIP in New York City or in terms of the general public. However, the similarities and differences in utilization, costs, and attitudes of the members of the two plans surveyed in this study appear to have important implica-

tions for health insurance and for those concerned with providing personal health services.

Costs of services

The average gross cost of all health care over a year was \$154 per person for the GHI enrollees studied, \$139 for HIP enrollees. These figures are substantially higher than the costs of health care met by insured individuals in other cities that have been studied, probably reflecting the higher unit prices of various health care services in New York City.

Broken down by type of service, the average costs for each individual in the two groups (including the amount paid by insurance) were: for hospital care, GHI enrollees \$23, HIP enrollees \$13; for physician services, GHI enrollees \$50, HIP enrollees \$47 (for hospital surgery, GHI members \$11, HIP members \$5); for drugs, GHI enrollees \$35, HIP enrollees \$36; for dental care, GHI \$34, HIP \$36; and for all other health care, GHI \$11, HIP \$8. As these figures show, the costs of hospital care and hospitalized surgery were significantly higher for GHI enrollees.

About one out of five GHI and HIP enrollees incurred total gross costs for health care of \$200 or more. Five to 6 per cent incurred costs of \$200 or more for physicians' services alone. Eight to 9 per cent of GHI and HIP enrollees spent \$100 or more for out-of-hospital drugs; 11 to 12 per cent spent that much for dental care.

Proportion paid by insurance

GHI and HIP paid 34 to 35 per cent of the total health care costs of the enrollees studied. Of insured services, GHI paid 78 per cent of its enrollees' hospital care costs, HIP 88 per cent. GHI paid 59 per cent of the cost of physicians' services, HIP 80 per cent.

For individuals whose costs for all services were \$300 or more, GHI paid 41 per cent and HIP 44 per cent of the costs. For those whose costs for physicians' services alone were \$300 or more, GHI paid 39 per cent and HIP 68 per cent of these costs.

GHI paid 80 per cent or more of all physicians' costs for 52 per cent of its enrollees who incurred some physicians' costs. HIP paid 80 per cent or more for 80 per cent of its enrollees who had these costs.

GHI paid 80 per cent or more of the hospital surgical costs for 35 per cent of the individuals who incurred these costs in the hospital. HIP paid this proportion for 92 per cent of those of its enrollees who had hospitalized surgery.

For those who used physicians' services outside the hospital, excluding obstetrical care and surgery, GHI paid 80 per cent or more of the costs for 38 per cent of its enrollees. HIP paid this proportion for 73 per cent of its enrollees using these services.

Utilization of services

GHI enrollees use more hospital care and surgery (both in and outside hospitals) than do HIP enrollees. GHI enrollees studied in this survey had 11 hospital admissions and 87 days of hospitalization per hundred in a year. HIP enrollees had 6.3 admissions and 41 days per hundred. GHI enrollees had 7.6 surgical procedures in the hospital per hundred in a year, while HIP enrollees had 4.3.

GHI and HIP enrollees make use to the same extent of physicians' services other than surgery. GHI enrollees had six doctor visits a year, exclusive of those for surgery and obstetrics, while HIP enrollees had 5.5. Twenty-six per cent of GHI enrollees and 25 per cent of HIP enrollees saw no doctor at all during a year.

Reasons for choice of their plan

Asked why they had chosen GHI, 72 per cent of the enrollees studied spontaneously cited its "free choice of physician." Forty per cent of HIP enrollees spontaneously cited "nothing to pay" as their reason for selecting that plan. The reason next most often mentioned (16 to 20 per cent) by members of both plans was that "others in the shop were joining."

Shown a list of reasons of broad range for selecting a health

insurance plan, 88 per cent of those in GHI checked "free choice of doctor" as a reason for having chosen their plan. Among HIP enrollees, 61 per cent checked "nothing to pay" as a reason for their choice of that plan. "Others in the shop joining," the second reason in popularity among members of both plans, was checked by 34 per cent of GHI enrollees, 39 per cent of HIP enrollees.

Attitudes toward GHI and HIP

The majority of enrollees in both plans expressed favorable attitudes toward their plan, 90 per cent for GHI enrollees and 79 per cent for HIP enrollees, but a larger minority of HIP enrollees were dissatisfied, 12 per cent as compared with 3 per cent for GHI. About the same proportion in both plans, GHI 7 per cent, and HIP 9 per cent, said they did not know. The majority in both plans also expressed favorable attitudes toward their physicians, but more HIP respondents agreed that "doctors don't let you explain troubles," "you wait too long in their office," etc. Very few GHI enrollees changed doctors when they enrolled in GHI, while 46 per cent of HIP respondents changed doctors when they enrolled in this plan.

Chapter 1

Purpose of the Study

THE PREVAILING PATTERN of benefits in voluntary health insurance continues to provide coverage for hospital care and physicians' services in the hospital. These are the services that were introduced first in the development of voluntary health insurance because they were relatively easy to administer and because they were regarded as the high cost services that families had most difficulty in paying for at time of illness.

This pattern of benefits has lost its early rationale. It has been demonstrated that the costs of virtually *all* categories of health services and goods fall very unevenly among families, making it difficult for many families to pay for one type of needed service or another.

The full range of personal health services includes these goods and services:

- A. Hospital care
 - 1. Room, board, and general nursing service
 - a. Private
 - b. Semi-private
 - c. Ward
 - 2. Operating room use
 - 3. Delivery room use
 - 4. Routine medications, dressings, etc.
 - 5. Radiological services
 - 6. Anesthetists' services (if on the hospital staff)
 - 7. Pathologists' services (if on the hospital staff)
 - 8. Laboratory services

- B. Physicians' services
 - 1. Home, office, and hospital calls
 - 2. Surgery
 - 3. Obstetrical services
 - 4. Diagnostic and therapeutic services using special equipment, such as X-ray
- C. Private-duty nursing services in home and hospital
- D. Dentists' services (dentures, fillings, extractions, etc.)
- E. Drugs and medications
- F. Care in nursing and convalescent homes
- G. Appliances (eye glasses, hearing aids, prosthetics)

The actual distribution of family costs in all these categories except care in nursing and convalescent homes was studied in two surveys conducted jointly by Health Information Foundation and the National Opinion Research Center, University of Chicago.* These studies, sponsored by Health Information Foundation, delineated the problems faced by families in paying for different health services.

The first of the two studies, a nationwide survey of family medical costs, showed that the following proportions of families incurred annual costs of \$200** or more in these categories of health service:

Hospital care	6%
Surgery	3%
Home and office calls	6%
Drugs	2%
Dental care	4%

The costs of all these goods and services fall unevenly among the population, can be substantial and are very likely combined

*Odin W. Anderson with Jacob J. Feldman, *Family Medical Costs and Voluntary Health Insurance: A Nationwide Survey*. McGraw-Hill Book Company, Inc., New York, 1956.

Odin W. Anderson and the Staff of the National Opinion Research Center, *Voluntary Health Insurance in Two Cities*, Harvard University Press, Cambridge, Massachusetts, 1957.

**The figure of \$200 was an arbitrary choice to illustrate the relatively high cost that many families had to meet in one year for a single category of service. The amount showed clearly that services other than hospital and surgery are of equal or greater importance as measured by this magnitude of costs incurred by some families.

for a given family. Presumably, therefore, they lend themselves to the insurance principle of spreading risks among many.

The nationwide survey showed also that as of 1953 the prevailing level of benefits paid for 19 per cent of the total health care costs incurred by families that had some form of health insurance. The distribution of the personal health services dollar is shown in Table 1. Of the services which prevailing insurance was designed to cover, i.e., hospital care and surgery, their health insurance covered 76 per cent of hospital costs and 60 per cent of surgical costs.

Table 1
Percentage Distribution of Gross Total Costs
for Insured Persons in the United States,
by Category of Service^a

	Per cent
Hospital	21
Physicians	38
Medicines	14
Dental	17
Other	12
	<hr/> 100% ^b

^aOdin W. Anderson and Jacob J. Feldman, op. cit.

^bPercentages do not add exactly to the sum of their components because of rounding.

To relate family expenditures for all services to specific, representative group health insurance contracts, Health Information Foundation sponsored a second study: surveys in Birmingham, Alabama, and Boston, Massachusetts, of subscriber-households enrolled in the Blue Cross-Blue Shield plans in these two cities and of groups in Boston covered by the Aetna Life Insurance Company. Household interviews were conducted in 1954 using essentially the same questionnaire as in the nationwide survey.

The distinguishing characteristic of the Blue Cross-Blue Shield plan in Birmingham was that the daily hospital rate was

reimbursed in full but ancillary services were reimbursed only in part. Surgery was paid on the basis of a fee schedule which physicians were not obliged to regard as payment in full. The Boston Blue Cross-Blue Shield plan reimbursed hospitals on the basis of an indemnity for room rates, but paid ancillary services in full. Surgery was paid in full for patients with family incomes below \$5,000. Aetna Life Insurance Company, as is usual with private insurance, paid for hospital care and surgery up to specified limits. Hospitals and physicians had no contractual agreements with the company to provide services at given charges.

As in the nationwide survey, this study showed clearly the importance of the costs of services outside of the hospital. The proportion of costs of all personal health services paid by these three plans for their subscribers serves as a crude but useful measure of the remaining cost burden. The Birmingham Blue Cross-Blue Shield paid for 20 per cent of its enrollees' total health care costs. Boston Blue Cross-Blue Shield paid for 27 per cent; and Aetna paid for 31 per cent. The percentage of hospital and surgical costs covered by these three plans was as follows:

	All charges	Surgery	Hospital
Birmingham BC/BS	20%	49%	75%
Boston BC/BS	27	73	72
Aetna	31	68	80

As these two studies showed, prevailing patterns of benefits leave the major part of total health care costs uncovered, although they pay a large portion of the costs of surgery and hospital care. The distribution of the personal health services dollar is shown in Table 2. One of the chief issues in voluntary health insurance is how best to expand the range of benefits to include other services, chiefly those outside of the hospital, which can be difficult for families to pay for in the absence of a pooled fund.

Table 2
Percentage Distribution of Total Gross
Costs by Category of Service^a
Birmingham-Boston Study

	Birmingham BC/BS	Boston BC/BS	Aetna
Hospital	18%	23%	24%
Physician	35	31	34
Drugs	20	17	16
Dentist	16	19	18
Other	10	10	8
	100% ^b	100% ^b	100% ^b

^a Odin W. Anderson and National Opinion Research Center, op. cit., Table A 11, p. 70.

^b Percentages do not always add exactly to the sum of their components because of rounding.

An important question in including all physicians' services in the range of benefits has been that of providing these services through group practice prepayment plans, which have relatively limited choice of physicians, or through plans which allow full choice of any physician in the community and which pay the physician a fee for each service provided. An objective of both types of plan is to provide the public with a means of paying for all physicians' services on a regular, periodic basis.

In some areas of the country a great deal of experience has been gained in a small number of plans which provide the full range of physicians' services in the home and office as well as in the hospital. These plans include both group practice prepayment plans and those adding an insurance mechanism to the prevailing fee-for-service structure of solo medical practice. Another development, coming mainly from private insurance companies, has been major medical insurance, which pays for a wide range of services (including physicians' services outside the hospital) after some initial deductible charge and other financial controls such as coinsurance.

Health Information Foundation sponsored studies of medical

prepayment plans in two areas which provide comprehensive physicians' services within the prevailing structure of medical practice. These were the plans sponsored and operated by the medical societies of Windsor, Ontario, and the State of Washington.* In both, physicians practiced in their private offices and were paid fees-for-service, the method of practice of the majority of physicians in the United States.

In Windsor and Washington, samples of subscriber-households were drawn and heads of families interviewed to learn about their experiences with the medical plans, their utilization of services, the costs of all services, and the portion paid by the plans during a year. The participating physicians—virtually all practicing physicians in the jurisdiction of the plans—were interviewed to learn their reactions to comprehensive medical insurance, what effect it had on their practices and incomes, their patients' attitudes toward services, and many other matters. Finally, problems of internal administration were studied, particularly the cost of processing claims, both small and large. The principal finding in both studies was that medical insurance plans of this type were feasible as measured by the plan's financial solvency, use of services, and patient and physician satisfaction.

Continued research

An opportunity for special study of comprehensive medical service plans presented itself two years ago after the emergence of so-called "dual choice" arrangements in California and New York. The usual practice of group practice plans like Kaiser Permanente in California and Health Insurance Plan of Greater New York (HIP) was to require employee groups to enroll the great majority of their members in the group. No portion of one group could enroll in some other type of plan.

Several local labor unions eventually requested that their members be permitted to choose individually between two com-

petitive health insurance plans. This choice was permitted. With two plans offered, it was possible for the first time for one portion of an employee group to select one plan and another portion the other plan. This procedure, known as "dual choice," aroused a great deal of interest in labor, management, and health insurance circles.

In a number of local trade unions in New York City "dual choice" meant a choice between two different comprehensive medical care plans: HIP and Group Health Insurance (GHI). At first enrollment, the eligible membership was permitted to select either one of these two plans even if it meant two plans represented in one union. Since then, periodically, members may transfer from one to the other.

GHI contracts with physicians in their private offices, pays them on a fee-for-service basis, thereby permitting subscribers free choice of all licensed physicians in New York City. HIP contracts only with medical groups whose physicians they approve on the basis of training and experience, pays each group on an annual capitation basis and allows its enrollees their choice of one of 31 medical groups in New York City and Nassau County and, within each group, free choice of general or family physician. Both plans, for all practical purposes, offer the same range of physicians' services in and out of the hospital. In addition, both plans have comparable arrangements with Associated Hospital Service, the Blue Cross plan serving New York City, so that hospital benefits for their subscribers are also identical. A more detailed description of the benefits is given later.

"Dual choice" of GHI and HIP therefore provides a unique opportunity for comparing how comprehensive coverage of hospital and physicians' services in two contrasting types of medical care arrangements helps families pay for their health services.

Officers of HIP and GHI were themselves interested in learning why union members in the same unions chose one plan or the other. HIP approached Health Information Foundation with the suggestion that the Foundation finance and conduct an

*Benjamin J. Darsky, Nathan Sinai and Solomon J. Axelrod, *Comprehensive Medical Services under Voluntary Health Insurance: A Study of Windsor Medical Services*. Harvard University Press, Cambridge, Massachusetts, 1958.

The manuscript for the study in the State of Washington is being prepared by George A. Shipman, Institute of Public Affairs, University of Washington, Seattle, Washington.

opinion and attitude study of union members who chose each plan, to throw light on the perceptions people had of medical practice, free choice of physicians, costs of services, and other matters. This was agreed to by GHI. The Foundation was interested in such a study providing it could also pursue its interest in how varying benefit patterns helped families to pay the costs of all personal health services. HIP and GHI officers agreed to cooperate with the Foundation in a study with these overall objectives. They emphasized that the study be financed, conducted and published by Health Information Foundation, completely independent of their own organizations. While this is the usual policy of Health Information Foundation, it indicates the spirit of objectivity with which these two competing health insurance plans entered the research project. Three local trade unions whose members had been given "dual choice" also consented quickly to cooperate in the study. They were the Dress Joint Board of the International Ladies Garment Workers Union (D.J.B.), International Association of Machinists (I.A.M.), and Office Employees Union (O.E.U.). Detailed planning and execution of the study were entrusted to the National Opinion Research Center, and interviewing of sample families began in the summer of 1957.

Summary

In summary, then, the objectives set for this study were (1) to analyze to what extent the provision of virtually complete hospital and physicians' services through prepayment helps families to pay for costs of all services in two contrasting methods of organizing physicians' services, and (2) to determine the attitudes toward and perceptions of medical practice that the households had who chose GHI or HIP, as well as the reasons for their choice and the impressions they gained of the plan they chose after some experience with it. Another objective, which took on greater importance after the findings were available, was to compare utilization and cost patterns within these contrasting methods of providing physicians' services.

Chapter 2

The Survey

THE MEMBERS AND their dependents in the three unions under study—Dress Joint Board, International Association of Machinists, and Office Employees Union—differed greatly in their age and sex composition, size of family, kind of occupation, nativity and nationality, income level, and educational attainment. The three unions also varied greatly in size. There was, further, no consistent pattern in the proportion of each union's membership living in New York City who selected GHI or HIP.

To make valid comparisons between the two plans, it was necessary to equate them as nearly as possible in all respects except their preference for HIP or GHI under "dual choice." Within each of the three unions, therefore, the samples were matched for the key demographic variables of age, sex, and size of family.* The samples do not reflect, therefore, the actual age, sex, or family-size differences between union members who elected one plan or the other, and are consequently not representative of the total membership of the unions. Neither do the samples reflect the great differences in size among the three unions. For example, the Dress Joint Board, in which enrollment was limited under the union plan to the employee, accounted for about three-fourths of the individuals coming under dual choice in New York at the time. However, it was arbitrarily assigned only a one-third share of the survey sample so that most of the study would cover persons enrolled under a family contract. This also made it possible to conduct the study on the basis of a wider range of occupational groups than could be done if the Dress Joint Board predominated in the sample.

*Since the Dress Joint Board contracts covered the subscriber only, size of family was irrelevant in the case of this union, and the distribution of sample cases among the three locals involved was controlled instead.

Chapter 3

Costs of Services

SINCE THE SUBSCRIBERS enrolled in GHI and HIP are from the same unions and are scattered similarly among the five boroughs of New York City, they presumably experience the same unit charges for the same hospital, dental, and other non-physician services, as well as for medical goods like drugs. Therefore, the gross costs of the various services their families receive can reliably be compared.

Special pains had to be taken, however, to devise a method of comparing physicians' costs incurred by GHI and HIP families, because of the differences in the two plans. GHI families have free choice of physicians in the New York area, and the physicians providing their care are paid on a fee-for-each service basis, as set forth in the GHI subscriber contract. Physicians who sign participating agreements with GHI have agreed to accept GHI fees as full payment for home and office calls and other specified services, and to patients in wards or semi-private rooms in hospitals. But physicians who have not signed participating agreements with GHI are not bound by the fee schedule. GHI, on the other hand, will pay any physician, whether participating or not, who renders service to GHI patients, but only the amount stipulated in the fee schedule. In HIP, on the other hand, the fee-for-service system does not exist for physicians or patients.

The analysis of costs may be approached from the standpoint of total costs and from the standpoint of the proportion covered by insurance. This chapter examines the first of these two points. The concept of total gross cost is straightforward in the case of GHI. It includes the amount reimbursed by GHI and out-of-pocket costs for the subscribers, i.e., the total amount

billed regardless of who paid the charges. Accordingly, the focus is on costs from the viewpoint of the consumer rather than on the costs to the plan of providing these services. In the case of HIP there is no direct charge or out-of-pocket payment for specific physician services. HIP pays its medical groups on a capitation basis and not according to the volume and type of care. It becomes necessary, therefore, to estimate the value in dollars of the services received by HIP members. Basically the approach adopted in arriving at this estimate assumes that specified units of services in HIP are equivalent in dollar value to the average charges for corresponding units in GHI (whether paid in full by GHI or not). This results in hypothetical total gross costs for HIP subscribers on a comparable basis to the figures for GHI subscribers.

Estimates of the dollar value of HIP services were worked out as described in Appendix A. Office calls, for example, were valued at \$4 each and specialists' consultations at \$13 each. Presumably, the charges reported by GHI patients reflect the prevailing physicians' charges in New York City for the income and occupational groups represented by these patients. The costs of non-HIP physicians' services reported by HIP patients were added to the cost estimates derived for HIP services.

The cost data are presented here chiefly on an individual basis, with only occasional references to costs per family, because one union, the Dress Joint Board, enrolled the employee only. This union accounts for one-third of the subscribers in the sample and 16 per cent of the covered individuals. Average costs by categories of services are presented first, followed by the distribution of costs, ranging from individuals who incurred no costs to those who incurred large costs in the course of a year.

For all components of personal health services, usually known as the "medical dollar," GHI and HIP enrollees reported the average costs shown in Table 3. This table reveals some striking differences in costs between these samples and those studied in other cities and nationally. In unadjusted dollar terms the total costs per individual for all services for GHI and HIP enrollees, \$154 and \$139 respectively, are much higher than those

of insured individuals in Birmingham and Boston or of insured individuals in selected cities of one million or over. Even after adjustments for rises in prices since 1953-54, when the Birmingham, Boston, and nationwide studies were conducted, the GHI and HIP figures still remain comparatively high. The total costs reported in these earlier studies and adjusted for price rises are as follows:

Table 3
Mean Gross Costs Per Individual
by Category of Service

Service	GHI	HIP
Hospital	\$ 23	\$ 13
Physician	50	47 ^a
Hospital surgery	(11)	(5)
Obstetrics	(3)	(2)
Office surgery	(2)	(2)
Other	(34)	(39)
Drugs	35	36
Dental	34	36
Other	11	8
Total ^b	\$154	\$139

^a A dollar value based on unit charges to GHI subscribers.

^b Totals may not add exactly to the sum of their components because of rounding.

Note: Eight HIP individuals and twelve GHI individuals had total gross costs of more than \$1,000. No HIP individual had costs exceeding \$2,000 but through chance sampling factors, five GHI individuals had total gross costs of more than \$2,000. Of these five, one had total gross costs of \$3,317; the other, \$3,671. Because of their unduly large effect on the mean values, the costs of these two were excluded from all calculations of mean costs within the GHI sample.

Both of these extremely high-cost cases are in one union. If they were to be included, the mean costs for GHI individuals would be as follows:

	GHI
Hospitals	\$ 31
Physicians	53
Hospital surgery	(12)
Obstetrics	(3)
Office surgery	(2)
Other	(35)
Drugs	35
Dental	34
Other	12
Total	\$165

Table 4

Costs Per Individual for All Personal Health Services,
from Various Studies

Samples	Reported costs per individual 1953-4	Estimated cost 1957
Birmingham BC/BS	\$84	\$ 96
Boston BC/BS	94	107
Aetna (in Boston)	81	92
Nationwide, insured*	84	96

*Ten selected cities of one million or more.

The costs in Table 4 do not approximate those reported by enrollees in GHI and HIP, apparently because New York City is a relatively high-cost area for personal health services. This is substantiated by an analysis of the ten cities in the United States with a million or more population in the Bureau of Labor Statistics Medical Care Index and the computations made by the Wharton School of Finance for those cities on the basis of the 1950 census. The 1958 family expenditures for medical care shown in Table 5 are estimates based on the per cent change in the interim period reported by the Bureau of Labor Statistics. As this table shows, New York City expenditures are high compared with other large cities. Although the relative difference diminished from 1950 to 1958, New York still holds the lead. The New York City costs shown in this table are averages for all families. The annual costs for GHI and HIP families (as distinguished from individuals) for the two unions in which families were enrolled were \$356 per GHI family and \$321 per HIP family (see Appendix D for detailed table), close to the New York City estimated expenditure of \$333 for each family shown in Table 5.

A second survey finding evident in Table 3 is that the costs of hospital care and hospitalized surgery incurred by GHI enrollees are significantly higher than those of HIP enrollees, while the costs of other services are similar. Even the costs of physicians' services outside the hospital are much the same for

Table 5

**Family Medical Care Expenditures in
Selected Cities over One Million Population
1950 and 1958**

City	Medical care expendi- tures 1950 ^a	Medical Care Index 1950 ^b	Medical Care Index 1958 ^b	Per cent change 1950-58 ^c	Estimated expendi- tures 1958 ^c
New York	\$264	107	Oct. 135	+26%	\$333
Chicago	232	107	Oct. 152	+42	329
Philadelphia	209	105	Oct. 149	+42	297
Boston	180	110	Oct. 157	+43	257
St. Louis	189	105	June 159	+51	285
Cleveland	199	106	Aug. 153	+44	287
Pittsburgh	203	106	Oct. 155	+46	296
Baltimore	148	103	June 151	+47	218
Los Angeles	241	106	Oct. 139	+31	316
San Francisco- Oakland	235	107	June 151	+41	331

^a Medical care expenditures from "Study of Consumer Expenditures, Incomes and Savings," Wharton School of Finance and Commerce and U. S. Bureau of Labor Statistics. Vol. VIII, 1956. Tables 1-8, pp. 2-3.

^b U. S. Bureau of Labor Statistics, Series B and monthly releases for specified dates.

^c Estimates made by Health Information Foundation.

the two groups. Patterns of utilization are explored further in Chapter 5.

Table 6 shows the percentage distribution of the "medical dollar" by type of service for GHI, HIP, and other subscriber groups surveyed. HIP costs for hospital care and surgery remain consistently different. The proportion of the medical dollar allocated to hospital care in GHI is similar to that in Birmingham BC/BS, Boston BC/BS, Aetna, and the nationwide sample of insured families—all with coverage for hospital care and physicians' services in the hospital only. With HIP enrollees, on the other hand, an appreciably lower percentage is allocated to

Table 6

**Percentage Distribution of Total Gross
Costs by Category of Service,
From Various Surveys**

Service	GHI ^a (1957)	HIP (1957)	Birmingham BC/BS ^b (1953)	Boston BC/BS ^b (1953)	Aetna ^b (1953)	Nationwide, insured ^c (1953)
Hospital	19%	9%	18%	23%	24%	21%
Physician	32	33 ^d	35	31	34	38
Surgery	(8)	(4)	(8)	(8)	(8)	(8)
Obstetrics	(2)	(1)	(4)	(4)	(5)	(4)
Other	(21)	(28)	(23)	(20)	(21)	(26)
Drugs	21	26	20	17	16	14
Dentist	20	26	16	19	18	17
Other	8	6	10	10	8	12
	100%	100%	100% ^e	100%	100%	100% ^e

^a Totals include the two high cost individuals excluded in Table 3.

^b Odin W. Anderson and National Opinion Research Center, *Voluntary Health Insurance in Two Cities: A Survey of Subscriber-Households*. Cambridge, Massachusetts: Harvard University Press, 1957. Table A11, p. 70.

^c Odin W. Anderson and Jacob J. Feldman, *Family Medical Costs and Voluntary Health Insurance: A Nationwide Survey*. McGraw-Hill Book Company, Inc., New York, N. Y., 1956.

^d Based on unit charges to GHI subscribers.

^e Percentages do not always add exactly to the sum of their components because of rounding.

hospital care. The same difference is apparent for surgical costs as a proportion of all costs of personal health services.

Although GHI enrollees incurred higher gross costs for health services than HIP enrollees the excess was not great enough to cause any appreciable differences in the percentage of individuals distributed among different cost levels, by type of services (Tables 7-10). Following the pattern of all studies of the costs of personal health services, some individuals are found to incur little or no costs, and a minority incurs relatively large costs. The distribution for GHI and HIP is similar, as seen in the tables that follow on pages 22 and 23.

This is further corroboration for the data shown in previous surveys that costs outside of the hospital are also of economic consequence for individuals and families during a year.

Chapter 4

Proportion of Costs Paid by Insurance

A COMMON CRITERION FOR judging the effectiveness of health insurance is the extent to which its benefits help to pay the costs of services incurred by subscribers and their dependents. This chapter shows to what extent gross costs incurred by individuals and families in GHI and HIP presented in the previous chapter were met by the benefits provided by the two plans and by Blue Cross. These benefits are presented here in detail to show their extent and to indicate how minor are the differences between GHI and HIP in the kinds of services they cover.

Benefit structure

A. Hospital Services

GHI and HIP enrollees receive the same hospital benefits. In semi-private accommodations Blue Cross provides without charge full coverage for the services listed below for 21 days, and a 50 per cent discount on the hospital's regular charges for 180 additional days. These services are:

1. Bed, board, and general nursing care, including special diets.
2. Operating room use.
3. Cystoscopic room use.
4. Laboratory examinations.
5. X-ray examinations.
6. Drugs, medicines, and dressings in the hospital.
7. Oxygen and equipment.
8. Anesthesia supplies and equipment, and administration of anesthesia by a hospital employee.

9. Plaster casts.
10. Basal metabolic examinations.
11. Use of electrocardiographic equipment.
12. Use of physiotherapeutic equipment.

In a private room all the preceding ancillary services are provided in full, but an allowance of \$10 a day is provided for 21 days and \$5 a day for the next 180 days toward the cost of room, board, and general nursing care.

There are special provisions on a limited basis for poliomyelitis, pulmonary tuberculosis, and mental or nervous disorders. For tonsillectomies and adenoidectomies, hospital benefits are limited to one or two days, depending on the age of the patient. An allowance up to \$7.25 is provided toward the hospital bill for emergency out-patient services. Finally, the usual exclusions apply regarding workmen's compensation cases; hospitalization furnished under federal, state or other laws; rest cures; X-ray or radium therapy; blood and blood plasma; private duty nurses; ambulance service. There are no waiting periods. One explicit exclusion is important in this survey: Hospital admissions primarily for diagnosis or physical therapy are not covered.

B. Physicians' Services

GHI

1. Home, office, hospital calls by any physician anywhere. In New York City participating physicians agree to accept as full payment fees paid by GHI for most of the services in home or office and in the hospital in semi-private accommodations. Some fee allowances are: First office calls, \$4; subsequent visits, \$3; house calls, \$5.

HIP

1. Home, office, hospital calls by physicians in medical groups affiliated with HIP. Each medical group has a number of general practitioners plus specialists of all major specialties. Services for which specialty training is deemed desirable by HIP are provided only by those specialists. All covered services are given at no di-

(GHI)

In-hospital medical care starts at \$10 per day for the first two days, then \$5 per day through the 21st day, and \$3 thereafter through 180 additional days. For house calls the participating physicians may make an additional charge of \$2 for a visit between 6:00 P.M. and 10:00 P.M., and \$5 between 10:00 P.M. and 8:00 A.M. If a non-participating physician is used, he is paid a fixed cash allowance toward his bill in accordance with fees set forth above.

2. Surgery in office, home or hospital. The maximum surgical fee is \$350.*
3. Specialist consultations at \$15 for one consulta-

(HIP)

rect cost to the patient, except for a possible charge of \$2 for a night call after 10:00 P.M. Services provided by physicians in New York City not in HIP are not paid by HIP, but by patients directly.

2. All surgery by surgeons in HIP groups at no direct cost to patient. In certain cases requiring highly specialized services, HIP patients are referred to special consultant surgeons appointed by HIP and serving all of the medical groups and who are reimbursed in full. Surgery performed by physicians not designated by HIP are not paid by HIP but by patients directly.
3. All specialist consultations by HIP specialists

(GHI)

tion in each specialty in each illness outside a hospital, and \$15 for one bedside consultation in a hospital. \$3 paid for each additional office visit, \$5 for each additional home visit. These are not full payments.

4. Other services:

Maternity care (except Dress Joint Board).

Annual examinations and immunizations.

Treatment of allergies.

Laboratory tests and special diagnostic procedures.

X-ray examinations and treatments.

Physiotherapy.

Visiting nurse service.

Specified fees paid for laboratory tests and diagnostic and therapeutic X-ray.

5. Limitations and exclusions:

No exclusions for pre-existing conditions and no age limits.

There are some limitations on physiotherapy, X-ray treatments, an-

(HIP)

at no direct cost to patients.

4. Other services:

All services listed under "Other services" for GHI, at no cost and without limit, plus ambulance service, eye examinations, and prescriptions for glasses.

5. Limitations and exclusions:

No exclusions for pre-existing conditions and no age limits.

For allowed services there are no limitations but the following are

*The surgical fee schedule was originally formulated in 1950 by the GHI medical staff with the medical members of the GHI Board of Directors to reflect as closely as possible fees then being paid in semi-private accommodations in the New York metropolitan area. Consultations were held with staff members at different types of hospitals, and approval was received from the three largest county medical societies in the area—New York, Kings, and Queens. There has been no change in the fee schedule since this time. (Source: Letter from Arthur Harlow, Jr., President, Group Health Insurance, Inc.)

(GHI)

trum punctures, and treatment of allergies. Also, there is a maximum of 201 days in a hospital admission for medical care (maximum \$655). Exclusions are services of practitioners who are not physicians; eyeglasses and examination of eyes for glasses; care for drug addiction, chronic alcoholism, and nervous and mental disorders; workmen's compensation and Veterans' Administration cases; blood or blood plasma; ambulance service; care of tuberculosis of the lung, other than surgery required; dental care; cosmetic surgery, administration of anesthesia; private nursing care; and drugs, appliances and medications.

(HIP)

excluded: Tuberculosis care if it requires admission to a tuberculosis hospital. (However, diagnosis and treatment of tuberculosis at home, doctor's office or general hospital are provided.) Treatment by psychiatrists for mental disorders after diagnosis, acute alcoholism, drug addiction, drugs and medications, dental care, workmen's compensation or Veterans' Administration cases, eye glasses, artificial limbs and other prosthetic appliances, cosmetic surgery, blood plasma, private nursing care, anesthesia in the hospital.

Costs paid by insurance

GHI and HIP, with their companion Blue Cross hospital benefits, offer benefits as comprehensive as any insurance plan in the country from the first dollar for hospital care and physicians' services in or out of the hospital. Among insured people nationwide, hospital care and physicians' services account for 59 per cent of the total costs of the full range of personal health services (outlined in Chapter 1). Closely similar proportions were found among people covered by Birmingham BC/BS, Boston BC/BS, and Aetna in Boston. For these groups, insur-

ance paid the following percentages of all costs of personal health services incurred by the subscriber-households in a year:

Nationwide (insured)	19%
Birmingham BC/BS	20
Boston BC/BS	27
Aetna	31

The parallel percentage for GHI is 34 and for HIP 35. It is thus apparent that even though plans like GHI and HIP are regarded as comprehensive, they cover only about a third of the total costs of all personal health services. If this proportion seems surprisingly low, it can be readily explained by two main facts. First, a substantial portion of health expenditures are for goods and services which are uninsured even by the comprehensive plans: specifically, drugs, dental care and such "other" goods and services as medical appliances, eye and foot care, etc. Nationally, in the year 1953, such items accounted for 43 per cent of the public's total medical costs. But among this sample of HIP and GHI subscribers, in New York City in 1957, an even larger proportion of the total costs were accounted for by these non-insured items. Among GHI subscribers, 49 per cent of the gross costs went for drugs, dental and "other" goods and services, while among HIP subscribers the proportion was 58 per cent (Table 11).

Although the dollar amounts spent for these categories of medical care were approximately equal for both HIP and GHI subscribers, the *percentage* of total costs which they represent is larger for the HIP group than for GHI because the GHI subscribers had higher hospital and surgical costs. Thus, even if the two plans had covered 100 per cent of the services which they insured, the percentage of total costs they paid would still have been only 51 and 42 per cent, respectively. But, as we have shown, the insured costs of hospital and physicians' services were not entirely covered. In the case of GHI, the full cost of specialist consultation, X-ray and laboratory costs are not always met, and non-participating physicians can charge more than the GHI fee schedule allows. In the case of HIP, enrollees sometimes consult non-HIP physicians at their own expense. And although HIP and

Table 11
Mean Gross Costs and
Distribution of Costs by Category of Service
GHI

	Dollar costs	Per cent of total	Dollar costs	Per cent of total
Mean gross hospital, surgical and obstetrical costs	\$39	29%	\$22	14%
Mean gross physicians' costs	34	21	39	28
Mean gross costs of uninsured goods and services	80	49	80	58
	<u>\$154</u>	<u>100%</u>	<u>\$139</u>	<u>100%</u>

Note: Sum of components does not always equal total because of rounding.

Blue Cross covered 82 per cent of the HIP subscribers' hospital and physician services, while GHI and Blue Cross covered in contrast 66 per cent of such costs for GHI subscribers, the fact that such services represented a smaller proportion of total costs for the HIP group resulted in approximately equal proportions of total costs being met by each of the two plans.

The extent to which GHI and HIP, with Blue Cross, paid the costs of hospital care and physicians' services is shown in Table 12. Blue Cross paid 78 per cent of all hospital charges for GHI patients and 88 per cent for HIP patients. Since the hospital benefits are identical under the two plans, there is no ready explanation for this difference but the best clue is in the differences in length of stay as shown in the next chapter.

For all physicians' services GHI paid 59 per cent of the costs and HIP 80 per cent. GHI paid 63 per cent of all surgical charges, while HIP paid 92 per cent. As Table 12 shows, GHI and HIP patients had approximately the same proportion of

Table 12
Percentage of Gross Costs of Specific Services Paid
by GHI/BC and HIP/BC

	Total	
	GHI Per cent	HIP Per cent
Hospital	78	88
Hospital surgery	60	93
Obstetrics	71	87
Office surgery	84	89
Other physicians	56	77
Total physicians	59	80
Total physicians and hospital	66	82
Drugs	0	0
Dentists	0	0
Other goods and services	0	2
Total costs	<u>34</u>	<u>35</u>

costs covered for office surgery. For hospital surgery, however, GHI patients had 60 per cent of all costs covered and HIP patients 93 per cent.

By agreement, participating doctors in GHI give surgical care at no direct charge to the patient if he is in semi-private hospital accommodations, but are not limited in their fees for patients in private rooms. For non-participating physicians, the fees paid by GHI do not necessarily represent full payment. Fees for specialist consultations also do not necessarily represent full payment. These factors probably account for the most part for the extent to which GHI patients pay directly for physicians' services in addition to what GHI pays. HIP patients, on the other hand, are not charged directly for physicians' services at all. Since 20 per cent of all physicians' costs for HIP patients are not paid by HIP but by the patients directly, this proportion is some indication of the extent to which HIP patients receive physicians' services outside of HIP. Given the current utilization

pattern of subscribers in three unions covered by HIP and the great range of medical alternatives that exist in a city like New York, these HIP enrollees pay directly to non-HIP physicians for 23 per cent of the costs of home, office and hospital calls not connected with obstetrics or surgery, and for 7 per cent of the costs of hospitalized surgery.

Returning to gross costs incurred for the full range of personal health services, the extent to which GHI and HIP, with Blue Cross, covered these costs for individuals at different cost levels is seen in Table 13. GHI-Blue Cross and HIP-Blue Cross cover gross costs to a similar extent in each level-of-expenditure group. The proportion paid by the two plans is substantially higher in the extremely high-cost group. For individuals who incurred \$300 or more of gross costs, both HIP and GHI covered more than 40 per cent of the total.

Another measure of the extent to which GHI and HIP cover costs is presented in Tables 14 and 15. These tables show what proportion of individuals who incur costs have different percentages of these costs paid by their insurance. As Table 14 shows, 5 per cent of GHI enrollees and 8 per cent of HIP enrollees who incurred some health care costs had 80 per cent or more of their total gross costs covered. Of those GHI enrollees who incurred physicians' costs, 32 per cent had all of those costs covered (Table 15). Among HIP enrollees who incurred physicians' costs, 75 per cent had all of these costs covered, an appreciable difference.

Table 16 shows more precisely the extent to which GHI and HIP cover the gross costs of physicians' services for individuals with different levels of physicians' costs. In all magnitudes of costs HIP pays an appreciably higher percentage of the costs of physicians' services than does GHI. It is interesting to note that at \$300 or over the proportion of physicians' costs covered by both GHI and HIP drops substantially, although more so for GHI.

Although the emphasis in this survey has been on individuals, it may be of interest and value to show proportions of costs

Table 13
Percentage of Total Gross Costs Paid by GHI/BC and HIP/BC by Levels of Total Costs

Individuals whose total gross costs were:	GHI		HIP	
	N	Per cent	N	Per cent
Under \$50	(285)	22	(302)	25
\$50 - \$99	(195)	22	(189)	29
\$100 - \$199	(177)	20	(187)	26
\$200 - \$299	(53)	26	(61)	27
\$300 or over	(128)	41	(102)	44
Total, all individuals	(838)	34	(841)	35

Table 14
Percentage of Individuals Who Incurred Some Costs, by the Level of Costs Paid by GHI/BC and HIP/BC

Per cent of total gross costs met by GHI/HIP and Blue Cross	GHI (798)	HIP (795)
0 - 19%	53%	50%
20 - 49%	30	26
50 - 79%	12	16
80 - 99%	3	5
100%	2	3
	100%	100%

Table 15
Percentage Distribution of Individuals Who Incurred Physicians' Costs by Proportion of Such Costs Met by GHI/HIP

Per cent of gross physicians' costs met by GHI/HIP	GHI (620)	HIP (610)
0 - 19%	13%	14%
20 - 49%	8	3
50 - 79%	27	3
80 - 99%	20	5
100%	32	75
	100%	100%

covered for families, as in Table 17. This table shows what proportions of *families* incurring costs for hospital care, hospital surgery, office surgery, and other physicians' services have different percentages of these costs paid by their insurance. Appreciable differences are seen for hospital surgery, for which HIP paid all the costs for 92 per cent of the families incurring costs, and for physicians' services exclusive of obstetrical care and surgery, for which HIP paid all the costs for 65 per cent of the families having such costs.

Table 16
Percentage of Individuals' Gross Physicians'
Costs Met by GHI/HIP

Individuals whose gross physicians' costs were:	GHI		HIP	
	N	Per cent	N	Per Cent
Under \$50	(628)	75	(624)	85
\$50 - \$99	(96)	69	(108)	84
\$100 - \$199	(68)	69	(60)	82
\$200 - \$299	(19)	66	(27)	83
\$300 or over	(27)	39	(22)	68
Total, all individuals	(838)	59	(841)	80

Table 17
Percentage Distribution of Families
Incurring Various Categories of Costs
by Proportion of Such Costs Met by GHI/HIP and/or Blue Cross

Per cent of gross costs met by insurance N =	Hospital costs		Hospital surgery		Office surgery		Other physicians	
	GHI (78)	HIP (49)	GHI (48)	HIP (26)	GHI (57)	HIP (40)	GHI (348)	HIP (342)
0 - 19%	1%	2%	2%	4%	2%	10%	19%	17%
20 - 49%	15	12	19	—	7	—	12	4
50 - 79%	13	2	44	4	12	—	31	6
80 - 99%	18	8	10	—	9	—	18	8
100%	53	76	25	92	70	90	20	65
	100%	100%	100%	100%	100%	100%	100%	100%

Chapter 5

Utilization of Services

THE SMALL SIZE OF the samples in this survey precludes absolute comparisons between GHI and HIP utilization rates of sufficient refinement for actuarial purposes. The differences in hospital and surgical utilization that will be shown are, however, statistically significant. The differences between GHI and HIP enrollees in costs incurred for hospital care and surgery are directly related to differences in the volume of these services they received.

As seen in Table 18, GHI enrollees had a hospital admission rate of 11 per cent in one year and HIP enrollees 6.3 per cent. Because the average length of stay was appreciably longer for GHI patients than for HIP patients, the number of days of hospitalization per 100 GHI enrollees is twice that of HIP enrollees.* GHI enrollees in this survey clearly use more hospital services than do HIP enrollees. Precisely how much more cannot be determined with accuracy from these data.

Besides receiving more hospital care, GHI enrollees also use more surgical services, both hospitalized surgery and surgery performed in physicians' offices. (Table 19.) The greater utilization of hospital care on the part of GHI enrollees is not entirely due to their higher rate of hospitalized surgery, however, because the ratio of surgical admissions to all hospital admissions for both GHI and HIP is practically the same: between 65 and 70 per cent. GHI enrollees therefore have a higher rate for medical admissions as well.

*Because of the small number in the samples, these data must be used with caution. The actual number of days of hospitalization among GHI enrollees may not be exactly twice that for HIP, but it is certainly larger.

Table 18
Utilization of Hospital Services by Individuals

	GHI (838)	HIP (841)
Hospital admission per 100 persons ^a	11.0	6.3
Number of days per 100 persons ^b	87 ^c	41
Mean length of stay per admission	8.0 ^c	6.5

^a Includes only those admissions that occurred within the survey year.

^b Excluding persons admitted before the survey year began, and including all hospital days of those who remained in the hospital after the end of the survey year.

^c One individual in GHI had a hospital stay of 205 days; the next longest stay was 48 days. If the 205-day hospitalization is included, the mean length of stay per admission for GHI becomes 10.2 and the number of days per 100 becomes 112. This long-stay case is retained in the admission rate of 11.0.

Note: The actual numbers from which the rates were determined are: hospital admissions, GHI—92 and HIP—53; number of days in hospital, GHI—729 (omitting 205-day stay) and HIP—343.

Table 19
Utilization of Surgical Services by Individuals

	GHI	HIP
Hospitalized surgical procedures per 100 persons	7.6	4.3
Non-hospital surgical procedures per 100 persons	10.1	7.3
Total procedures	17.7	11.6

Notes:

1. Surgery was in all cases defined following GHI classifications. If a particular medical service was classified by GHI as a surgical procedure it was so classified in this survey; if GHI called the service "medical care" (non-surgical), the survey did the same.

Because the allocation of dollar values to HIP surgical services depended upon the GHI fee schedule for such services, GHI definitions of surgery were extended also to HIP cases. Thus, HIP classifies "removal of wax from ears" as surgery; but GHI has no surgical fee for the procedure and reimburses it as a routine office visit. In such cases, the dollar value of the HIP office visits was allocated to "other physicians' services" and the services were not classified as surgical procedures.

2. The actual numbers from which the rates were determined are: hospitalized surgical procedures, GHI—64 and HIP—36; non-hospital surgical procedures, GHI—85 and HIP—61.

Whether or not GHI enrollees are more likely to be hospitalized for diagnostic purposes alone is not known. It would seem that since physicians' services are covered both inside

and outside the hospital for members of both plans, there would be little difference in admissions for diagnostic purposes, although GHI patients are more likely to incur direct costs for physicians' services (through additional charges by specialists and other non-participating physicians).

As Table 20 shows, GHI and HIP enrollees have virtually the same number of physicians' home, office, and hospital calls, 6.0 and 5.5 calls per person per year respectively.* Also, about one-fourth of both GHI and HIP enrollees do not see a physician during a year. It is evident, therefore, that GHI and HIP enrollees receive approximately the same volume of physicians' services not associated with surgery and obstetrics, and the same proportions do not see a physician at all. Furthermore, as shown in the chapter on costs, GHI and HIP enrollees received approximately the same volume of drugs. And, as Table 21 shows, they make virtually the same use of dental care, eye care, and the services of "other medical persons." The only significant differ-

*Excluding pre-natal and post-partum calls and calls connected with surgery or obstetrics.

Table 20
Percentage Distribution of Individuals by Total Number of Non-Surgical, Non-Obstetrical Doctor Visits (Home, Office and Hospital)

Number of Visits	GHI	HIP
0	26%	25%
1	12	12
2	10	11
3-4	14	16
5-9	20	19
10-19	12	11
20 or more	6	6
	100%	100%
Mean number of visits	6.0	5.5

ence in their patterns of health care utilization is that GHI enrollees are more likely to be referred to hospitals and to undergo surgery both in the hospital and in the physician's office. This difference gives rise to speculation about the "proper" use of hospitals and "proper" indications for surgery; both GHI and HIP may be defensible within their respective contexts.* The fact

*The difference also raises the question of whether GHI and HIP physicians have equal access to New York City hospitals. A definitive answer would require another survey, but the present study does reveal the proportions of admissions to hospitals of varying sponsorship. If HIP admissions to proprietary hospitals were significantly greater, this might reasonably indicate that HIP physicians have less access to voluntary hospitals than GHI physicians. As seen in the following table, this was not so.

Hospital Admissions by Sponsorship of Admitting Hospital		
Sponsorship	GHI (92)	HIP (53)
	Per cent	Per cent
Proprietary	32%	23%
Voluntary	61	71
Municipal	7	6
	100%	100%

About 12 per cent of the general hospital beds in New York City are proprietary, indicating that the three unions in this survey use them disproportionately. These data cannot be generalized for either the GHI or HIP populations, outside of these three unions. It is of interest, however, to refer to Table 4D (p. 55) in the study by Densen, Balamuth, and Shapiro, which shows that on a citywide basis HIP patients are a little more likely to be admitted to proprietary hospitals than Blue Cross-Blue Shield patients.

Hospital Admissions Within New York City by Insurance Status and Sponsorship of Hospital, 1955		
Sponsorship	Blue Cross-HIP	Blue Cross-Blue Shield
	(4,170)	(3,156)
	Per cent	Per cent
Proprietary	35.3	29.8
Voluntary	60.8	68.0
Municipal	3.9	2.2
	100%	100%

There may be a further question regarding the relatively high proportion of enrollees in HIP compared with GHI classified as Negro, Puerto Rican, or West Indian in the present sample and its possible effect on the HIP hospital utilization rate since it is suspected that these groups use services significantly less than the rest of the population. When the groups in question were excluded and the analysis of utilization was restricted to the "white, non-Caribbean" portion of the sample the differences between GHI and HIP persisted with HIP still showing lower utilization rates. This group alone showed hospital admission rates of 11.0 for GHI and 5.9 for HIP. The rates for Negroes and Puerto Ricans and West Indians were 11.1 and 7.5 respectively.

Table 21

**Percentage of Individuals Who Received Dental or Eye Care
in Survey Year or Visited "Other" Medical Persons**

	GHI	HIP
Received dental care	53%	52%
No dental care	47	48
	100%	100%
Received medical eye care	5%	7%
Saw an optometrist	26	24
No eye care	69	69
	100%	100%
Saw "other" medical persons ^a	6%	5%
No "other" care	94	95
	100%	100%

^a Mostly chiropractors and foot doctors.

is, however, that the data obtained do not explain at all what the differences in utilization of hospital care and rates of surgical procedures mean.

Actually, utilization as such is only incidental to this study, which focused principally upon the extent to which plans like GHI and HIP pay the costs of services incurred by the people enrolled in them. However, costs cannot be isolated from use. Voluntary health insurance has arrived at the difficult stage of relating dollars to services with no workable concept of what constitutes an adequate level of service. Hospital care is now the service under intense scrutiny because of rising unit costs and rising utilization, both reflected in pressures for increased insurance premiums. It is likely that in the future a specific service like surgery will also receive more attention. What then is an adequate level of service? Are GHI enrollees receiving too much hospital care and surgery? Are HIP enrollees getting too

little? Although no answer can be given from present findings, utilization data from other studies may provide some perspective.

As Table 22 shows, the hospital utilization rate of HIP enrollees in this study is the lowest of any insured group studied. It is even lower than that of uninsured persons in the nationwide study. The plans studied that, like HIP, provide home and office calls are Windsor Medical Services and GHI. The other plans provide physicians' services in the hospital only. HIP is, of course, the only plan organized on a group practice basis. The least that these data indicate is that hospitalizations vary considerably, even between plans with benefits of similar scope.

Any generalizations or conclusions from these variations would require more information on medical care received prior to hospitalization, during the hospital stay, and after discharge, in relation to the organization of medical practice and methods of payment in different areas of the country. The patterns of

hospitalization vary, but no data indicate whether this is "good" or "bad."

An incidental observation can be made regarding the hospital admission rate in New York City. Indications so far are that New York City has a low hospital admission rate compared to other cities and the country in general. Even though GHI and Blue Cross-Blue Shield hospital admission rates are higher than for HIP, they are still lower than admission rates in other areas where systematic studies have been made, as Table 22 shows.

Not only are there variations in hospital admission rates among different insurance plans, as described, but there are also variations in the hospitalized surgical rates. HIP enrollees have a lower surgical rate than the other plans studied. (Table 23.) The HIP surgical rates are only slightly higher, in fact, than nationwide rates for persons without any insurance at all. These variations are without explanation on the basis of present knowledge. Before they could be explained more information would be needed about medical indications for surgery, both in the hospital and out of the hospital, in different contexts of medical practice.

Table 22
Hospital Admissions, From Selected Studies

	Admissions per 100	Days per 100
Nationwide (insured) ^a	14	100
Nationwide (uninsured) ^a	9	70
Birmingham BC/BS ^b	12.1	75
Boston BC/BS ^b	13.8	116
Aetna (Boston) ^b	13.4	102
HIP-Blue Cross (N.Y. sample) ^c	8.1	59
Blue Shield-Blue Cross (N.Y. sample) ^c	9.4	69
Windsor Medical Services ^d	18.6	*
GHI } present study	11	87
HIP }	6.3	41

* No data.

^a Anderson-Feldman, op. cit.

^b Anderson, op. cit.

^c Paul M. Densen, Eve Balamuth, and Sam Shapiro, *Prepaid Medical Care and Hospital Utilization*, Chicago, American Hospital Association, 1958. Hospital Monograph Series No. 3.

^d Benjamin J. Darsky, Nathan Sinai, and Solomon J. Axelrod, *Comprehensive Medical Services under Voluntary Health Insurance: A Study of Windsor Medical Services*, Cambridge, Harvard University Press, 1958. p. 106.

Table 23
Hospitalized Surgery, From Selected Studies

	Surgical admissions per 100
Nationwide (insured) ^a	6.0
Nationwide (uninsured) ^a	3.0
Birmingham BC/BS ^b	5.0
Boston BC/BS ^b	7.9
Aetna (Boston) ^b	6.1
HIP-Blue Cross (N.Y. sample) ^c	4.1
Blue Cross-Blue Shield (N.Y. sample) ^c	5.0
GHI } present study	7.6
HIP }	4.3

^a Unpublished data from nationwide family survey, 1953, HIF-NORC Table E-II-cl.

^b Anderson, op. cit.

^c Densen, op. cit.

For home, office, and hospital calls not in connection with obstetrical care and surgery, the GHI and HIP utilization patterns are the same, practically speaking. Table 20 shows the same distribution for enrollees in both plans of those who see no physician at all in a year and the proportion who see a physician 20 or more times. GHI and HIP enrollees both see a physician about six times a year. A recent release of the National Health Survey by the U.S. Public Health Service showed almost five visits per person for 1957; 37 per cent of the population had not seen a physician during the year.* Table 24 shows the proportion of people who do not see physicians in a year in other plans studied.

At best these are crude data, but they do indicate that under the most favorable financial circumstances — the absence of any such barriers to physicians' services in GHI, HIP, Windsor — 25 to 32 per cent of the enrollees will still not seek physicians' services during a year. Where home and office calls are not covered (Birmingham, Boston, Aetna) this proportion rises to 35 to 37 per cent, not a startling difference.

Table 24
Proportion of Persons Who Do Not
See A Physician During a Year,
From Selected Studies

	Per cent
Birmingham BC/BS ^a	35
Boston BC/BS ^a	36
Aetna (Boston) ^a	37
Windsor Medical Services ^b	32
Nationwide (insured) ^c	36
GHI } present study	26
HIP }	25

^a Anderson, *op. cit.*, p. 86, Table A26

^b Darsky, *op. cit.*

^c Anderson-Feldman, *op. cit.*

*United States National Health Survey, "Preliminary Report on the Volume of Physicians' Visits, United States, July-September, 1957." Series B1, Washington, D. C., 1958.

Chapter 6

Background on Choice of GHI and HIP

THIS AND THE following chapter describe the bases for choosing GHI or HIP and the attitudes of subscribers toward their experiences with the plan of their choice. It should be borne in mind that the interviews were conducted a year to a year and one-half *after* the respondents had selected one plan or the other. This part of the survey is, then, a comparative study of attitudes at a single point of time to provide some idea of similarities and differences in the attitudes of GHI and HIP respondents.

Underlying attitudes and choice of GHI or HIP

GHI and HIP respondents expressed very similar attitudes toward health in general, as well as toward their own health and that of others, indicating that their choice of GHI or HIP did not stem from this base. When asked about their own health (whether it was "excellent," "good," "fair," or "poor") GHI and HIP respondents gave virtually identical answers (Table 25). Respondents who were married were asked about the general health level of their spouses. Again the answers of GHI and HIP respondents parallel each other. Respondents who had children were asked about their children's health. Given the size of sample, the differences that do appear are not significant, indicating that the two groups continue to be similar.

The level of health perceived by the individual may have only a partial relationship to reality. Nevertheless, at the time of the interview 75 to 80 per cent of respondents in both GHI and HIP saw themselves and their spouses as enjoying good or excellent health, and about 90 per cent saw their children in that category. The reasonable inference must be that the great

Table 25
How Subscribers Perceived Their Own
Health and That of Their Spouses and Children

Own health is:	GHI (419)	HIP (422)
Excellent	32%	31%
Good	45	46
Fair	20	19
Poor	3	4
	<u>100%</u>	<u>100%</u>
Spouse's health is:	GHI (269)	HIP (279)
Excellent	28%	27%
Good	48	49
Fair	20	19
Poor	4	5
	<u>100%</u>	<u>100%</u>
Children's health is:	GHI (150)	HIP (147)
Excellent	33%	40%
Good	57 } 90	48 } 88
Fair	9	11
Poor	1	1
	<u>100%</u>	<u>100%</u>

majority of people in both plans are content with their day-to-day health. A nationwide survey of adults yielded a lower proportion (68 per cent) who viewed their own health as good or excellent.*

Other general perceptions of health also show similarities between GHI and HIP respondents. The proportion of respondents who agree or disagree with selected statements about personal health are shown in Table 26. The specific answers given are relatively unimportant. What is important in this instance is the similarity between GHI and HIP respondents in their general views of health.

*NORC-HIF attitude study in preparation by Paul B. Sheatsley and Jacob J. Feldman.

Table 26
How GHI/HIP Subscribers
Answered Questions About Personal Health

A person understands his own health better than most doctors do	GHI (419)	HIP (422)
Agree	57%	52%
Disagree	37	44
Don't know	6	4
	<u>100%</u>	<u>100%</u>
Nobody should go to a hospital unless there's just no other way to take care of him properly		
Agree	54%	53%
Disagree	43	45
Don't know	3	2
	<u>100%</u>	<u>100%</u>
Some aches and pains are not important; you might as well get used to them		
Agree	57%	52%
Disagree	38	44
Don't know	5	4
	<u>100%</u>	<u>100%</u>
If a person takes care of himself, he will stay in good health practically all his life		
Agree	71%	67%
Disagree	26	29
Don't know	3	4
	<u>100%</u>	<u>100%</u>
Older people have to expect a lot of aches and pains		
Agree	77%	73%
Disagree	21	23
Don't know	2	4
	<u>100%</u>	<u>100%</u>

Table 29

**Per Cent of GHI/HIP Enrollees Experiencing
Illness of Varying Costs Before Joining Either Plan**

Most expensive illness before joining cost roughly about	GHI	HIP
\$0 (never had illness)	14%	14%
\$0 (received free-care)	1	3
\$0 (insurance paid all)	*	1
\$1 - 99	21	29
	36	47
\$100 - 199	11	8
\$200 - 299	12	9
\$300 - 499	14	13
\$500 - 999	15	12
\$1000 - 1999	8	7
\$2000 and over	4	4
	27	23
	100%	100%

*Less than half of 1 per cent.

Table 30

**Sources of Medical Care Before
Joining GHI or HIP**

Before joining GHI/HIP had received:	GHI	HIP
Most care at clinics	5%	11%
Some care at clinics	9	13
All from private doctors	85	75
Don't know	1	1
	100%	100%

Table 31

Level of Satisfaction with Prior Clinic Care

	GHI (74)	HIP (118)
Entirely satisfied	71%	78%
Not too satisfied	25	22
Don't know	4	—
	100%	100%

about medical care prior to joining GHI and HIP reveal approximately the same experience in both groups with high cost illnesses. More HIP enrollees visited clinics for their medical care before joining their plan than did GHI enrollees, and slightly fewer express dissatisfaction with that experience. These data provide background for the explicit reasons given by subscribers for their choice of a plan.

These reasons are shown in Tables 32 and 33. To obtain as good a perspective as possible, those interviewed were asked directly why they chose GHI or HIP. Later, they were asked to check a list of specific reasons of broad range, so that spontaneous answers could be compared with suggested answers. Among those who chose GHI an overwhelming majority gave "free choice of physicians" as the reason in both their free and checklist answers. This reason stands out from others more in the spontaneous undirected responses than among those given in the checklist. The reason given next most often in both direct answer and checklist was "others in the shop joining." Union recommendation appears to have relatively little influence in comparison with leading reasons, but when GHI and HIP are compared the unions were more likely to influence members toward HIP rather than GHI. It should be pointed out that many individuals cited more than one reason for their choice.

Of those who chose HIP, more gave "nothing to pay" as the reason than any other explanation, but not to the same degree that GHI members cited "free choice." The reason given next most often by HIP members, as with GHI subscribers, was "others in shop joining." Another reason often mentioned by HIP enrollees was the availability of specialists.

Table 32

Why GHI Enrollees Chose GHI

Free Answer	Total
Free choice of doctors in GHI, not like HIP	72%
Most of others in shop were joining GHI	16
Family doctor was signed up with GHI	10
Heard that HIP is like a clinic	7
Other criticism of HIP service	6
GHI has better, more liberal coverage	4
No HIP doctor or clinic nearby, convenient	3
GHI coverage is good anywhere	3
Knew someone in HIP who didn't like it	3
Heard that HIP doctors are not as competent	3
Union chiefs recommended GHI	2
Heard GHI gave very good service	2
Friend or relative recommended GHI	2
Heard GHI doctors were good, very competent	1
A GHI doctor was right near home	1
Never chose GHI, was assigned to it	1
Misc. reasons for choosing GHI	4
Don't know, no particular reason	3
Check-List	
Free choice of doctors in GHI, not like HIP	88%
Most of others in shop were joining GHI	34
Family doctor was signed up with GHI	27
Heard that HIP is like a clinic	22
Heard GHI gave good service	20
A GHI doctor right near home	16
Top people in union thought it was best plan	15
Friends or relatives recommended GHI	14
Knew someone in HIP that didn't like it	13
Heard GHI doctors were good	11
Heard that HIP doctors are not as competent	11
None of these reasons were important	2

It appears that the respondents had a good idea of the main alternatives in selecting GHI or HIP. GHI enrollees stressed the freedom to choose one's family doctor throughout the entire city

Table 33

Why HIP Enrollees Chose HIP

Free Answer	Total
Nothing to pay in HIP, not like GHI	40%
Most of others in shop were joining HIP	21
HIP has better coverage, covers everything	11
Friend or relative recommended HIP	8
Belonged to HIP before or already in HIP	6
Heard HIP had a lot of specialists	6
Heard HIP gave very good service	6
Union chiefs recommended HIP	5
Had no regular doctor, so HIP was all right	5
Never chose HIP, was assigned to it	4
Heard HIP doctors were good, very competent	4
HIP doctor or group was nearby, convenient	3
No forms to fill out in HIP	3
There's a choice of doctors at HIP	2
Family doctor belonged to HIP	2
Group practice at HIP, doctors work as team	1
Spouse was already enrolled in HIP	1
Knew someone in GHI who didn't like it	1
Misc. reasons for choosing HIP	8
Don't know, no particular reason	7
Check-List	
No doctor bills in HIP, in GHI sometimes pay	61
Most of others in shop were joining HIP	39
Heard HIP gave good service	33
Heard HIP had a lot of specialists	32
Friend or relatives recommended HIP	29
HIP doctors work as team, group practice	27
Heard HIP doctors were good	24
Top people in union thought it was best plan	24
A HIP doctor was right near home	23
Knew someone in GHI who didn't like it	7
Family doctor was an HIP doctor	6
None of these reasons were important	8

or retain the one who was the family's doctor prior to joining GHI. HIP enrollees stressed the fact that all physicians' services are covered at no extra cost.

Chapter 7

Attitudes and Experiences in GHI and HIP

THE PREVIOUS CHAPTER SHOWED the reasons given by subscribers for choosing GHI or HIP, as well as their general attitudes toward health and their experiences with medical care before they selected one plan or the other. This chapter shows some of their reactions to experiences in GHI and HIP. It needs to be repeated that the same proportion of GHI and HIP enrollees saw a physician during a year; the two groups utilized approximately the same average number of physicians' services other than surgery and obstetrical care, but GHI enrollees used significantly more hospital care and surgery. Also, as measured by the amount they spent, both groups used the same volume of drugs and dental care.

Change and choice of physicians

To determine if joining either plan affected established relationships with physicians, GHI and HIP enrollees were asked if they had had a regular physician before they joined their present plan. *Had this changed since they selected their plan?* Before GHI respondents enrolled in GHI, they report, 11 per cent had no regular doctor. The remaining 89 per cent claim to have had a physician to whom they went for medical care. Following enrollment in GHI, only 8 per cent changed their regular doctor. Eleven per cent still have no regular doctor, although this percentage does not include all the same people, as Table 34 shows. Six per cent of subscribers' spouses do not have a regular physician under GHI. A quarter to a third of subscribers say that their regular physician or that of their spouse is not a participating physician with GHI; 3 out of 5, however, have a regular physician who, they say, is signed up with GHI as a par-

Table 34

Extent to which GHI Enrollees Experienced Change in Choice of Doctor

Had regular doctor before, same one now	77%
Had regular doctor before, different one now	8
Had regular doctor before, none now	4
No regular doctor before, but have one now	4
No regular doctor before, none now	7
	100%

Table 35

Extent to which GHI Enrollees and Their Families Have Regular Doctor

	Enrollee (419)	Spouse (185)	Children (110)
Have regular doctor signed up with GHI	56%	60%	60%
Have regular doctor, not signed up with GHI	24	31	34
Have regular doctor, don't know if GHI	9	3	1
Don't have regular doctor	11	6	5
	100%	100%	100%

Table 36

Extent to which HIP Enrollees and Their Families Experienced Change in Choice of Doctor

	Enrollee (422)	Spouse (184)	Children (110)
Had no regular doctor before HIP	23%	17%	13%
Still consider former doctor as regular one	29	29	34
No longer consider him regular doctor	46	53	52
Don't know	2	1	1
	100%	100%	100%

ticipating physician, although many GHI subscribers are not clear as to the difference between participating and non-participating physicians. (Table 35.) As an indication of the duration

of the doctor-patient relationships in this group, 41 per cent of the GHI respondents (and 44 per cent of their spouses) reported that they had had their doctor for 10 years or more. Twenty-three per cent (24 per cent of their spouses) reported that they had had the same doctor for 15 years or more.

Twenty-three per cent of HIP respondents report having had no regular doctor before enrolling in HIP. This is twice the proportion among subscribers in GHI. Forty-six per cent had a regular physician before joining HIP whom they no longer consider their regular doctor. (Table 36.) HIP enrollees were not asked whether or not they had regular doctors after joining HIP, since this is a relationship deliberately recommended and encouraged. The interviews, however, focused on whether or not they knew the medical group with which they were entitled to care. Eighty-six per cent gave the name, number or address of their group; two per cent reported no knowledge of any affiliation with a group; and 12 per cent knew they belonged to a group center, but could not give its name, number, or address.

Whether GHI respondents have greater or less knowledge than HIP enrollees about how and where to seek physicians' services remains an open question from the present data. What is apparent, however, is that distinct shifts took place among HIP enrollees in their relationships with doctors after joining HIP—changes markedly greater than those affecting GHI subscribers. In fact, it appears that GHI had little or no effect on its members' physician-patient relationships, as measured by change and choice of physicians or the fact of having a regular physician at all. Among HIP enrollees, however, approximately one-half no longer considered their former doctor their regular doctor after joining HIP. About 30 per cent did still consider their former doctor as their regular one.

It is interesting that among HIP respondents and spouses who report having had a regular physician before joining HIP the duration of their relationship was similar to that reported by GHI respondents and spouses: 43 per cent of the HIP respondents (40 per cent of their spouses) report that they had had their doctor for 10 years or more, and 23 per cent (21 per cent of their spouses) report having had the same doctor for

15 years or longer. This is further indication of the gross shifts in physician-patient relationships entailed among HIP enrollees.

Use of services

Utilization data were presented in a previous chapter. This section explores a subjective aspect of this utilization: What effect GHI and HIP enrollees believed their plan had on their use of medical care. It will be recalled that the respondents had been covered by one of the two plans from a year to a year and a half, for the most part. Both plans provide literature to new enrollees describing the benefits, exclusions, and so on, and the unions acquaint members with their rights and privileges. Beyond this, HIP conducts various health education programs through its 31 medical groups in New York City, the timing and content varying with groups.

Although the actual utilization rates for GHI and HIP enrollees were approximately the same for physicians' services outside of the hospital, slightly more HIP respondents reported that their new plan had affected their use of physicians (Table 37). There is no way of knowing if the use of medical services by members of the two groups was the same before they joined their plans or not. Those who said GHI or HIP *had* made a difference were asked, "*In what way has it made a difference?*" As Table 38 shows, respondents reported that they are more likely to have checkups, tests, use a specialist more, probably go sooner and more often for minor things, and "just see the doctor more readily."

Table 37
Extent to which GHI/HIP Enrollees Thought
Their Use of Doctors Had Been Affected

Enrollment in plan:	GHI	HIP
Has affected family's use of doctors	14%	22%
Made no difference	83	74
Don't know	3	4
	100%	100%

Table 38

**Ways in Which Plans Had Made
A Difference in Use of Services**

	GHI (59)	HIP (91)
More use of checkups, tests	2	17
Use specialists more	2	7
Go sooner for minor things	20	24
Just see doctor more readily	41%	26%
Less worry, bills are paid	31	14
More confidence in doctor	5	13
Take better care of self	2	8
Misc.	—	4
Don't know	2	—
	<hr/> 105%	<hr/> 113%

(Note: Some named more than one way.)

Respondents were asked directly if they thought their plan would have any effect on their family's health. A slightly higher proportion of HIP respondents felt that their plan would result in better health for their families (Table 39).

Continuing on a subjective basis, respondents were handed a card with a list of conditions that people sometimes complain about. The list referred to "cough for several weeks," "diarrhea or constipation," "severe shortness of breath," "feeling tired all the time," and other common complaints. They were then asked: *During the last 12 months, have you yourself had any of those conditions, but didn't bother to see a doctor about it?* They were also asked if there were any *other* illnesses or conditions that they had during the last year about which they hadn't bothered to see a doctor. Respondents who mentioned having had any condition on the list or any other condition but who had not seen a doctor about it, were asked, *"Why not?"* The answers given by GHI and HIP respondents parallel each other in virtually all items, indicating that their reasons for *not* seeing a doctor do not differ for enrollees of the two plans.

Desire for more benefits

GHI and HIP respondents were asked if their respective plans should cover any services that were not covered at the present time. The responses to the general question fall into the same pattern (Table 40), although more GHI respondents felt that additional services should be covered than did subscribers to HIP. Among those in GHI and HIP who said that more things should be covered, the major suggested additions, according to the proportion of respondents mentioning them, were similar. As Table 41 shows, in both GHI and HIP the greatest proportion of respondents expressed a desire for coverage of dental care. The next item was drugs, vaccines, and transfusions, which are not normally covered by either plan. Specific mention was also made of eyeglasses, another item not covered by either plan, although HIP does provide eye examinations and refractions. GHI respondents expressed a desire for more coverage for X-rays, a service normally met in full by HIP. A small proportion of GHI respondents also felt that more of specialists'

Table 39

Views of Effect of HIP/GHI on Family Health

	GHI	HIP
Plan will result in better health for family	41%	50%
Not much difference	52	44
Don't know	7	6
	<hr/> 100%	<hr/> 100%

Table 40

**GHI/HIP Enrollees' Attitudes
Toward Uncovered Services**

	GHI	HIP
Plan should cover some things it doesn't	48%	40%
Nothing plan should cover which it doesn't	24	35
Don't know	28	25
	<hr/> 100%	<hr/> 100%

Table 41

**Kind of Additional Coverage Desired by GHI/HIP
Enrollees Who Think Plan Should Cover More**

(Per cent of those desiring additional coverage)

GHI	Total (200)
Should cover dental care	38%
Should cover drugs, vaccines, transfusions	18
Should cover eye exams, glasses, eye care	18
Should cover, pay more on X-rays	16
Should cover anesthetics	13
Should pay more on specialist services	11
Should cover other family members	8
Should cover ambulance fees	8
Should cover nervous, emotional disorders	7
Should cover, pay more on special treatments	7
Should pay more on pregnancy, post-natal	5
Should pay more on surgery, operations	5
Should pay more on doctor visits	4
Should cover chiropractors, foot doctors	4
Should cover, pay more on lab tests, fees	4
Should cover tuberculosis	3
Should cover everything, pay everything	1
Miscellaneous answers	5
Should cover more, but don't know what	1
HIP	Total (168)
Should cover dental care	58%
Should cover drugs, shots, injections	16
Should cover nervous, emotional disorders	13
Should cover misc. conditions: TB, etc.	7
Should cover other family members	7
Should cover anesthetics	5
Should cover eye glasses	5
Should cover more, but don't know what	4
Misc. specific things: Sick benefits, etc.	11
Should cover things that actually are covered	13
Should cover chiropractors, foot doctors	2

services and anesthetists' should be covered. HIP normally covers specialists' services in full (except anesthetists). Subscribers are obviously likely to mention any services not covered or covered only in part, but the greatest prominence by far was given by GHI and HIP members to dental care. About 50 per cent of these enrollees had experienced dental costs in the year prior to the interview.

Factual knowledge of GHI and HIP

The level of knowledge about the plans among their enrollees may well affect their attitudes toward the plans and how they are used. GHI and HIP respondents were asked a series of questions to test their knowledge of their respective plans. In general, HIP respondents knew more about the features of their plan than did GHI respondents. Five questions are selected and shown below for GHI respondents.

Table 42

**Degree of Knowledge of GHI Reported by
GHI Enrollees**

GHI doctors differ from non-GHI as far as the fees they can charge are concerned.	Correct	25%
There is no difference between them.	Incorrect	33
Don't know.		42
GHI will pay for prior illness.	Correct	41%
GHI will not pay for prior illness.	Incorrect	13
Don't know.		46
No limit to family doctor visits.	Correct	52%
GHI limits number of family doctor visits.	Incorrect	23
Don't know.		25
Will not pay entire laboratory or X-ray bill.	Correct	47%
GHI pays entire laboratory or X-ray bill.	Incorrect	21
Don't know.		32
All specialist care not available at no cost.	Correct	51%
All such care available at no cost.	Incorrect	18
Don't know		31

and spouses in GHI slightly over one-half (55 and 54 per cent respectively) were entirely satisfied; among HIP respondents and spouses a little under one-half were entirely satisfied (47 and 44 per cent respectively). In all instances the proportion who expressed outright dissatisfaction was small, indicating that the two plans rest on a broad base of general satisfaction of 90 per cent for GHI (combining "entirely" and "fairly well" satisfied) and 79 per cent for HIP. Spouses' answers closely parallel these responses.

So far in the health insurance and medical care field there is no objective standard for a "proper" level of satisfaction-dissatisfaction. In the surveys in Birmingham and Boston referred to earlier, two-thirds of the respondents in Blue Cross-Blue Shield plans in these two cities expressed complete satisfaction with their plan, and among those covered by Aetna Life Insurance Co. in Boston, four-fifths expressed complete satisfaction.* It will be recalled that the plans in these cities did not provide physicians' services outside of the hospital, but represented the prevailing pattern of coverage for hospital care and physicians' services in the hospital. In a nationwide sample of adults 69 per cent of those carrying some type of health insurance policy reported complete satisfaction with their coverage. Again, virtually all of them carried insurance only for the costs of hospital care and physicians' services in the hospital.** A somewhat similar study of public attitudes sponsored by the Institute of Life Insurance revealed that 75 per cent of the families with some type of health insurance were satisfied with their coverage.***

These studies are not strictly comparable, but they do indicate a broad base of satisfaction with the health insurance coverage people have.**** It is a very complicated field for the

*Anderson, op. cit., p. 37.

**Eliot Freidson and Jacob J. Feldman, *Public Attitudes Toward Health Insurance*. New York: Health Information Foundation, 1958. Research Series No. 5, p. 11.

***Albert I. Hermalin, *Health Insurance — The Public's View*. Presented at the Annual Meeting of the Health Insurance Association of America, Chicago, May 13, 1958. Mimeo, p. 10.

****The differences in proportions of satisfaction/dissatisfaction between GHI-HIP respondents and the studies cited are probably due to the differences in the phrasing of questions and the specificity of the subject on which opinions are held. In the present survey as seen in Table 44 the respondents were given three levels of satisfaction/dissatisfaction and they were asked to give opinions on GHI and HIP in general. In the studies cited there was a general

Table 45
Attitudes Toward GHI and HIP Doctors
of Enrollees in Respective Plans

	GHI	HIP
They don't give you a chance to explain exactly what your trouble is	6%	16%
Not true	69	65
Don't know	25	19
They make you wait entirely too long when you try to see them in their office	12%	20%
Not true	66	60
Don't know	22	20
The people who make appointments for them are not very considerate	6%	12%
Not true	63	62
Don't know	31	26
They don't tell you enough about your condition; they don't explain just what the trouble is	9%	26%
Not true	67	51
Don't know	24	23
You usually have trouble getting them to come to your home when you need them	10%	18%
Not true	59	40
Don't know	31	42
They don't like to get other doctors' opinions about your condition	9%	11%
Not true	49	36
Don't know	42	53
They don't take enough personal interest in you	7%	25%
Not true	70	52
Don't know	23	23

question directed mainly to the benefit provisions of health insurance and the question was phrased as follows: "Are you completely satisfied with the policy as it is?" (*Voluntary Health Insurance in Two Cities*) or "In general, how do you feel about the things this insurance covers and the amount it pays? Is there anything about it you don't like so much, or are you completely satisfied the way it is?" (Freidson-Feldman). The study by Hermalin did not give the exact question, but it was clear that it was directed to coverage.

general public to have explicit, well-informed opinions on, but it is a field in which the public is getting a great deal of experience, and expressions of opinion are easy to obtain. Certainly only a small minority say they do not know, and another equally small minority express dissatisfaction. Some of the dissatisfaction appears to stem from a desire to have more services covered or have more paid on services already insured in part, as shown in Tables 40 and 41 of this chapter and in other surveys mentioned.

In the present study, it was possible to compare the attitudes of GHI and HIP respondents toward physicians in terms of their actual experience, as they perceived it, with the physicians in these two different ways of providing physicians' services.

Table 45 shows the responses of GHI and HIP enrollees to common public complaints about physicians. The great majority of respondents, both GHI and HIP, express the opinion that the complaints listed are not true or say they do not know. A minority in both groups agree that "Doctors don't let you explain your trouble," "They don't tell you enough," "They don't take enough personal interest," and so on, but a persistently larger minority of HIP respondents agree with each complaint. Clearly, there is a significantly larger minority among HIP respondents who are not satisfied with their relationships with doctors. Whether or not GHI and HIP physicians actually do behave differently toward their patients is not known, but GHI and HIP respondents certainly *perceive* them as different to some degree. If people define a situation as real, it is real in its consequences.

It is a fact that most GHI enrollees did not change their regular physicians after joining GHI, but simply continued relationships that had been established for some time. Almost one-half of the HIP enrollees, on the other hand, changed physicians after joining HIP, and 29 per cent still regard their former physician as their regular one. HIP patients had only a year to a year and one half to become accustomed to the new relationship.

Chapter 8

Summary and Conclusions

PREVIOUS CHAPTERS SHOWED that GHI and HIP respondents do not differ in their evaluations of their own health or that of their spouses and children. Their attitudes are similar also regarding the use and value of hospitals, physicians, and related matters, as revealed by general questions. GHI and HIP respondents expressed the same degree of concern with the costs of hospital care, drugs, dental service, food, clothing, and household repairs, but HIP respondents expressed slightly—but significantly—greater concern over the "high" cost of physicians' services. Prior to enrollment HIP respondents were also more likely not to have had a family doctor and more apt to have been dependent on clinic care. The attitude toward physicians' costs was apparently one factor in the basis for choice, since the primary reason given by the majority of HIP respondents for selecting HIP was "nothing to pay." The primary reason given by a majority of GHI respondents was "free choice of physician."

Since the survey was conducted a year to a year and one-half after respondents had enrolled in the plan they chose, their costs and utilization of services could be compared over a full year, as well as their attitudes toward their experience. Both the similarities and the dissimilarities in the costs, utilization, and attitudes of GHI and HIP enrollees are provocative. The outstanding differences are the significantly greater use of hospitals and higher rate of surgical operations of GHI enrollees, which are translated into comparatively higher costs for hospital care and surgery, and the higher level of satisfaction reported by GHI respondents. Equally provocative is the similarity of the two groups in their use of other health services: GHI and HIP en-

rollees saw physicians about the same number of times, and the same proportions sought physicians' services not at all. GHI and HIP enrollees also spent equal amounts for drugs. (A great share of these expenditures were, of course, due to the prevailing prescription practices of physicians, but it was not possible to separate prescribed and unprescribed drugs and medicines.) The same proportion of both groups saw a dentist at least once during the year.

HIP, with Blue Cross, paid a significantly larger portion of the costs of hospital care and physicians' services incurred by its subscribers than did GHI and Blue Cross. Finally, both GHI and HIP respondents were in the great majority generally satisfied with their plan and their experiences with physicians, but a significantly larger minority of HIP respondents were dissatisfied.

What do these differences and similarities mean for health insurance and the provision of personal health services? A previous study* of a sample of the entire enrollment in HIP showed that HIP members used hospitals less than a corresponding sample of people enrolled in New York's Blue Shield plan. Among the many speculations in that study regarding the reasons for the lower rate in HIP was the comparatively broader range of physicians' services available in this plan on a prepaid basis—particularly the availability of physicians' services outside the hospital. However, in the present study the lower hospital utilization rate for HIP enrollees persists, even though GHI and HIP enrollees have relatively equal access to the full range of physicians' services. It appears that the difference in hospital utilization cannot be attributed to the absence or presence of insurance against the cost of physicians' services outside of the hospital.

The difference in hospital rates may be speculatively attributed to many factors about which not enough is known. Do GHI and HIP physicians have the same degree of access to hospitals for their patients? Do GHI and HIP physicians practice in such different medical environments that equally defensible decisions

produce different results in referrals to hospitals and to surgery? Do the pressures that patients may put on physicians vary for GHI and HIP physicians? The list can go on. For surgery, particularly, not even tentative conclusions can be suggested on the basis of present data. The fact remains that surgical operations remain relatively low in HIP in comparison with medical insurance plans which pay physicians on a fee-for-service basis, but what this means in terms of good medical practice and patient care is an open question. Assertions can be made—and only assertions—that the GHI surgical rate is too high or that the HIP surgical rate is too low, or that neither are proper, or that both are proper within each situation, and so on. Clearly, however, these data pose questions of a profound nature in the continued improvement and development of medical care.

Although the majority of people appear to be satisfied with health insurance plans in which they are enrolled, as seen both in this survey and others, it is significant that a persistently larger minority of HIP respondents were dissatisfied either with the HIP plan or with the HIP doctors. This study has not examined the objective circumstances on which dissatisfaction may be based, but only how the respondents defined their situations. GHI respondents were in the main being asked to comment on physicians they had been using for years and about a plan which involved no fundamental change from the prevailing pattern of medical care, except that a large portion of their bills was now paid by GHI. HIP respondents, however, were commenting about an experience in which change is basic, i.e., a change in family physicians and a shift to a medical center. The question posed by the findings in this study is whether the attitudes expressed are temporary, reflecting adjustment problems that arise in a new situation, or whether they are inherent in the type of plan. It certainly appears, however, that the HIP method of providing medical care has an initial problem of patient satisfaction/dissatisfaction not faced by the GHI type.

It is of interest that GHI respondents reported greater satisfaction than HIP respondents even though GHI respondents paid more to doctors above the reimbursement by their plan. Actually, HIP enrollees need not pay anything for physicians'

*Densen, Balamuth, Shapiro, op. cit.

Appendices

Appendix A

Methodology of the Study

The sample

IN THIS study of subscriber attitudes and experience under two contrasting types of comprehensive physicians' service plans, it was clearly desirable that the samples drawn from the two subscriber groups be as similar as possible in their socio-economic status. This objective was achieved by restricting the study to particular union groups whose members had been offered a "dual choice" between HIP and GHI. The union groups chosen were the Joint Board of Dress and Waistmakers' Union (ILGWU), the International Association of Machinists (District No. 15), and the Office Employees International Union (Local 153). Not only did members of these three unions comprise the great majority of all people under dual choice at the time, but all three groups had been enrolled in the plans for a year to a year and a half. Furthermore, they represented three different occupational groups: semi-skilled, skilled, and white-collar workers. And finally, officials of all three unions pledged their full cooperation in the study.

Eligibility provisions differed between the Dress Joint Board (DJB) and the other two unions. The DJB coverage under the union welfare plan was restricted to the employee alone, while in the other two unions the subscriber's contract covered also his spouse and minor children. At the time, the DJB subscribers actually comprised about three-fourths of all the persons who had been offered dual choice, but because of the study's interest in the role of comprehensive medical insurance in meeting family medical costs, it was decided to restrict the number of DJB interviews to one-third of the total. And although approximately three times as many machinists as office workers had been offered dual choice, the sample was divided between these two groups in the ratio of 2-to-1 in order to obtain a minimum of 100 OEU interviews from

subscribers to each plan. Thus, of the 450 interviews designated from each of the two plans, 150 were to be DJB subscribers, 200 were to be machinists, and 100 were to be office employees.

Because of the small size of the total sample, it became important to match the HIP and GHI subscribers as closely as possible with respect to certain key demographic variables, to permit valid comparisons between them. Without such matching, differences found in attitudes or in utilization of medical care might easily have been attributed to some uncontrolled factor such as age or sex. Data were therefore obtained from HIP and GHI concerning the distribution of their IAM and OEU subscribers by age, sex and family size, and of their DJB subscribers by age, sex and union local (Table A). The combined total within each age-sex and family size-or-local cell, expressed as a proportion of all of that union's subscribers to the two plans, became the per-

Appendix Table A
Actual Percentage Distribution
of GHI and HIP Subscribers in Three Unions,
by Sex, Age and Family Size or DJB Local^a

	DJB		IAM		OEU	
	GHI	HIP	GHI	HIP	GHI	HIP
Sex						
Male	17%	19%	94%	94%	54%	35%
Female	83	81	6	6	46	65
Age						
Under 25	1%	2%	4%	5%	13%	12%
25-44	24	23	50	50	39	49
45-64	57	57	33	38	40	34
65-up	5	7	7	3	4	1
Unknown	13	11	6	4	4	4
Size of family						
1-person family	—	—	16%	25%	52%	62%
2 persons	—	—	35	31	24	18
3 or more persons	—	—	49	44	24	20
DJB Local						
Local 10	5%	7%	—	—	—	—
Local 22	23	66	—	—	—	—
Local 89	72	27	—	—	—	—

^a Percentages based on tabulations of random samples drawn from the files of the two plans in February 1957. Subscribers living outside the five boroughs of New York City, or with less than a year's experience in the plan, were excluded.

centage of interviews to be drawn from that cell from HIP and GHI equally. For example, 5.5 per cent of the HIP-DJB subscribers were women aged 25-44 in Local 89, while 15.1 per cent of GHI-DJB subscribers were in this cell. The combined total represented 11.3 per cent of all DJB subscribers to both plans, so that 11.3 per cent of the 150 DJB subscribers to be interviewed from each plan were drawn from women in Local 89 who were between 25 and 45 years of age.

From random samples of subscribers drawn from HIP and GHI files, the designated number of cases were systematically selected for each age-sex and family size-or-local cell within each union. Subscribers who resided outside the five boroughs of New York City were excluded, as were those who had not been enrolled in the plan of their choice for as long as a year. An additional pool of subscriber names was drawn for each cell, to be used as substitutes in the event that an originally designated respondent turned out to be ineligible or could not be interviewed for one reason or another.

As a result of this matching procedure, the HIP and GHI samples are virtually identical with respect to age, sex and family size, so that any differences between them revealed by the survey cannot be due to these factors. By definition, the two samples are also equivalent with respect to their distribution among the three union groups involved. Geographical variations have been controlled, since all subscribers were residents of New York City, and there are no significant differences in their distribution among the five boroughs of the city. As shown in Appendix C, the HIP sample contains slightly higher proportions of persons with low income, less than high school education, Negroes, Puerto Ricans and other West Indians, but the differences are comparatively small and can scarcely account for any large differences in attitudes, medical expenditures or utilization.

Matching of the cases facilitated the major objective of the study of providing valid comparisons between subscribers to the two different kinds of comprehensive medical care plan, uncontaminated by the effects of the major demographic variables. It should be clear that our two matched samples do not necessarily provide a representative cross-section of all HIP and

GHI subscribers, or of all employees offered the "dual choice," or even of the HIP and GHI subscribers within our three union groups.

The questionnaire

The survey data are based upon a combination of personal interview responses and record information. The personal interviews with subscribers covered the "attitudinal data" concerning reasons for choice of HIP or GHI, satisfaction with the plan, etc.; the nature and costs of medical care received outside of the two plans (i.e., services received by HIP respondents from non-HIP physicians, and services received by GHI families for which no claim forms were filed); and the gross costs of medical services not covered by the two plans, such as drugs and dentistry.

The questionnaire was developed and pretested on subscribers of the two plans during the spring of 1957. The final version was reviewed by representatives of HIP and GHI, and was further submitted to officials of each of the three union groups involved. Since the main questionnaire comprised 24 pages and was slightly different for each of the two plans, and since there were a variety of supplementary questionnaires to be filled out for hospitalized and other major illness conditions, the interview schedules are not reproduced here. A summary of their content, however, is provided in the following paragraphs. It should be noted that not all of the interview data have been presented in this report. The responses to some questions were of little relevance to the immediate objectives of the survey, while in other instances there were not enough cases to provide sufficient data for analysis.

The interview opened with a detailed enumeration of the subscriber's household: the sex, age, marital and dependency status of each person who had lived in the dwelling unit during the preceding year, the number of months of their residence, and specific information as to who was and was not covered by the subscriber's HIP or GHI contract. The interviewer then asked a series of questions about the general state of health of the various family members; the subscriber's basic attitudes toward

illness and medical care; his opinions about the cost of medical care and his past experience with expensive illness. There followed some inquiries about the kind of care he received before joining HIP or GHI: the family's dependence on a regular doctor, their use of clinics, etc. Then came a battery of information questions designed to test the subscriber's knowledge of HIP or GHI's benefits and limitations, after which the interviewer probed in some detail about the respondent's reasons for choosing the plan he did. Inquiries were next made about additional health or medical insurance carried by any family member, and about any previous experience the subscriber may have had with the plan he was not now enrolled in. If an HIP subscriber had had prior experience with GHI, or a GHI member formerly belonged to HIP, he was questioned in detail about his reasons for changing and his relative satisfaction with the two types of plan.

At this point the interviewer began his questioning about the family's illness experience and costs during the preceding twelve months, and separate schedules were filled out for any hospitalizations or major illnesses. The pattern of the questioning was similar to that followed on NORC's national study of family medical costs in 1953*. Thus, the respondent was first asked about any hospitalization occurring in the family during the preceding year. If any hospitalization had taken place, a separate schedule was referred to, and the respondent was asked for details: reason for the hospital stay, its length, the amount of any charges not paid by Blue Cross, the nature of any surgery performed, services received from any other doctors in connection with the hospitalized condition, the nature and amount of any in-hospital expenses not appearing on the hospital bill, amounts spent on drugs and medicines in connection with the condition, amounts spent on special tests or X-rays, etc. If the HIP family used only HIP physicians for the hospitalized illness, or if the GHI family filled out claim forms for all medical care received in connection with the illness, note was simply made of that fact. But if non-HIP doctors were used at all, or if any care was received for which GHI claims were not filed, the respondent was asked for full details on number of

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*Anderson, Feldman, op. cit.

doctor visits, amount of charges, and reasons for not using his HIP or GHI insurance.

After obtaining full information on all hospitalized illnesses within the family during the year, the interviewer turned to "other serious illnesses," which were defined as those requiring five or more doctor visits, or involving some chronic or long-standing condition which required regular medicines or treatment, any pregnancy or maternity care during the year, any fractured bones or surgery performed in the doctor's office, or any other illness, accident or condition which the respondent himself regarded as "serious." Any condition mentioned in response to this battery of screening questions was again recorded on a separate schedule, and substantially the same questions used for hospitalized illnesses were repeated. After covering hospitalized and "other serious" illnesses, the interviewer went on to minor illness which required medical care during the year, and information was obtained for each family member regarding the medical care received for such conditions. Finally, the respondent was asked about visits to "other medical persons" (chiropractors, chiropodists, etc.), about drug costs not already reported in connection with the serious illnesses, any special tests or treatments not previously reported, and any medical appliances purchased during the year.

Throughout the questioning, respondents were encouraged to refer to old bills and records, or to consult other family members if their own memory was faulty, and interviewers were trained to make internal consistency checks at various points in the interview to be certain that no cost or service had been overlooked and that none had been reported more than once. The lengthy series of questions about hospitalized, serious and minor illnesses was asked separately and in detail only for those family members who were covered by the subscriber's HIP or GHI contract. In the case of the DJB group, this meant the subscriber only; for the other two unions, it included spouse and minor children if any. When full information had been obtained about the illness experience of these, a shorter series of questions was asked concerning any other family members who were dependent upon the subscriber for more than half of their sup-

port. For these family members there were obtained only rough estimates of hospital, surgical and doctor bills during the year, of drug costs, and of "other" medical expenditures for these persons. This section of the questionnaire was concluded with a series of questions about the family's dental care during the year, and another series concerning eye care.

The interviewer then asked briefly about any illness symptoms or conditions during the year which the subscriber did *not* see a doctor about, and the reasons for his failure to obtain medical care. He was next asked to review his experience with HIP or GHI and to say what he liked best and least about the plan he chose; to tell about any unsatisfactory medical experience he might have had under the plan; to answer a battery of questions about the HIP or GHI doctors, to compare his impression of HIP doctors with those obtainable under GHI, and to express his overall satisfaction or dissatisfaction with the plan he selected. Finally, he was asked whether his comprehensive medical care insurance had affected his family's use of doctors in any way, and whether he thought it would make any difference to their health in the future. The interview concluded with the standard background items on occupation, education, income, religion and nationality.

Wherever possible, the questionnaires were kept identical for both HIP and GHI respondents. The wording of the attitude questions, for example, was the same for both, except that one form might read "HIP" and the other "GHI". The order of the questioning, too was identical on both forms. The only substantial differences occurred, necessarily, in connection with the questioning about physicians' services, and about the subscriber's knowledge concerning the plan of his choice. Thus, HIP respondents had to be asked, "*Did you get all of the medical care for this condition during the last twelve months from HIP doctors, or only part of it, or all of it from doctors outside of HIP?*" and were then probed on any non-HIP care; while GHI respondents were asked, "*Did you or the doctor fill out a GHI claim form for all of these doctors' bills?*" etc. The content of the information questions naturally varied also for the two plans. GHI subscribers were asked, for example, to explain the difference be-

tween a participating and non-participating physician, so far as the fees they could charge were concerned. HIP respondents were asked, for example, whether subscribers to the plan could change their HIP family doctors if they so desired.

The interviewing

The great majority of the 841 personal interviews with subscribers were completed by 35 NORC interviewers during the summer of 1957. Of these, 11 were members of NORC's permanent field staff in New York City, while the others had been specially recruited for this project. All had received intensive training for their assignment, including an all-day briefing session, a number of practice interviews, and individual consultations with the field supervisors. Each interviewer had a 60-page manual of specifications for the survey which provided a detailed description of all aspects of his job. Each interviewer was assigned an approximately equal number of GHI subscribers and HIP subscribers. The interviewing started in late June, and by the end of July was about two-thirds completed. Because of summer vacations, work was generally postponed during August, and the field phase of the project was concluded in September.

The median time required for the interview was an hour and a half, though the range was from 40 minutes through three hours or more, depending upon the size of the subscriber's family and their illness experience during the year. In spite of the length of time required for each interview, the respondents generally gave excellent cooperation. Each one had received letters signed by the president of Health Information Foundation and by the business manager or other official of his local union, explaining the purpose of the study and urging his cooperation. The survey was also publicized in the union newspapers and on bulletin boards in the union offices. Because of the ethnic composition of portions of the sample, a number of Spanish, Italian and Yiddish-speaking interviewers were recruited and trained, so that respondents could reply to the questions in their own language. Losses from the sample were caused primarily by obsolete addresses obtained from the insurance plan and by prolonged unavailability through absence from home. In such cases, matched substitutes were assigned to take the place of the orig-

inal respondents. Subscribers who refused to be interviewed were sent a personal letter, and this was followed up by a phone call or visit from a special interviewer assigned to "problem cases." Subscribers who persisted in their refusal were substituted for in the usual manner.

All subscribers were interviewed personally, and the *attitudes* reported in this study are those expressed by the subscribers themselves. Where a spouse or other family member was present during the interview, it was made clear to the respondent that (unless otherwise specified) it was his own personal opinions which were wanted. In those portions of the interview dealing with family medical care, however, or with the experience of other family members, the subscriber was urged to consult other members of the household if no records existed and his own memory was deficient. In many instances, a male subscriber would report only on his own illness history during the year, while his wife would report for herself and the children. Factual information about the family's medical care which could not be supplied at the time of the interview was often picked up later by means of a phone call from the interviewer or from the NORC office. For example, if a female subscriber did not know how many times her husband had visited the doctor, the interviewer would telephone back for that information at a time when the husband was at home.

Sources of the medical care data

The attitudinal data reported in the study came, of course, from the personal interviews with subscribers, and the coding and tabulation of these responses posed no unusual problems. The cost and utilization data, however, came from a variety of sources, and the task of transcribing, checking and reconciling all of the diverse bits of information was a formidable one.

Data on *hospital costs and utilization* are based almost entirely on the records of the Associated Hospital Service (Blue Cross) of New York. Since all persons covered by HIP or GHI contracts were also covered by Blue Cross, it was possible to rely on the insurance plan's records, rather than on the respondent's memory, for an accurate account of hospital costs,

services used, length of stay, etc. Respondents who reported a hospitalization for any covered member of the family were asked for the approximate dates of admission and discharge, for the subscriber's Blue Cross certificate number, for the amount of any hospital charge not covered by Blue Cross, and for a description of any operation performed during the hospitalization.

The names, certificate numbers and approximate dates of admission of the 159 cases reported by respondents were then transcribed and forwarded to Blue Cross. In addition, a search of the HIP and GHI records turned up evidence of hospitalized medical care provided to 12 other individuals who had not been reported by respondents as having been hospitalized. Altogether, therefore, investigation was made of 171 possible hospital admissions among our total sample of covered persons, and 136 of these were validated.* The remainder turned out to be outpatient visits, hospitalizations which actually had taken place outside of the time period covered by the survey, or respondent accounts of hospitalization which were unsupported by either Blue Cross or HIP/GHI information. In a very few cases, the respondent's report was accepted, even though no records confirmed his account, because it was in other respects circumstantial; e.g., a subscriber who had been injured on the job and who said his hospital bill was paid by Workmen's Compensation. But in general, if the respondent stated that Blue Cross had paid a portion of the bill or that he had been attended by an HIP physician or had filled out a GHI claim form for in-hospital care, and the records failed to support his statement, the alleged hospitalization was not counted in the survey. The forms filled out for each case by AHS personnel, on the basis of Blue Cross records, provided accurate information on the date of admission, length of stay, reason for hospitalization (surgical, obstetrical, other), amount charged by the hospital, and amount if any which was paid by the patient. The hospital charges were usually broken down by room and board and a variety of ancillary services, but since a number of cases were charged on a "flat rate" basis, only the total amount on the hospital bill (minus any personal charges for telephone, etc.) was coded into the survey.

*In the course of searching the Blue Cross records, evidence was found of nine additional admissions from these same families, bringing the validated total to 145.

Data on *surgical and other physicians' costs and utilization* were derived primarily from the HIP and GHI records, supplemented where necessary by the respondent's own account. GHI file folders for each subscriber contain all the claim forms submitted on behalf of the covered persons in that family, together with receipted laboratory bills, correspondence with doctors about the case, etc. The claim forms list rather full details about the services for which GHI reimbursement is sought. These are classified in terms of surgical, maternity, (specialist) consultation, X-rays, laboratory procedures, and medical care. For each type of service there is given the date, place and number of times it was performed, a description of the procedure (nature of surgery, X-ray, etc.), the amount charged by the doctor for the service, and the amount reimbursed by GHI. Working with one family at a time, NORC clerks examined all claim forms for services received during the twelve months covered by the survey, and transcribed the record of each individual's medical care and costs. Where services itemized on a particular claim form overlapped the survey year, only those which fell within the 12-month period were counted.

The GHI records included, of course, only those services for which claim forms had been submitted and received. Since there is often a 2- or 3-month time lag between the actual medical service and submission of the claim form to GHI, a recheck of the GHI records was made approximately four months after the close of the survey year to pick up any additional forms which had come in. The subscriber's interview questionnaire was then checked for any mention of doctor care received for which no GHI claim had been filed. Such mention might have been made in connection with a hospitalized condition, a "serious illness" condition, or in his account of "minor" medical care received during the year. If the respondent said that no claim had been filed for doctor care received and his account was otherwise plausible, the services he alleged were included in the survey data. If, however, he stated that a GHI claim had been filed, and the GHI records showed no evidence of such a claim, the doctor services referred to were not counted, on the assumption that they had occurred outside of the survey year or that the respondent's statement was otherwise inaccurate.

Services provided by HIP physicians to subscriber-families are listed on forms which each physician forwards monthly to the HIP central office. Each service is given a separate line on this form, with the patient's name and certificate number, the date and place he was seen, and the nature of the services performed. Since each doctor lists his services in chronological order, the services provided to any particular patient are likely to appear almost anywhere in the forms filled out by a given doctor over the course of a year; and if the patient received care from more than one doctor, his history will be scattered over a great number of forms. Because of these circumstances, it was necessary for an NORC staff member to review the several thousand of these forms received during the survey year, in order to bring together the services provided to each individual in the sample. As with the GHI group, if the HIP records failed to substantiate a subscriber's interview statement of services received, these were not included in the survey data. His interview schedules were examined, however, for any references to medical care received outside of HIP, and unless there was contradictory evidence, the reported non-HIP services were included.

One complication with respect to the HIP data was the fact that the forms filled out by physicians are restricted to services provided by all HIP physicians other than pathologists. Information on laboratory services was available only from the medical records on file at each group center. While NORC planned to write each group individually for these data, the nature of the response was unpredictable, especially since the request would involve some labor on the part of busy clerical personnel at the group center. Accordingly, this information was obtained from the respondent in the personal interview. Whenever an HIP subscriber mentioned any illness condition or doctor care, he was always asked, "*Did you receive any special tests or treatments from HIP for this condition during the last twelve months?*" and was shown a card listing some of the more common tests (urinalysis, blood count, basal metabolism, etc.) to refresh his memory. Actually, when the HIP groups were asked to provide these data on our sample individuals, full information was received from 23 of the 29 to whom the request was addressed. In about

three-quarters of the cases, therefore, the respondent's report of these tests was ignored and the HIP data were relied on; in the remainder of the cases, the respondent's report was accepted. The HIP records also provided full information on visiting nurse services, ambulance services received through HIP, and special medical care received from non-HIP specialists but paid for by HIP.

Data on *drug, dental and other costs* were obtained entirely from respondent reports, since these services are not covered by insurance and no records were available. Drug and "other" costs were inquired about separately in connection with each hospitalized condition and each serious illness condition, and again in a summary form in connection with the "minor medical expenses" of each covered person in the family. The drug question was phrased in the following manner: "*How much did you have to spend on medicines or prescriptions during the last twelve months, in connection with this condition? (—aside from anything you've told me about already.)*" When it was asked with reference to minor medical expenses, the question wording specified "medicines, prescriptions, vitamins and so on." "Other" costs were elicited in response to questions about any in-hospital services not covered in the hospital bill (such as special nursing, anesthetics, etc.), any "other medical persons" seen about a condition or during the year (such as chiropractors, foot doctors, etc.), any medical appliance purchased during the year (such as "*a hearing aid, crutches, braces or anything like that which you haven't told me about already*"), and any other costs not previously mentioned (such as home nursing care, special laboratory tests, etc.). Also included under "other" costs were any amounts mentioned in response to the series of questions on eye care: "*Did anyone in the family have their eyes checked or new glasses made during the last twelve months? Who? Anyone else? Did (you, he, she, they) see a medical eye doctor, or a person who just makes and fits glasses? How much did the eye doctor charge you? How much did the glasses cost?*" Dental costs were elicited in response to these questions: "*Did you or any other member of the family go to a dentist during the period from last June till now? Who? Anyone else? What was the total amount that (all) this dental work cost you?*"

Assignment of dollar values to HIP services

As noted, the GHI claim forms specified the doctor's charge for each service, and the amount reimbursed by GHI. Thus, it was a fairly simple matter to calculate the total (gross) doctor costs of each individual covered by GHI, and the amount (net) which the subscriber himself had to pay, beyond what was reimbursed by GHI. HIP, however, pays its medical group centers on a capitation basis, and not according to the volume and type of care. There are no fees attached to the HIP physicians' services*. In order to compare the gross and net costs of HIP vs. GHI subscribers, therefore, and to estimate the proportion of medical costs covered by each plan, it became necessary to assign dollar values to each of the medical services provided by HIP doctors, and to treat the total of these assigned values as the "cost" of HIP services utilized by the sample of subscribers.

There is, of course, no universally accepted measure of the dollar value of physicians' services. Not only do physicians differ among themselves in the normal fees they charge, but the normal fee of any particular physician may often be varied according to the circumstances of the case. GHI itself has set up a detailed fee schedule covering the gamut of medical services, but this schedule represents the permissible charges of participating physicians to GHI subscribers and is believed to be unrepresentative of the "average" charges of all doctors. The schedules established by other insurance plans, such as the surgical fees allowed by Blue Shield, are similarly believed to understate the general level of prevailing charges. In a number of areas, professional medical groups have agreed upon and published schedules of fees which are to be regarded as average or reasonable, but even when such schedules are up to date, they cannot be presumed to represent prevailing charges in New York City.

Moreover, it seemed advantageous to derive the dollar values of HIP services, so far as possible, from empirical analysis of the charges actually sustained by the matched sample of GHI subscribers for comparable or identical services. Thus, if tabulation of the claim forms of our sample of GHI subscribers

showed that doctors were charging them an average of \$4 for each office visit, it would be fair to value an office visit to an HIP doctor at the same amount. If it were found that the average charge for appendectomies among our GHI subscriber-families was \$200, it would be reasonable to value an appendectomy performed by an HIP doctor at the same figure. The average gross costs incurred by GHI subscribers for each service would be accepted as representative of the prevailing medical fees obtaining for that service in New York City, during the period of the study, to individuals with these particular social and demographic characteristics.

Obviously, the validity of such a procedure would depend upon the number of cases from which the estimates were derived. Derivation of the value of physicians' home and office visits was relatively simple because ample cases existed. Thus, a tabulation of more than 2,000 office visits by GHI subscribers revealed that the average charge was close to \$4. A similar tabulation of home calls showed a mean average charge of \$5.50. On the other hand, there were not enough cases of any particular surgical procedure (except possibly tonsillectomies) to provide stable estimates of average physicians' charges for that operation. The following paragraphs specify the amount or source of the dollar values finally assigned to the HIP services, and the reasoning which led to the adoption of each.

Home calls by HIP doctors were valued at \$5.50. This was the average charge incurred by the sample of GHI subscribers for such doctor visits.

HIP office visits were valued at \$4, which was close to the average charge to GHI subscribers for such visits.

In-hospital visits by HIP physicians were valued at \$4.75. This, too, approximated the average charge incurred by GHI subscribers for such visits.

Specialist services at HIP were valued at \$12 for each consultation. The average charge for such services received by GHI subscribers was \$13.20. The lower figure was designed to reflect that specialists generally charge more for initial consultations than follow-up visits, and that return visits to specialists are more frequent at HIP than among the GHI subscribers.

*Except that a \$2 fee may be charged for a home call between the hours of 10 p.m. and 7 a.m.

Surgery performed by HIP physicians was valued at the GHI benefit for the particular procedure, plus an empirically derived mark-up reflecting the amount by which average surgeons' charges to the GHI subscribers exceeded the GHI fee schedule. A preliminary hand-tabulation showed that, for all cases of in-hospital surgery combined, the total gross surgical charges were approximately 60 percent higher than the benefits allowed by GHI. In other words, GHI reimbursed \$100 for every \$160 charged for hospitalized surgery. For all cases of office surgery, GHI reimbursed \$100 for every \$125 charged. Ratios, therefore, of 1.60 for hospitalized surgery and 1.25 for office surgery, were applied to the GHI schedule of allowances. Thus, all in-hospital surgical procedures reimbursed by GHI at \$100 were valued at \$160, those reimbursed at \$150 were valued at \$240, etc. For office surgery, the 1.25 ratio was applied, so that, for example, procedures valued at GHI at \$40 were assigned a cost of \$50 when performed by an HIP doctor in his office or at the group center. This method may have over- or underestimated the average charge for any particular surgical procedure, but it is believed to reflect rather accurately the general level of surgical costs prevailing in New York City for the population groups comprised in our sample at the time of the study.

Obstetrical services were valued according to the schedule of allowances set by the New York State Division of Medicare in December 1956. There were not enough instances of such services to GHI subscribers to justify the application of any statistical ratio to the GHI benefits, and the schedule set by Medicare seemed a reasonable standard to apply. These allowances were set by the Council Committee on Economics of the New York State Medical Society; they were designed largely for patients in the \$4500-\$4800 income bracket, which closely matched the actual family income of the HIP sample group; their publication date occurred during the time period covered by the study, and they seemed generally in accord with the actual experience of the GHI subscribers in the sample.

X-ray and laboratory procedures were also valued according to the schedule of allowances set by Medicare.

Appendix B

Estimates of Sampling Errors

AS DESCRIBED IN the previous section, the study populations in HIP and GHI were obtained by drawing random samples of subscribers from specified age-sex-family size strata in the IAM and OEU groups and from age-sex-union local strata in the DJB. These samples are only one of many sets of random samples that could be drawn under identical procedures. Measures derived from them are regarded as estimates of the averages of the corresponding figures in all such samples that could be obtained from the total enrollment of these unions and that are subjected to the same field and processing operations. How far a particular estimate is from the average of all possible samples is not known, but the probability that the difference is less than a specified amount can be determined with a fair degree of reliability. For example, chances are about 19 out of 20 that the difference between an estimate obtained in this study and the overall average is less than twice the standard error. These are the odds often used as confidence limits for data of the type presented here.

Appendix Table B-1 presents standard errors for a wide range of cost and utilization measures discussed in the report. To obtain these standard errors, the sample in each plan was subdivided into 30 sub-samples¹ through a random procedure which took into account the original stratification. Variation among the sub-samples provides a reliable basis for estimating standard errors of the measures obtained from the total samples in each of the plans.

Since the major interest in the current study is in testing whether a difference between HIP and GHI might be due to chance factors, standard errors of specific HIP-GHI differen-

¹ The two individuals in the GHI sample with extremely high costs were excluded from the sub-samples. All measures of sampling errors given in the appendix table exclude these individuals.

Appendix Table B-1
Standard Errors of Selected Cost and Utilization Measures

Item	GHI		HIP		HIP-GHI difference	
	Estimate ^a	Standard error ^a	Estimate	Standard error	Estimate	Standard error
Gross total costs per individual	\$153.65	\$7.61	\$139.28	\$7.63	\$14.37	\$10.78
Gross hospital costs per individual	\$ 22.86	\$2.63	\$ 12.77	\$2.23	\$10.09*	\$ 3.46
Gross costs of hospitalized surgery per individual	\$ 10.77	\$1.95	\$ 4.74	\$1.14	\$ 6.03*	\$ 2.26
Gross costs of non-surgical, non-obstetrical physicians' services per individual	\$ 34.20	\$3.28	\$ 38.92	\$2.41	\$ 4.72	\$ 4.08
Gross costs of all physicians' services per individual	\$ 50.26	\$3.94	\$ 46.83	\$5.36	\$ 3.43	\$ 6.66
Drug costs per individual	\$ 35.33	\$1.33	\$ 35.82	\$2.07	\$.49	\$ 2.47
Per cent of total gross costs spent on hospitals	14.9%	1.2%	9.2%	1.4%	5.7%*	1.8%
Per cent of gross physicians' costs met by HIP or GHI	59.4%	3.2%	80.1%	2.8%	20.7%*	4.3%
Per cent of gross hospital costs met by Blue Cross	78.5%	8.5%	88.4%	9.0%	9.9%	12.4%
Per cent of gross hospital and physicians' costs met by HIP/GHI and Blue Cross	67.3%	2.6%	81.5%	3.2%	14.2%*	4.1%
Per cent of gross costs of hospitalized surgery met by HIP or GHI	61.6%	4.3%	93.4%	5.8%	31.8%*	7.2%
Per cent of total gross costs met by HIP/GHI and Blue Cross	32.0%	1.3%	35.0%	1.7%	3.0%	2.1%
Hospital admission rate per 100 persons	10.65	.94	6.30	.94	4.35*	1.34
Hospitalized surgical procedure rate per 100 persons	7.18	.96	4.38	.81	2.80*	1.27
Mean length of stay per hospital admission	7.44	.64	6.47	.49	.97	.80
Number of days in hospital per 100 persons	79.1	9.2	40.8	7.2	38.3*	11.7
Mean number of non-surgical, non-obstetrical doctor visits	5.88	.37	5.55	.33	.33	.50

*Chances are less than 1 in 20 that a difference of this size is due to random factors.

^a GHI estimates and standard errors exclude two high-cost individuals.

tials are also given in Appendix Table B-1. The odds are low (1 in 20) that a difference that is at least twice the standard error is due to sampling variability. Differences of this relative magnitude are indicated by an asterisk in the table. It will be noted that they relate to hospital and surgical costs and rates and to per cent of physician and hospital costs met by insurance.

In addition to the variables shown in the appendix table, the report presents a variety of other measures, many of which are in the form of a percentage of the subscribers interviewed. A conservative but satisfactory estimate of the standard error of such a percentage for HIP or GHI may be derived from the formula:

$$s = \sqrt{\frac{pq}{n}} \quad \text{where } p = \text{per cent of subscribers in specified response category}$$

$$q = \text{per cent of subscribers not in specified response category}$$

$$n = \text{total number of subscribers in sample}$$

Appendix Table B-2 gives estimates of standard errors that correspond to particular percentages. Since the size of the sample is virtually the same in both HIP and GHI, these estimates are applicable to either of the two plans. The third column in the table indicates the approximate margin between a percentage

Appendix Table B-2
Standard Errors of Percentages

Per cent of subscribers in a specified category	Estimated standard error of per cent	Chances are 1 in 20 or less that an HIP-GHI difference of the following size or larger is due to chance factors
(1)	(2)	(3)
10 or 90 per cent	1.5	4%
20 or 80 per cent	2.0	5
30 or 70 per cent	2.2	6
40 or 60 per cent	2.4	7
50 per cent	2.4	7

in HIP and the corresponding figure in GHI which would have less than 1 chance in 20 to be due to sampling variability. If a difference is larger than the one given in the table, the likelihood that it arises from chance factors decreases. For example, if a difference is a third greater, the odds are 1 in 100.

The estimated errors shown in the foregoing tables show the deviations which might be expected if many different samples of the same population had been selected and interviewed in the same manner. They account for the errors arising from sampling *per se*, and for the random component of errors in interviewing and data-processing, but they do not measure the effect of any non-random or systematic error tendencies.

One possible source of such non-random error is the failure to interview all of the originally designated samples and the substitution of other randomly chosen individuals for those whom it was not possible to interview. Twenty-four per cent of the 900 originally designated subscribers had to be substituted for, and if these 24 per cent were different from their substitutes in any systematic respect (greater or less illness experience, more or less satisfaction with their insurance plan, etc.), a possibly important bias could result. There is evidence, however, that the process of substitution had little or no effect on the comparability of the HIP and GHI study group. The "loss rate" from the originally designated sample was almost identical for each plan (25 per cent for GHI, 23 per cent for HIP), and the overwhelming majority of the losses were due, not to illness or to refusals to be interviewed, but to such random factors as "Subscriber moved, present address unknown," "Unknown at address given," "Not home after anywhere from four to nine calls," and interviewer failure to complete the assignment. Only 4.2 per cent of the originally designated subscribers refused to be interviewed or broke off the interview after having answered a few questions, and refusals too were equally distributed between the two plans (4.4 per cent GHI, 4.0 per cent HIP).

There remains the possibility of systematic errors in subscribers' responses, in the interviewers' recording of replies, and in the coding and tabulation of the data. The effect of response

and recording errors was immensely reduced through the study's reliance, for the most part, on HIP and GHI medical records rather than on respondents' recollection of illness, medical care and cost. A variety of quality checks were introduced to control any systematic errors or biases in the remainder of the data and in its processing. Interviewers were carefully trained and their work checked; apparent inconsistencies or contradictions in the data were referred back to respondents or to records of the two plans for explanation, the work of each coder was independently verified by another and differences resolved by the coding supervisor or study director, and so on. Finally, some confidence in the non-record portion of the data may be gained both from internal analysis and from comparisons with other known data.

*Appendix C***Composition of Samples****Appendix Table C-1****Number of Subscribers and Covered Individuals
in GHI and HIP Samples**

	GHI	HIP
Subscribers	419	422
Individuals	838	841

Appendix Table C-2**Composition of Samples by Subscribers' Age,
Sex, Size of Household**

	GHI	HIP
Subscribers' sex		
Male	60%	60%
Female	40	40
	100%	100%
Subscribers' age		
Under 25	4%	4%
25-44	44	45
45-64	47	44
65 or over	5	7
	100%	100%
Size of household		
One	24%	22%
Two	40	41
Three	14	13
Four	12	13
Five	6	7
Six or more	4	4
	100%	100%

Appendix Table C-3**Composition of Samples by Subscribers' Education**

	GHI	HIP
0-4 years	11%	16%
5-6 years	6	7
7-8 years	24	26
Some high school	26	25
Completed high school	24	17
Some college	7	6
Completed college	2	3
	100%	100%

Appendix Table C-4**Composition of Samples by Family Income**

	GHI	HIP
Under \$2,000	2%	3%
\$2,000-2,999	9	12
\$3,000-3,999	17	17
\$4,000-4,999	22	21
\$5,000-5,999	17	16
\$6,000-7,499	20	18
\$7,500-9,999	9	10
\$10,000 or over	4	3
	100%	100%

Note parallel data for New York City population:

Under \$2,000	6.8%
\$ 2,000- 2,999	9.3
\$ 3,000- 3,999	10.5
\$ 4,000- 4,999	15.6
\$ 5,000- 5,999	18.1
\$ 6,000- 6,999	11.3
\$ 7,000- 9,999	18.7
\$10,000-14,999	8.4
\$15,000 and over	3.2

New York State. Interdepartmental Committee on Low Incomes. *Family Income in New York State: 1956*. Bulletin No. 1 (Part I) October 1958 reports, p. 15, Table 1 for New York City.

Appendix Table C-5
Composition of Samples by National Origin,
Race, and Residence of Subscribers

	GHI	HIP
National Origin		
Father born in U. S.	18%	23%
Italy	32	27
Germany, Austria	12	10
Russia, Poland, Baltic	17	16
Balkan, Eastern Europe	4	3
Great Britain, Ireland	7	5
Puerto Rico	2	7
Other West Indies	2 } 4	5 } 12
Middle East	2	1
Other	4	3
	<u>100%</u>	<u>100%</u>
Race		
White	95%	85%
Negro	4	14
Other	1	1
	<u>100%</u>	<u>100%</u>
Borough		
Bronx	19%	21%
Brooklyn	40	37
Manhattan	11	15
Queens	27	26
Richmond	3	1
	<u>100%</u>	<u>100%</u>

Appendix Table C-6
Composition of Samples by
Occupations of Subscribers

	GHI	HIP
Professional, semi-professional	1%	1%
Proprietor, manager, official	1	5
Clerical, sales	24	21
Craftsman, foreman (skilled)	27	26
Operative (semi-skilled)	46	46
Service worker	*	1
Laborer (unskilled)	1	*
	<u>100%</u>	<u>100%</u>

*Less than one-half of 1 per cent.

The New York City sample drawn in the HIP study in 1952 shows:

Professional, semi-professional workers	10.0
Proprietors, managers, and officials (including farm) and farmers	11.3
Clerical and sales	25.9
Craftsmen, foremen, operatives, laborers	37.0
Domestic service	1.2
Other service	9.4
Not reported	5.2

Committee for the Special Research Project in the Health Insurance Plan of Greater New York.
Health and Medical Care in New York City. Cambridge, Mass.: published for the Commonwealth
Fund by Harvard University Press, 1957, p. 25, Table III-12.

*Appendix D***Costs of Families****Appendix Table D-1****Mean Gross Costs Per Family by Category of Service^a**

Service	GHI ^b N = 278	HIP 288
Hospital	\$ 52	\$ 30
Physician	115	110
Hospital surgery	(24)	(12)
Obstetrics	(9)	(4)
Office surgery	(5)	(3)
Other	(78)	(91)
Drugs	83	85
Dental	81	80
Other	26	16
Total	\$356	\$321

^aThe table includes costs of only those family members who are covered by the subscriber's HIP or GHI contract. Costs of non-covered family members (parents, adult children, etc.) are not considered here.

The Dress Joint Board has not been included in the "per family" tabulations, because DJB subscribers have individual coverage only.

There have been included in these tabulations, however, 28 HIP "families" and 7 GHI "families" which contain a spouse and/or minor children who were not covered by the subscriber's HIP or GHI contract during the 12-month period preceding the date of interview.

^bThe costs of all covered individuals within the two extremely high-cost GHI families have been excluded from these tabulations of mean costs per family. One family had a total gross cost of \$3,647 and the other \$8,779. See note, Table 3.

Appendix Table D-2**Percentage Distribution of Families by Level of Gross Hospital Costs^a**

Gross hospital costs	GHI	HIP
\$0	78%	85%
\$1 - 99	6	4
\$100 - 199	6	5
\$200 - 299	4	3
\$300 or more	6	3
	100%	100%

^aIAM and OEU cases only.

Appendix Table D-3**Percentage Distribution of Families by Level of****Non-Surgical, Non-Obstetrical Physicians' Costs^a**

Gross costs of all physicians' services	GHI	HIP
\$0	13%	16%
\$1 - 49	40	35
\$50 - 99	23	20
\$100 - 199	16	16
\$200 - 299	4	8
\$300 or more	4	5
	100%	100%

^aIAM and OEU cases only.

Appendix Table D-4**Percentage Distribution of Families by Amount Spent on Drugs^a**

Total amount spent on drugs	GHI	HIP
\$0	9%	10%
\$1 - \$19	17	20
\$20 - \$49	21	21
\$50 - \$99	22	22
\$100 - \$199	21	14
\$200 or more	10	13
	100%	100%

^aIAM and OEU cases only.

Appendix Table D-5
Percentage Distribution of Families
by Amount Spent on Dental Care^a

Total amount spent on dental care	GHI	HIP
\$0	27%	30%
\$1 - \$19	12	11
\$20 - \$49	18	15
\$50 - \$99	14	16
\$100 - \$199	15	14
\$200 or more	14	14
	<u>100%</u>	<u>100%</u>

^aIAM and OEU cases only.

Appendix Table D-6
Percentage Distribution of Families
by Amount Spent on "Other" Medical Costs^a

Total amount spent on "other" medical costs	GHI	HIP
\$0	43%	46%
\$1 - \$9	10	8
\$10 - \$19	13	15
\$20 - \$49	24	18
\$50 or more	10	13
	<u>100%</u>	<u>100%</u>

^aIAM and OEU cases only.*Appendix E***Costs for Three Union Groups**

The following selected tables are appended to show how the data for the three individual unions fell into consistent patterns corresponding to the composite patterns shown for GHI and HIP in this survey. By and large each individual union revealed similar variations between GHI and HIP enrollees within it which corresponded to the variations between the sum of all GHI and HIP enrollees for the three unions.

Appendix Table E-1

Mean Gross Costs Per Individual by Category of Service
and by Unions

	Union A		Union B		Union C		Total	
	GHI	HIP	GHI	HIP	GHI	HIP	GHI	HIP
Hospital	\$ 34	\$ 15	\$ 21	\$ 12	\$ 21	\$ 14	\$ 23	\$ 13
Physicians ^a	70	57	42	43	58	50	50	47
Hospital surgery	(18)	(5)	(8)	(5)	(15)	(5)	(11)	(5)
Obstetrics	(3)	(2)	(4)	(2)	(*)	(—)	(3)	(2)
Office surgery	(1)	(2)	(2)	(1)	(1)	(2)	(2)	(2)
Other	(48)	(48)	(28)	(35)	(42)	(44)	(34)	(39)
Drugs	46	43	31	36	41	29	35	36
Dental	43	54	28	30	44	42	34	36
Other	15	15	9	6	15	8	11	8
Total	\$209	\$184	\$131	\$127	\$178	\$144	\$154	\$139

^aPhysicians' costs for HIP based on unit charges to GHI subscribers.**Appendix Table E-2**

Percentage Distribution of Individuals by Level
of Total Gross Costs, by Unions

Total gross costs	Union A		Union B		Union C		Total	
	GHI	HIP	GHI	HIP	GHI	HIP	GHI	HIP
\$0	3%	5%	6%	7%	4%	3%	5%	6%
\$1 - \$49	22	24	34	33	21	26	29	30
\$50 - \$99	22	19	24	23	22	25	23	23
\$100 - \$199	25	22	18	21	28	26	21	22
\$200 - \$299	5	11	5	6	10	8	7	7
\$300 or more	23	19	13	10	15	12	15	12
	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>

Appendix Table E-3

**Percentage Distribution of Individuals by Level
of Gross Physicians' Costs, by Unions***

Gross costs of all physicians' services	Union A		Union B		Union C		Total	
	GHI	HIP	GHI	HIP	GHI	HIP	GHI	HIP
\$0	24%	27%	28%	31%	21%	18%	26%	27%
\$1 - \$49	45	38	49	47	50	53	49	47
\$50 - \$99	12	16	9	10	19	18	12	13
\$100 - \$199	11	10	9	7	4	5	8	7
\$200 - \$299	2	4	2	3	2	3	2	3
\$300 or more	6	5	3	2	4	3	3	3
	100%	100%	100%	100%	100%	100%	100%	100%

*Physicians' costs for HIP based on unit charges to GHI subscribers.

Appendix Table E-5

**Individuals' Utilization of Hospital
and Surgical Services
by GHI/HIP and by Unions**

	Union A		Union B		Union C		Total	
	GHI	HIP	GHI	HIP	GHI	HIP	GHI	HIP
Hospital admissions per 100 persons	10.8	6.7	11.4	6.9	9.6	4.0	11.0	6.3
Days per 100 persons	110	45	87	44	69	27	87	41
Hospitalized surgical procedure rate per 100 persons	9.3	4.5	6.8	4.7	8.5	2.9	7.6	4.3

Appendix Table E-4

**Percentage of Individuals' Gross Physicians'
Costs Met by GHI/HIP, by Unions***

	Union A		Union B		Union C		Total	
	GHI	HIP	GHI	HIP	GHI	HIP	GHI	HIP
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Under \$50	68	88	79	85	70	84	75	85
\$50 - \$99	68	86	73	84	65	84	69	84
\$100 - \$199	57	81	74	84	53	73	69	82
\$200 - \$299	72	91	70	83	54	73	66	83
\$300 or over	44	79	45	53	21	96	39	68
Total, all individuals	55	84	66	77	47	84	59	80

*Physicians' costs for HIP based on unit charges to GHI subscribers.