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VITAL and HEALTH STATISTICS

DATA EVALUATION AND METHODS RESEARCH

Measurement of Personal Health Expenditures

Development and testing of a brief questionnaire on family medical and dental expenditures for use in the Health Interview Survey.

Washington, D.C.

June 1963

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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Secretary

Public Health Service

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Under legislation establishing the National Health Survey, the Public Health Service is authorized to use, insofar as possible, the services or facilities of other Federal, State, or private agencies. The methodological study in this report was performed under a contractual arrangement with the National Opinion Research Center, The University of Chicago.

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The Health Interview Survey of the National Health Survey (NHS) is designed to collect information on illness, accidental injuries, a variety of measures of disability, and hospitalization experience as well as the demographic and social characteristics of members of the families that come into the sample. The collection of data on personal health expenditures in a general purpose health interview such as this presents many problems.

One difficulty is that a detailed interview on family health expenditures could make the entire interview too long and detract from the reliability of many items since the interview sometimes takes up to an hour and ranges over a variety of topics—both the regular topics mentioned above and special topics that are added from time to time. Furthermore, the kind of data needed on health expenditures includes as an essential part statistics on the frequency distribution of annual expenditures for families and persons. This means that the questions must cover expenditures for the entire year before the date of interview. Recall of minor expenses for a period as long as a year is subject to much error. (Repeated visits to the same family would seem the obvious solution, but the Health Interview Survey plan at the present time calls for interviewing each family only once.)

Despite these problems, it was felt that the Health Interview Survey could make a contribution to statistics on this topic if the objective was limited to estimates of the total bill for all health expenditures for each person. Only major sub-items such as hospital care would be shown separately, and these only if there was evidence indicating their validity. Emphasis in the analysis would be placed on families and individuals with large annual expenditures—the right-hand tail of

the frequency distribution. For this and for breakdowns of the population by age, sex, and residence, the Health Interview Survey sample would have an advantage due to its relatively large size—roughly 10,000 different households each quarter.

Consequently, the National Health Survey made a contract with the National Opinion Research Center (NORC) of the University of Chicago to develop a brief set of questions which could be used to classify families and individuals into broad classes according to the amount of their personal health expenditures. Working with the Bureau of the Census, which carries out the Health Interview Survey on behalf of the National Health Survey, NORC was then to test the questionnaire in the field. NORC had previously conducted two detailed cost studies in collaboration with the Health Information Foundation,¹ and the results from these studies suggested that the methods used could serve as a good basis for further developmental work.

The basic plan of the study was to use a criterion source of information with which to compare the yield of the abbreviated questions on expenditures. This was accomplished by a design in which the original health interview, which included the proposed new questions, was carried out in a sample of households, and a subsequent intensive interview was conducted in the same

¹Odin W. Anderson, Patricia Collette, and Jacob J. Feldman, "Family Expenditure Patterns for Personal Health Services;" *Health Information Foundation. Research Series 14, 1960.*

households. This latter interview was essentially like that previously used by NORC and it provided a detailed study of expenditures against which the shorter interview would be matched.

An additional feature of the study was an investigation of the relative effectiveness of securing data by means of a direct interview and a self-enumeration questionnaire.

The questionnaire that was tested incorporated the proposals of NORC with certain modifications suggested by the staffs of the Bureau of the Census and the National Health Survey. The interview was carried out by Census interviewers

under the supervision of that agency. The second or criterion interview was administered by NORC staff, and the analysis of results including a detailed report on the study was also the responsibility of NORC.

For those methodological studies which the National Health Survey initiates but does not directly conduct, staff members are assigned to provide liaison with the research organization and to convey the viewpoint of the National Health Survey. For this study Mr. Elijah L. White provided the liaison, and he also edited the contractor's report for the present publication.

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SYMBOLS

Data not available-----	---
Category not applicable-----	...
Quantity zero-----	-
Quantity more than 0 but less than 0.05----	0.0
Figure does not meet standards of reliability or precision-----	*

PERSONAL HEALTH EXPENDITURES

The following research report was prepared by the National Opinion Research Center of the University of Chicago under contract with the National Health Survey Division, National Center for Health Statistics. Paul N. Borsky, Senior Study Director, and Jacob J. Feldman, Director of Research, directed the project for NORC and were responsible for the analysis and report presented here. Galen Glockel supervised the field work; J. Robert Banacki was in charge of data processing; and Harold Levy prepared the extensive tabulations.

I. STUDY DESIGN

INTRODUCTION

In contemplating the regular collection of reports on personal medical outlays, the Public Health Service decided that it would like to secure the necessary information by adding a number of supplementary questions to its continuing National Health Survey (NHS) questionnaire. The problem arose as to how many and what kinds of questions were required to achieve a reasonable level of validity. Presumably, the more detailed and precise the probing, the greater the accuracy of the expenditure estimates. For administrative reasons, however, and to avoid an overly lengthy and costly interview, it was necessary to try to minimize the number of different kinds of questions and still maintain an acceptable level of overall validity. The object of this study was to experiment with different approaches in order to test the feasibility of alternative methods.

REVIEW OF PREVIOUS RESEARCH ON MEDICAL CARE COSTS

The first phase in planning this study was to review prior, relevant research. The National Opinion Research Center (NORC) had conducted two national studies of medical care costs, and in collaboration with Columbia University had conducted a special area study of medical costs.

Other universities have conducted special studies, and their experiences and reports were also evaluated.

Special tabulations were prepared from the 1958 national study of NORC. As part of the 1958 sampling procedure, eight overall summary questions that made up the screening questionnaire were asked prior to the very detailed and lengthy personal interview. It was possible, thereby, to compare reports of total family medical care costs as revealed by the short-screening questionnaire with the totals consolidated from the detailed interview. Such a comparison might suggest the efficacy of using a relatively small number of questions in securing medical costs data.

When only three class intervals were used, over 84 percent of all family reports of total medical expenses were the same for summary as for detailed interviews (table 1). About 10 percent of the summary reports of total family expenses were understatements, about 6 percent were overstatements.

Even when as many as seven class intervals were used, about two-thirds of all summary and detailed interview reports were in agreement. The summary form resulted in understatement for about 23 percent of the families and in overstatement for about one-half that percent (table 2).

A detailed evaluation of the cases in which major discrepancies existed between the summary and criterion forms revealed the following major problems in the summary form:

Table 1. Comparison of summary and detailed interview reports of total family medical expenses, by three class intervals: NORC, 1958

Intervals of expenditure	Intervals of expenditure							
	Total		Under \$200		\$200-499		\$500+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<u>Summary interview</u>	Detailed interview							
Total-----	2,207	100.0	1,214	55.0	622	28.2	371	16.8
Under \$200-----	1,289	58.3	1,138	51.4	143	6.5	8	0.4
\$200-499-----	562	25.5	61	2.8	432	19.6	69	3.1
\$500+-----	356	16.2	15	0.8	47	2.1	294	13.3
Total-----	2,207	100.0						
Same class interval-----	1,864	84.4						
Summary less-----	220	10.0						
Summary greater-----	123	5.6						

Table 2. Comparison of summary and detailed interview reports of total family medical expenses, by seven class intervals: NORC, 1958

Intervals of expenditure	Intervals of expenditure															
	Total		Under \$100		\$100-199		\$200-299		\$300-399		\$400-499		\$500-999		\$1,000+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<u>Summary interview</u>	Detailed interview															
Total-----	2,207	100.0	750	34.0	464	21.0	300	13.6	197	8.9	125	5.7	268	12.1	103	4.7
Under \$100-----	861	39.0	683	30.9	144	6.5	15	0.7	12	0.6	2	0.1	5	0.2	-	-
\$100-199-----	428	19.4	45	2.1	266	12.1	82	3.7	25	1.1	7	0.3	3	0.1	-	-
\$200-299-----	283	12.8	8	0.4	37	1.7	157	7.1	54	2.4	13	0.6	12	0.5	2	0.1
\$300-399-----	187	8.5	6	0.3	7	0.3	28	1.3	84	3.8	42	1.9	20	0.9	-	-
\$400-499-----	92	4.2	1	-	2	0.1	6	0.3	12	0.6	36	1.6	35	1.6	-	-
\$500-999-----	257	11.6	5	0.2	5	0.2	10	0.4	9	0.4	24	1.1	171	7.8	33	1.5
\$1,000+-----	99	4.5	2	0.1	3	0.1	2	0.1	1	-	1	0.1	22	1.0	68	3.1
Total-----	2,207	100.0														
Same class interval-----	1,465	66.4														
Summary less-----	506	22.8														
Summary greater-----	236	10.8														

1. Inclusion of charges incurred prior to period covered by survey
2. Inclusion of free medical care
3. Omission of second or third hospitalization
4. Omission of pregnancy hospitalizations
5. Omission of anesthetist and surgeon fees
6. Omission of medical insurance payments
7. Omission of nonprescription drugs
8. Omission of routine medical examinations
9. Omission of nondoctor treatments and tests
10. Duplication of reported charges

Using the experiences from the above analysis and information secured from other studies, a short interview form was developed and pre-tested in several versions. After consultation with staffs of the Bureau of the Census and the National Health Survey, final forms were developed for the study.

SPECIFICATIONS FOR THE STUDY

After detailed discussions, the following administrative specifications were established for the survey:

1. The period covered would be 1 year prior to the short interview
2. The short interview should require about 10-15 minutes on the average
3. The basic unit for recording medical charges would be the individual member of the household
4. Every member regularly residing in the household at the time of the short interview would be enumerated
5. Any adult member of an immediate family may respond for other members of the family
6. In cases of subfamilies or nonfamily members residing in a household, separate interviews would be secured on the detailed interviews
7. Information on total personal health expenses (not payments) incurred during the past year would be secured from totaling major components of expense
8. Information on medical care charges would be grouped into four or five class intervals
9. Persons covered by complete prepayment medical plans such as the Kaiser Health

Plan in California and the Health Insurance Plan of Greater New York would be excluded from the study

10. To simulate eventual field conditions when the personal health expenditure questions would be incorporated in the National Health Survey, the regular health survey questions would be asked of all respondents participating in this special methodological study at the time of initial interview
11. To reduce costs and facilitate field work, a subsample from the urban part of the NHS sample would be selected in such a way that it overlapped NORC's national probability sample of areas

INTERVIEWING DESIGN

Since the Bureau of the Census was expected eventually to administer the medical care expenditure supplement, it was decided to have regular health interviewers conduct the current health interview survey and ask the short form questions. This would provide a realistic field test of the short questionnaire. NORC interviewers would then conduct the longer detailed interview which would be used as the criterion of validity when comparing the responses with the short interview. So that no special efforts would be exerted which might bias the comparisons, the initial interviewers would not be informed of the followup NORC interview.

Since self-enumeration has been found useful in other work of the National Health Survey, it was decided to split experimentally the sample of short interviews with half being directly interviewed and half being given a self-enumeration form. The actual field procedures were as follows:

1. A total of 442 households was selected from the regular NHS sample of primary sampling areas which overlapped with NORC areas. These health interviews were conducted during October 1960. It is important to note that the sample of households used in this study does not represent a national sample, and the population included (mostly urban) is small. Therefore, the data on expenditures should not be used as estimates of national levels of expenditure.

2. Half of the sample households were selected at random and given the self-enumeration form of the short interview—the form for this interview is included in Appendix I. The form included a letter to the respondent which briefly described the purposes of the personal health expenditure study and asked that the questionnaire be completed and mailed within 5 days to the Bureau of the Census. (A self-addressed envelope requiring no postage was furnished.) Prior to filling out the form, the respondent was urged to consult other members of the family and to check available records in order to make the report as accurate as possible. At the end of the regular health survey interview, the respondent was asked for his telephone number and told that a callback might be necessary if the information was incomplete.
3. The other half of the households was asked the same questions on personal health expenditures as part of the regular health interview survey. These respondents were *not* asked to check records or to consult with others in the family, and very few actually did. About a week following the health interview, each directly enumerated respondent was sent a letter stressing the importance of more detailed information and asking him to check records and to consult other family members on a suggested list of medical cost items prior to a second interview.
4. About 3-4 weeks following the initial interview, NORC interviewers got in touch with the respondents who originally provided the data for both halves of the sample and arranged for a followup criterion interview. The initial contact was with the original respondent, but if told another member of the household was more knowledgeable, the NORC interview was arranged with the better informed person. In many instances, several members of the household contributed information to the NORC interview.
5. If the self-enumeration form was not returned within a week or if the form was incomplete and failed to pass a review in

the regional field office, a followup letter, telephone call, or personal contact was made.

Of the 442 assigned families, 402 were subsequently interviewed by NORC. In four cases, however, interviewer reports strongly questioned the validity of the NORC interviews. The respondents were reported as hostile and uncooperative, and a careful review of the answers revealed such discrepancies and conflicts in answers that it was decided to discard these cases from the analysis.

Of all the cases assigned, 91 percent were interviewed by NORC and 90 percent were found to be usable and complete. Only 4 percent were refused or terminated before completion and for the remaining 5 percent, followup contacts were cancelled because of the time and cost involved.

Approximately 10 percent of the families that belonged to the self-enumeration subsample and with which NORC had successfully conducted an interview had not, even after followup, returned their forms by mail. Instead, short-form data pertaining to their health expenses had been collected by phone or personal interview. However, because recourse to such nonresponse procedures would remain necessary in the event that self-enumeration was adopted by the National Health Survey for the collection of health expense information, in all the tabulations presented in this report the individuals in these anomalous families were treated as if their expenses had actually been reported initially through self-enumeration.

In a number of subsequent tables (3-10 and Appendix II), a category labeled "NHS self-enumeration—failed edit" appears. This category is composed of : (1) individuals from families whose mail-returned, self-enumeration forms originally failing edit because of missing or incomplete information were passed after followup; (2) families for which the editorial followup was unsuccessful; (3) families that failed to return the self-enumeration form but were subsequently interviewed by phone or personal visit; and (4) certain other cases shown in the table below. Thus, the "failed edit" rubric is somewhat of a misnomer. About two-fifths of the families in the category were not even subject to the normal editing procedure because the information was collected from them by direct interview rather than self-enumeration. The category in question might well be viewed as

"self-enumeration—problem cases," as can be seen from the detailed breakdown given below of response data for households originally interviewed by NHS and assigned for followup by NORC.

	<u>Number</u>	<u>Percent</u>
Total assigned-----	442	100
Total not completed-----	44	10
Refusals and breakoffs-----	16	4
Too costly to followup-----	24	5
NORC data questionable-----	4	1
Total completed-----	398	90
NHS direct interviews-----	193	43
NHS self-enumeration		
Returned self-enumeration form by mail		
Passed edit without followup-----	146	33
Passed edit after followup-----	29	6
Failed edit--no successful followup	7	2
Did not return self-enumeration form by mail		
Information obtained by phone-----	16	4
Information obtained by personal interview-----	4	1
Other		
Miscellaneous extraordinary circumstances-----	3	1

In all, detailed reports were obtained by NORC for 1,203 persons, of which short self-enumeration forms were initially secured from 617 and direct interviews were held with 586.

BRIEF DESCRIPTION OF INTERVIEWS

Six questions were asked in both of the short-form questionnaires with the actual language modified to fit self-enumeration and direct interviewing.

A general definition of health expenditures was given on the self-enumeration form with emphasis on exclusion of free care. The exact dates for the year covered in the report were specified at the top of the form. The questions dealt with overnight hospitalizations (in this report overnight hospitalization refers to stays of 1 or more nights); not overnight hospitalizations (the great majority of these stays represents outpatient care); doctor charges; costs of medicine, prescriptions, and tonics; dental costs; and all

other health expenses. Both short forms are included in Appendix I.

The NORC criterion interview was different from that used in most attitude or opinion studies. In most ordinary interviews directed toward understanding personal attitudes and opinions, care is taken to insure absolute privacy for individual interviews; sequences of questions are strictly maintained; questions are standardized; and conflicts in answers are never challenged. Since the goal in this study was to obtain as complete and accurate a record of costs as possible, the presence of and consultation with other family members was encouraged; conflicts in answers were questioned and eliminated; changes in order and language of questions were permitted; and probing was directed to clarifying any ambiguities and inaccuracies in response.

The NORC criterion interview started with questions about hospitalizations. If a person had been hospitalized during the past year, a special detailed supplement was filled out on hospital expenses for each hospitalization. Costs of room and board and other hospital charges were separated from doctor charges before, during, and after hospitalization for a given condition. Expenses for medicine, tests, X-rays, and special equipment were some of the other items separately probed. Then, a series of questions was asked about major illnesses, chronic conditions, and expensive illnesses, and a special supplement was completed for each reported major condition. The detail of this supplement paralleled the hospital forms and separated free care from costs levied on the respondent. Expenses paid by the respondent's health insurance or billed to the respondent or his family were covered by the study. Free care was defined as that paid for by workmen's compensation, nonprofit organizations, charitable or welfare groups, government welfare, and military or veteran agencies.

Minor illnesses involving home and office visits were third among the items probed, followed by an enumeration of costs of medicine. A special question dealing with costs of eyeglasses was followed by detailed inquiries on costs of special appliances and equipment. Dental costs were covered by a series of six questions on types of possible treatment. A final question included charges of nondoctor personnel, such as chiropodists, chiropractors, or nurses.

II. FINDINGS

MEAN VALUES OF PERSONAL HEALTH EXPENSES

Overall, the total average personal health expense reported to NORC was \$102.14 per person. The comparable total reported on the short interview forms was \$105.13—only 3 percent more than the amount recorded on the detailed interview. The six separate components of personal health expenses, however, were not as accurately reported on the short questionnaires. Hospital expense not involving overnight stays, as will be discussed later, was a frequently misunderstood category and was generally overstated in the short interview reports. Doctor and dental expenses were also generally overreported in the short forms, offsetting somewhat understatements of overnight hospital stays, medicine, and all other health expenses. In evaluating percent differences, care must be taken to consider the average amounts of each category of expense. For example, since the average expenditure for outpatient care reported to NORC was under \$2.00, an average difference of a small amount would be computed as a sizeable percent difference.

Direct interviewing by NHS produced more accurate overall reporting of medical and dental expenditures. Offsetting differences in average component costs resulted in a chance reporting of identical average total costs on the short NHS interviews and NORC detailed interviews. The pattern of overstatements and understatements on component expenses, however, persisted with doctor, dental, and hospital-not-overnight expenses being overreported on NHS interviews and other health expenses being underreported.

In general, NHS self-enumeration reports showed almost 6 percent higher average total health expenditures. A closer inspection of the data, however, reveals that self-enumeration reports which passed field edit for completeness of reporting were almost 4 percent less than NORC reports, while those which failed field edit were greatly overstated by 23 percent on the average. Of the 617 persons included on self-enumeration reports, 437 passed field edit and 180 did not. Table 3 presents these findings on average expenditures.

NET FREQUENCY DISTRIBUTIONS OF PERSONAL HEALTH EXPENSES

Total Health Expenses

The offsetting of individual overstatements by other understatements produced a remarkable similarity of net frequency distributions in personal health expenses reported on both short forms used by NHS and the detailed interviews of NORC. On the average, NHS cost intervals were less than 1 percent different from NORC reports (table 4).

Direct enumeration by NHS again reflected greater accuracy, but the average differences reported by self-enumeration were only 1 percent greater than direct interviewing. As expected, the self-enumeration reports that passed edit were almost as accurate as direct interviewing with the fail edit reports accounting for most of the NHS discrepancies.

Hospital Overnight Expenses

With only 9 percent of all persons reporting hospitalizations involving overnight stays, it was not surprising that the average difference in net frequency distributions for these hospitalization expenses was less than half of 1 percent. NHS direct interviews and NHS self-enumeration forms which passed edit were about the same in average net differences. The fail edit forms as expected were the least accurate (table 5).

Hospital—Not-Overnight Expenses

Only about 3 percent of all persons reported care at a hospital not requiring overnight stays. This item was often confused with doctor expenses and will be discussed with other discrepancies more fully in another section. On the average, net frequency distributions differed by approximately 2 percent with the direct interview distribution coming somewhat closer to the criterion than did the self-enumeration. These data are presented in table 6.

Table 3. Reported mean values of personal health expenses reported to NHS and NORC, by type of expenditure: 1960

Source and type of interview	Type of expenditure						
	Total	Hospital		Doctor	Medicine	Dental	All other
		Overnight	Not overnight				
<u>Total</u>							
NORC-----	\$102.14	\$22.53	\$1.69	\$28.89	\$23.85	\$16.95	\$8.23
NHS-----	105.13	20.46	4.74	33.41	20.66	18.30	7.56
Difference-----	+\$2.99	-\$2.07	+\$3.05	+\$4.52	-\$3.19	+\$1.35	-\$0.67
Percent difference-----	2.9	9.2	180.5	15.6	13.4	8.0	8.1
<u>NHS direct interview</u>							
NORC-----	\$100.49	\$21.28	\$0.95	\$30.95	\$23.04	\$14.67	\$9.60
NHS direct-----	100.49	19.10	2.91	32.36	20.58	17.65	7.90
Difference-----	-	-\$2.18	+\$1.96	+\$1.41	-\$2.46	+\$2.98	-\$1.70
Percent difference-----	-	10.2	206.3	4.6	10.7	20.3	17.7
<u>NHS self-enumeration</u>							
NORC-----	\$103.71	\$23.73	\$2.39	\$26.94	\$24.62	\$19.11	\$6.92
NHS self-----	109.53	21.75	6.47	34.41	20.74	18.93	7.23
Difference-----	+\$5.82	-\$1.98	+\$4.08	+\$7.47	-\$3.88	-\$0.18	+\$0.31
Percent difference-----	5.6	8.3	170.7	27.7	15.8	1.0	4.5
<u>NHS self-enumeration—passed edit</u>							
NORC-----	\$95.37	\$17.72	\$2.28	\$24.21	\$21.50	\$21.91	\$7.75
NHS-----	92.00	13.70	4.33	27.50	18.98	21.47	6.02
Difference-----	-\$3.37	-\$4.02	+\$2.05	+\$3.29	-\$2.52	-\$0.44	-\$1.73
Percent difference-----	3.5	22.7	90.0	13.6	11.7	2.0	22.3
<u>NHS self-enumeration—failed edit</u>							
NORC-----	\$123.94	\$38.31	\$2.66	\$33.57	\$32.19	\$12.31	\$4.91
NHS-----	152.09	41.29	11.67	51.18	25.02	12.76	10.17
Difference-----	+\$28.15	+\$2.98	+\$9.01	+\$17.61	-\$7.17	+\$0.45	+\$5.26
Percent difference-----	22.7	7.8	338.7	52.5	22.3	3.7	107.1

Table 4. Net frequency distributions of total personal health expenses reported to NHS and NORC, by intervals of expenditure: 1960

NHS intervals of expenditure	NORC	NHS	Difference
<u>All persons, 1,203 respondents</u>			
Total-----	100.0	100.0	¹ 0.9
Under \$25-----	41.1	41.8	+0.7
\$25-49-----	18.0	16.2	-1.8
\$50-99-----	16.0	15.6	-0.4
\$100-299-----	16.5	17.3	+0.8
\$300+-----	8.4	9.1	+0.7
<u>Direct interview, 586 respondents</u>			
Total-----	100.0	100.0	¹ 1.0
Under \$25-----	41.1	40.0	-1.1
\$25-49-----	18.3	17.0	-1.3
\$50-99-----	16.0	17.6	+1.6
\$100-299-----	16.2	16.9	+0.7
\$300+-----	8.4	8.5	+0.1
<u>Self-enumeration, 617 respondents</u>			
Total-----	100.0	100.0	¹ 1.8
Under \$25-----	41.0	43.4	+2.4
\$25-49-----	17.7	15.4	-2.3
\$50-99-----	16.1	13.8	-2.3
\$100-299-----	16.8	17.7	+0.9
\$300+-----	8.4	9.7	+1.3
<u>Self-enumeration—passed edit, 437 respondents</u>			
Total-----	100.0	100.0	¹ 1.2
Under \$25-----	39.6	40.7	+1.1
\$25-49-----	16.9	17.8	+0.9
\$50-99-----	17.8	14.7	-3.1
\$100-299-----	18.1	19.0	+0.9
\$300+-----	7.6	7.8	+0.2
<u>Self-enumeration—failed edit, 180 respondents</u>			
Total-----	100.0	100.0	¹ 4.0
Under \$25-----	44.4	50.0	+5.6
\$25-49-----	19.4	9.5	-9.9
\$50-99-----	11.7	11.7	-
\$100-299-----	13.9	14.4	+0.5
\$300+-----	10.6	14.4	+3.8

¹Total average difference.

Table 5. Net frequency distributions of hospital overnight expenses reported to NHS and NORC, by intervals of expenditure: 1960

NHS intervals of expenditure	NORC	NHS	Difference
<u>All persons, 1,203 respondents</u>			
Total-----	100.0	100.0	¹ 0.4
No expense-----	91.0	90.4	-0.6
\$1-99-----	2.0	2.6	+0.6
\$100-199-----	2.7	3.2	+0.5
\$200-299-----	2.0	1.5	-0.5
\$300+-----	2.3	2.3	-
<u>Direct interview, 586 respondents</u>			
Total-----	100.0	100.0	¹ 0.6
No expense-----	91.6	90.9	-0.7
\$1-99-----	1.5	2.1	+0.6
\$100-199-----	2.7	3.4	+0.7
\$200-299-----	2.3	1.6	-0.7
\$300+-----	1.9	2.0	+0.1
<u>Self-enumeration, 617 respondents</u>			
Total-----	100.0	100.0	¹ 0.4
No expense-----	90.4	90.0	-0.4
\$1-99-----	2.4	3.1	+0.7
\$100-199-----	2.6	2.8	+0.2
\$200-299-----	1.8	1.4	-0.4
\$300+-----	2.8	2.7	-0.1
<u>Self-enumeration—passed edit, 437 respondents</u>			
Total-----	100.0	100.0	¹ 0.6
No expense-----	91.1	91.7	+0.6
\$1-99-----	2.5	3.0	+0.5
\$100-199-----	2.7	3.0	+0.3
\$200-299-----	1.6	0.9	-0.7
\$300+-----	2.1	1.4	-0.7
<u>Self-enumeration—failed edit, 180 respondents</u>			
Total-----	100.0	100.0	¹ 1.4
No expense-----	88.9	85.5	-3.4
\$1-99-----	2.2	3.4	+1.2
\$100-199-----	2.2	2.9	+0.7
\$200-299-----	2.2	2.1	-0.1
\$300+-----	4.5	6.1	+1.6

¹Total average difference.

Table 6. Net frequency distributions of hospital—not overnight expenses reported to NHS and NORC, by intervals of expenditure: 1960

NHS intervals of expenditure	NORC	NHS	Difference
<u>All persons, 1,203 respondents</u>			
Total-----	100.0	100.0	¹ 1.9
No expense-----	96.7	91.9	-4.8
\$1-24-----	1.4	4.0	+2.6
\$25-49-----	0.7	1.8	+1.1
\$50-99-----	0.6	1.2	+0.6
\$100+-----	0.6	1.1	+0.5
<u>Direct interview, 586 respondents</u>			
Total-----	100.0	100.0	¹ 1.6
No expense-----	96.3	92.8	-3.5
\$1-24-----	2.4	4.6	+2.2
\$25-49-----	0.8	1.6	+0.8
\$50-99-----	0.5	-	-0.5
\$100+-----	-	1.0	+1.0
<u>Self-enumeration, 617 respondents</u>			
Total-----	100.0	100.0	¹ 2.5
No expense-----	97.3	91.0	-6.3
\$1-24-----	0.5	3.4	+2.9
\$25-49-----	0.5	2.1	+1.6
\$50-99-----	0.6	2.4	+1.8
\$100+-----	1.1	1.1	-
<u>Self-enumeration—passed edit, 437 respondents</u>			
Total-----	100.0	100.0	¹ 2.5
No expense-----	97.5	91.5	-6.0
\$1-24-----	0.7	3.9	+3.2
\$25-49-----	-	1.8	+1.8
\$50-99-----	0.7	1.9	+1.2
\$100+-----	1.1	0.9	-0.2
<u>Self-enumeration—failed edit, 180 respondents</u>			
Total-----	100.0	100.0	¹ 2.8
No expense-----	96.6	89.5	-7.1
\$1-24-----	-	2.2	+2.2
\$25-49-----	1.7	2.8	+1.1
\$50-99-----	0.6	3.9	+3.3
\$100+-----	1.1	1.6	+0.5

¹Total average difference.

Doctor Expenses

Over half of all persons reported some doctor expenses during the past year. On the average, total net frequency distributions varied only about 1 percent. It was interesting to note that the short interviews understated the small expenditures of less than \$25 and tended to overstate slightly the larger categories of expenses. Direct NHS interviews produced the greatest accuracy with the average net frequency difference amounting to less than one-half of 1 percent. Data from interviews which failed edit again showed the greatest variability as shown in table 7.

Medicine Expenses

Net frequency distributions reported on NHS interviews for medicine expenses were only a little over 1 percent different, on the average, from NORC interviews. Direct and self-enumeration interviews which passed edit were about the same, but those which failed edit were consistently less accurate. "Zero" expenditures were combined with those "under \$25" because of an artifact in NORC reporting. In many cases, a family total for nonprescription medicine had to be arbitrarily divided evenly among family members by NORC. On NHS self-enumeration interviews this was not so; thus many more "zero" expenditure discrepancies resulted (table 8).

Dental Expenses

Over one-third of all persons reported some dental expenses with the average net frequency interval difference between NHS and NORC interviews amounting to only 1 percent. Only minor differences are noted in table 9 for the different types of NHS interviews.

Other Health Expenses

Other health expenses included such items as eyeglasses, hearing aids, crutches, braces, and other medical appliances as well as costs for nurses, chiropractors, and other practitioners without a medical degree. On the average, net frequency distributions reported to NHS and NORC were within less than 2 percent of one another.

Direct interviewing was more accurate, but the differences were small as can be seen in table 10.

GROSS DIFFERENCES IN FREQUENCY DISTRIBUTIONS OF PERSONAL HEALTH EXPENSES

Almost two-thirds of all persons reported total medical expenditures in the same class interval in both the short NHS interview and the more detailed NORC interview. Differences, as shown in table 11, were not significant between NHS direct interviews and self-enumeration.

The precise magnitude of the discrepancy between the NHS and NORC interviews for a given category of expenses was quite arbitrary. This magnitude seemed to be a function of the number and size of the class intervals employed and the shape of the expenditures distribution. Since these factors varied, comparisons as to the relative accuracy of the reporting with regard to different types of expenses would not be fruitful.

The level of agreement was artificially high for relatively infrequent types of expenses, like those for hospital care. Hence, the percents of coincident classification exclusive of the "no expense" cell of the diagonal are presented in table 11.

It is interesting to note that in table 12 only 9 percent of all persons reported to NORC and NHS total expenses which were two or more class intervals different. About one-fourth of all persons reported only one class interval difference in total health expenses. Likewise, all categories except doctor expenses showed less than 9 percent of all persons reporting two or more class interval differences. Clearly, most of the discrepancies reported to NHS on the short interview were inaccuracies involving only one class interval difference.

Details on gross differences in reported health expenses for all six categories of expenses are shown in Appendix II.

REPORTING OF PERSONAL HEALTH EXPENSES IN RELATION TO PERSONAL CHARACTERISTICS

In the discussion on net and gross differences in reported frequency distributions of personal

Table 7. Net frequency distributions of doctor expenses reported to NHS and NORC, by intervals of expenditure: 1960

NHS intervals of expenditure	NORC	NHS	Difference
<u>All persons, 1,203 respondents</u>			
Total-----	100.0	100.0	¹ 1.1
No expense-----	44.3	44.5	+0.2
\$1-24-----	31.3	28.1	-3.2
\$25-49-----	9.3	10.7	+1.4
\$50-99-----	6.8	7.3	+0.5
\$100-199-----	5.6	5.7	+0.1
\$200+-----	2.7	3.7	+1.0
<u>Direct interview, 586 respondents</u>			
Total-----	100.0	100.0	¹ 0.5
No expense-----	40.8	40.0	-0.8
\$1-24-----	32.4	32.1	-0.3
\$25-49-----	10.5	10.2	-0.3
\$50-99-----	7.0	7.9	+0.9
\$100-199-----	6.6	6.6	-
\$200+-----	2.7	3.2	+0.5
<u>Self-enumeration, 617 respondents</u>			
Total-----	100.0	100.0	¹ 2.0
No expense-----	47.8	48.8	+1.0
\$1-24-----	30.3	24.3	-6.0
\$25-49-----	7.9	11.2	+3.3
\$50-99-----	6.7	6.8	+0.1
\$100-199-----	4.7	4.7	-
\$200+-----	2.6	4.2	+1.6
<u>Self-enumeration—passed edit, 437 respondents</u>			
Total-----	100.0	100.0	¹ 1.7
No expense-----	46.9	49.2	+2.3
\$1-24-----	29.3	24.3	-5.0
\$25-49-----	10.1	12.1	+2.0
\$50-99-----	7.6	7.5	-0.1
\$100-199-----	4.1	4.6	+0.5
\$200+-----	2.0	2.3	+0.3
<u>Self-enumeration—failed edit, 180 respondents</u>			
Total-----	100.0	100.0	¹ 3.9
No expense-----	50.0	47.7	-2.3
\$1-24-----	32.8	24.5	-8.3
\$25-49-----	2.8	8.9	+6.1
\$50-99-----	4.4	5.0	+0.6
\$100-199-----	6.1	5.0	-1.1
\$200+-----	3.9	8.9	+5.0

¹Total average difference.

Table 8. Net frequency distributions of medicine expenses reported to NHS and NORC, by intervals of expenditure: 1960

NHS intervals of expenditure	NORC	NHS	Difference
<u>All persons, 1,203 respondents</u>			
Total-----	100.0	100.0	¹ 1.4
Under \$25-----	73.8	76.5	+2.7
\$25-49-----	14.4	11.8	-2.6
\$50-99-----	7.6	7.5	-0.1
\$100+-----	4.2	4.2	-
<u>Direct interview, 586 respondents</u>			
Total-----	100.0	100.0	¹ 1.3
Under \$25-----	73.7	75.4	+1.7
\$25-49-----	15.0	12.8	-2.2
\$50-99-----	6.5	7.4	+0.9
\$100+-----	4.8	4.4	-0.4
<u>Self-enumeration, 617 respondents</u>			
Total-----	100.0	100.0	¹ 2.0
Under \$25-----	73.9	77.4	+3.5
\$25-49-----	13.8	10.9	-2.9
\$50-99-----	8.8	7.6	-1.2
\$100+-----	3.5	4.1	+0.6
<u>Self-enumeration--passed edit, 437 respondents</u>			
Total-----	100.0	100.0	¹ 1.2
Under \$25-----	75.3	77.1	+1.8
\$25-49-----	13.3	11.5	-1.8
\$50-99-----	8.9	8.2	-0.7
\$100+-----	2.5	3.2	+0.7
<u>Self-enumeration--failed edit, 180 respondents</u>			
Total-----	100.0	100.0	¹ 3.8
Under \$25-----	70.6	78.3	+7.7
\$25-49-----	15.0	9.5	-5.5
\$50-99-----	8.3	6.1	-2.2
\$100+-----	6.1	6.1	-

¹Total average difference.

Table 9. Net frequency distributions of dental expenses reported to NHS and NORC, by intervals of expenditure: 1960

NHS intervals of expenditure	NORC	NHS	Difference
<u>All persons, 1,203 respondents</u>			
Total-----	100.0	100.0	¹ 1.3
No expense-----	64.3	64.3	-
\$1-24-----	20.5	17.8	-2.7
\$25-49-----	6.3	8.7	+2.4
\$50-99-----	4.2	3.7	-0.5
\$100+-----	4.7	5.5	+0.8
<u>Direct interview, 586 respondents</u>			
Total-----	100.0	100.0	¹ 1.7
No expense-----	64.0	65.0	+1.0
\$1-24-----	21.9	18.3	-3.6
\$25-49-----	6.3	7.8	+1.5
\$50-99-----	4.4	3.8	-0.6
\$100+-----	3.4	5.1	+1.7
<u>Self enumeration, 617 respondents</u>			
Total-----	100.0	100.0	¹ 1.3
No expense-----	64.5	63.7	-0.8
\$1-24-----	19.3	17.3	-2.0
\$25-49-----	6.3	9.6	+3.3
\$50-99-----	4.1	3.6	-0.5
\$100+-----	5.8	5.8	-
<u>Self-enumeration--passed edit, 437 respondents</u>			
Total-----	100.0	100.0	¹ 1.7
No expense-----	63.4	62.9	-0.5
\$1-24-----	17.8	15.6	-2.2
\$25-49-----	7.4	11.2	+3.8
\$50-99-----	5.0	3.4	-1.6
\$100+-----	6.4	6.9	+0.5
<u>Self-enumeration failed edit, 180 respondents</u>			
Total-----	100.0	100.0	¹ 1.6
No expense-----	67.2	65.5	-1.7
\$1-24-----	22.8	21.7	-1.1
\$25-49-----	3.9	5.6	+1.7
\$50-99-----	1.7	3.9	+2.2
\$100+-----	4.4	3.3	-1.1

¹Total average difference.

Table 10. Net frequency of other personal health expenses reported to NHS and NORC, by intervals of expenditure: 1960

NHS intervals of expenditure	NORC	NHS	Difference
<u>All persons, 1,203 respondents</u>			
Total-----	100.0	100.0	¹ 1.6
No expense-----	78.0	81.6	+3.6
\$1-24-----	9.5	6.3	-3.2
\$25-49-----	8.5	7.8	-0.7
\$50-99-----	3.1	3.3	+0.2
\$100+-----	0.9	1.0	+0.1
<u>Direct interview, 586 respondents</u>			
Total-----	100.0	100.0	¹ 1.2
No expense-----	78.8	81.7	+2.9
\$1-24-----	8.7	6.5	-2.2
\$25-49-----	7.7	7.5	-0.2
\$50-99-----	3.4	3.1	-0.3
\$100+-----	1.4	1.2	-0.2
<u>Self-enumeration, 617 respondents</u>			
Total-----	100.0	100.0	¹ 2.0
No expense-----	77.3	81.5	+4.2
\$1-24-----	10.2	6.2	-4.0
\$25-49-----	9.2	8.1	-1.1
\$50-99-----	2.8	3.4	+0.6
\$100+-----	0.5	0.8	+0.3
<u>Self-enumeration--passed edit, 437 respondents</u>			
Total-----	100.0	100.0	¹ 2.5
No expense-----	75.9	82.2	+6.3
\$1-24-----	10.3	5.9	-4.4
\$25-49-----	9.6	8.7	-0.9
\$50-99-----	3.7	2.7	-1.0
\$100+-----	0.5	0.5	-
<u>Self-enumeration--failed edit, 180 respondents</u>			
Total-----	100.0	100.0	¹ 2.2
No expense-----	80.6	80.0	-0.6
\$1-24-----	10.0	6.7	-3.3
\$25-49-----	8.3	6.7	-1.6
\$50-99-----	0.6	5.0	+4.4
\$100+-----	0.5	1.6	+1.1

¹Total average difference.

Table 11. Comparison of personal health expenses reported to NORC and NHS according to type of NHS interview and level of agreement, by type of expenditure: 1960

Type of NHS interview and level of agreement	Type of expenditure						
	Total	Hospital		Doctor	Medicine	Dental	Other
		Over-night	Not over-night				
<u>Total</u>	Percent distribution						
Same class interval-----	63.2	95.3	92.1	62.6	75.4	81.1	84.2
NHS greater-----	19.9	2.8	6.2	20.7	11.3	10.7	6.0
NHS less-----	16.9	1.9	1.7	16.7	13.3	8.2	9.8
<u>NHS direct interview</u>							
Same class interval-----	63.8	95.9	92.9	62.8	75.5	80.6	85.3
NHS greater-----	20.1	2.4	5.2	20.2	11.6	10.9	4.7
NHS less-----	16.1	1.7	1.9	17.0	12.9	8.5	10.0
<u>NHS self-enumeration</u>							
Same class interval-----	62.6	94.6	91.6	62.8	75.1	81.9	83.1
NHS greater-----	19.7	3.2	7.1	21.0	11.3	10.4	7.1
NHS less-----	17.7	2.2	1.3	16.2	13.6	7.7	9.8
<u>Adjustment for no expense all persons</u>							
No expenses-NORC-NHS-----	1	89.6	90.9	34.0	1	58.9	73.8
Same class interval with expenses-----	1	5.7	1.2	28.6	1	22.2	10.4
Different class interval with expenses--	1	4.7	7.9	37.4	1	18.9	15.8

¹Because of the combination of the "no expense" and "S1-24" class intervals, a meaningful adjustment is not possible for the "total" and "medicine" categories.

Table 12. Percent of persons according to the number of class interval differences and level of agreement in personal health expenses reported to NHS and NORC, by type of expenditure: 1960

Class interval differences and level of agreement	Type of expenditure						
	Total	Hospital		Doctor	Medicine	Dental	Other
		Over-night	Not over-night				
<u>Total</u>	Percent						
<u>One class interval difference from NORC</u>							
Total-----	27.7	3.4	4.5	27.9	18.5	14.5	8.8
NHS greater-----	15.5	2.2	3.3	15.4	8.5	8.0	2.7
NHS less-----	12.2	1.2	1.2	12.5	10.0	6.5	6.1
<u>Two or more class interval differences from NORC</u>							
Total-----	9.1	1.3	3.4	9.5	6.1	4.4	7.0
NHS greater-----	4.4	0.6	2.9	5.3	2.8	2.7	3.3
NHS less-----	4.7	0.7	0.5	4.2	3.3	1.7	3.7

health expenditures, the offsetting of overstatements by understatements of expenses was noted. While this tendency to balance errors in reporting on the short interviews produced desirable overall accuracy, it is important in evaluating the expenses of different population groups to be certain that there are no systematic biases in reporting related characteristics to specific personal characteristics such as sex, age, or education. An analysis of these items which will be presented in this section, revealed no serious biases related to these factors. The class intervals employed for each of the expense categories in this analysis were the same as those which appear in the corresponding sections shown in Appendix II.

Sex

The degree of consistency between the class intervals of the personal health expenditures reported to NHS and those reported to NORC was generally about the same for males and females. For the NHS direct and self-enumeration interviews combined, a difference in the level of class interval coincidence of as much as 5 percent occurred only in the case of expenses for doctor care (table 13). This difference was to some extent an artifact of the lower proportion of females who reported zero expenditures for doctor care.

Age

As can be seen from table 14, there was, in general, little systematic variation between individuals of different ages in the degree of class interval coincidence of the expenses reported for them. A higher level of utilization of the particular type of service by one age group accounted for most exceptions. For instance, there was less agreement between the dental expenses reported to NORC and those reported to NHS for the 15-34 age group than for the other age groups. Thus in the 15-34 year age group, a lower proportion of persons reported zero dental expenses, and there was less probability of coincidence for the "zero-zero" category of reporting in the NHS and NORC interviews.

One result for which there was no ready explanation was the exceptionally low coincidence level of the doctor expenses reported for the oldest age group in the self-enumeration sample.

Since a disproportionate number of the discrepancies appeared to have come from the "problem families"—those who originally failed edit and those who failed to return the self-enumeration form and therefore had to be interviewed by telephone—the finding provided no basis for the improvement of the self-enumeration form itself. It was not clear whether the respondents were basically unreliable or whether questioning by the NHS supervisor of the original self-enumeration response led to an inflation of the expense figures (or greater accuracy than the NORC criterion interview figure). In any event, the discrepancy even for this deviant group did not appear to be so large as to present an insurmountable problem.

Because of the high level of interest in the health expenses for those persons 65 years of age or older, separate tabulations were made for the 55-64 year group and the 65 and over group. These two groups did not appear to differ appreciably in their coincidence level. They have been combined in table 14 because of the extremely small numbers of cases in each of these age-class intervals (112 persons, 55-64 years of age; 103 persons, 65 years and over).

Education of Family Head

Table 15 shows the comparisons between the personal health expenses reported to NHS and those reported to NORC, each individual being classified in terms of the educational attainment of the head of the family of which he was a member. The pattern of response coincidence was quite erratic—so much so that it defied a ready interpretation.

The differences in coincidence level between subgroups were considerably larger when the classification was on the basis of the educational attainment of the head of the family than when it was on the basis of the individual's sex and age. This may have been due to the fact that the sampling variance of the differences between subgroups was probably considerably greater when classified by a characteristic of the family head (or the family as a whole) than when classified by a characteristic of the individual. In the former case all the individuals in a given family, and therefore all the individuals for whom a given informant reported, appeared in the same sub-

Table 13. Comparison of NORC and NHS personal health expenses according to type of expenditure and level of agreement, by sex: 1960

Type of expenditure and level of agreement	Male	Female
<u>TOTAL EXPENDITURE</u>		
<u>Total</u>		
Percent distribution		
Number of respondents ¹ -----	573	630
Same class interval-----	62.0	64.1
NHS greater-----	19.7	20.2
NHS less-----	18.3	15.7
<u>NHS direct interview</u>		
Number of respondents ¹ -----	272	312
Same class interval-----	62.5	64.7
NHS greater-----	19.1	21.2
NHS less-----	18.4	14.1
<u>NHS self-enumeration</u>		
Number of respondents ¹ -----	301	318
Same class interval-----	61.5	63.5
NHS greater-----	20.2	19.2
NHS less-----	18.3	17.3
<u>HOSPITAL OVERNIGHT</u>		
<u>Total</u>		
Same class interval-----	95.3	95.1
NHS greater-----	2.6	3.0
NHS less-----	2.1	1.9
<u>NHS direct interview</u>		
Same class interval-----	96.3	95.5
NHS greater-----	1.8	2.9
NHS less-----	1.9	1.6
<u>NHS self-enumeration</u>		
Same class interval-----	94.4	94.7
NHS greater-----	3.3	3.1
NHS less-----	2.3	2.2
<u>HOSPITAL—NOT OVERNIGHT</u>		
<u>Total</u>		
Same class interval-----	91.6	92.7
NHS greater-----	6.5	5.9
NHS less-----	1.9	1.4
<u>NHS direct interview</u>		
Same class interval-----	90.8	94.6
NHS greater-----	6.6	3.8
NHS less-----	2.6	1.6
<u>NHS self-enumeration</u>		
Same class interval-----	92.4	90.9
NHS greater-----	6.3	7.9
NHS less-----	1.3	1.2

¹Percentages for each type of expenditure are based on the same number of respondents throughout this table.

Table 13. Comparison of NORC and NHS personal health expenses according to type of expenditure and level of agreement, by sex: 1960—Con.

Type of expenditure and level of agreement	Male	Female
<u>DOCTOR EXPENSES</u>		
<u>Total</u>		
Same class interval-----	65.1	60.5
NHS greater-----	17.1	24.0
NHS less-----	17.8	15.5
<u>NHS direct interview</u>		
Same class interval-----	64.7	61.2
NHS greater-----	15.1	24.7
NHS less-----	20.2	14.1
<u>NHS self-enumeration</u>		
Same class interval-----	65.5	59.7
NHS greater-----	18.9	23.3
NHS less-----	15.6	17.0
<u>MEDICINE EXPENSES</u>		
<u>Total</u>		
Same class interval-----	75.6	74.9
NHS greater-----	10.5	12.7
NHS less-----	13.9	12.4
<u>NHS direct interview</u>		
Same class interval-----	76.9	74.7
NHS greater-----	9.9	13.1
NHS less-----	13.2	12.2
<u>NHS self-enumeration</u>		
Same class interval-----	75.1	75.2
NHS greater-----	10.0	12.3
NHS less-----	14.9	12.5
<u>DENTAL EXPENSES</u>		
<u>Total</u>		
Same class interval-----	80.6	81.6
NHS greater-----	10.7	10.8
NHS less-----	8.7	7.6
<u>NHS direct interview</u>		
Same class interval-----	77.6	83.3
NHS greater-----	12.5	9.3
NHS less-----	9.9	7.4
<u>NHS self-enumeration</u>		
Same class interval-----	83.4	80.2
NHS greater-----	9.0	11.9
NHS less-----	7.6	7.9

Table 13. Comparison of NORC and NHS personal health expenses according to type of expenditure and level of agreement, by sex: 1960—Con.

Type of expenditure and level of agreement	Male	Female
<u>OTHER HEALTH EXPENSES</u>		
<u>Total</u>		
	Percent distribution	
Same class interval-----	85.0	83.0
NHS greater-----	5.4	6.7
NHS less-----	9.6	10.3
<u>NHS direct interview</u>		
Same class interval-----	84.2	85.9
NHS greater-----	4.4	5.1
NHS less-----	11.4	9.0
<u>NHS self-enumeration</u>		
Same class interval-----	85.7	80.2
NHS greater-----	6.3	8.2
NHS less-----	8.0	11.6

Table 14. Comparison of NORC and NHS personal health expenses according to type of expenditure and level of agreement, by age: 1960

Type of expenditure and level of agreement	Under 15	15-34	35-54	55+
<u>TOTAL EXPENDITURE</u>				
<u>Total</u>				
Number of respondents ¹ -----	385	268	335	215
Same class interval-----	63.9	63.1	62.7	62.3
NHS greater-----	19.7	18.6	21.8	19.1
NHS less-----	16.4	18.3	15.5	18.6
<u>NHS direct interview</u>				
Number of respondents ¹ -----	194	128	162	100
Same class interval-----	65.5	66.4	61.1	61.0
NHS greater-----	19.6	20.3	22.8	17.0
NHS less-----	14.9	13.3	16.1	22.0
<u>NHS self-enumeration</u>				
Number of respondents ¹ -----	191	140	173	115
Same class interval-----	62.3	60.0	64.2	63.5
NHS greater-----	19.9	17.1	20.8	20.9
NHS less-----	17.8	22.9	15.0	15.6
<u>HOSPITAL OVERNIGHT</u>				
<u>Total</u>				
Same class interval-----	93.5	95.9	96.4	95.3
NHS greater-----	4.9	2.2	0.9	2.8
NHS less-----	1.6	1.9	2.7	1.9
<u>NHS direct interview</u>				
Same class interval-----	92.8	96.9	98.1	97.0
NHS greater-----	5.7	1.5	0.0	1.0
NHS less-----	1.5	1.6	1.9	2.0
<u>NHS self-enumeration</u>				
Same class interval-----	94.2	95.0	94.8	93.9
NHS greater-----	4.2	2.9	1.7	4.3
NHS less-----	1.6	2.1	3.5	1.8
<u>HOSPITAL--NOT OVERNIGHT</u>				
<u>Total</u>				
Same class interval-----	94.3	88.8	91.3	94.0
NHS greater-----	4.2	9.3	6.9	4.6
NHS less-----	1.5	1.9	1.8	1.4
<u>NHS direct interview</u>				
Same class interval-----	94.3	89.8	92.6	94.0
NHS greater-----	4.1	7.8	5.6	3.0
NHS less-----	1.6	2.4	1.8	3.0
<u>NHS self-enumeration</u>				
Same class interval-----	94.2	87.9	90.2	93.9
NHS greater-----	4.2	10.7	8.1	6.1
NHS less-----	1.6	1.4	1.7	-

¹Percentages for each type of expenditure are based on the same number of respondents throughout this table.

Table 14. Comparison of NORC and NHS personal health expenses according to type of expenditure and level of agreement, by age: 1960—Con.

Type of expenditure and level of agreement	Under 15	15-34	35-54	55+
<u>DOCTOR EXPENSES</u>				
<u>Total</u>				
Same class interval-----	63.1	62.3	64.2	59.5
NHS greater-----	21.8	22.0	18.2	21.9
NHS less-----	15.1	15.7	17.6	18.6
<u>NHS direct interview</u>				
Same class interval-----	61.9	61.7	63.0	66.0
NHS greater-----	24.7	22.7	16.7	14.0
NHS less-----	13.4	15.6	20.3	20.0
<u>NHS self-enumeration</u>				
Same class interval-----	64.4	63.6	65.3	53.9
NHS greater-----	18.8	20.0	19.7	28.7
NHS less-----	16.8	16.4	15.0	17.4
<u>MEDICINE EXPENSES</u>				
<u>Total</u>				
Same class interval-----	76.1	77.2	77.6	68.4
NHS greater-----	10.6	9.0	12.2	14.4
NHS less-----	13.3	13.8	10.2	17.2
<u>NHS direct interview</u>				
Same class interval-----	74.2	83.6	77.2	66.0
NHS greater-----	12.4	8.6	11.1	15.0
NHS less-----	13.4	7.8	11.7	19.0
<u>NHS self-enumeration</u>				
Same class interval-----	78.0	71.4	78.0	70.4
NHS greater-----	8.9	9.3	13.3	13.9
NHS less-----	13.1	19.3	8.7	15.7
<u>DENTAL EXPENSES</u>				
<u>Total</u>				
Same class interval-----	84.9	71.3	84.5	81.4
NHS greater-----	7.0	16.4	9.8	11.6
NHS less-----	8.1	12.3	5.7	7.0
<u>NHS direct interview</u>				
Same class interval-----	86.6	71.1	81.5	79.0
NHS greater-----	7.7	16.4	9.2	13.0
NHS less-----	5.7	12.5	9.3	8.0
<u>NHS self-enumeration</u>				
Same class interval-----	83.2	71.4	87.3	83.5
NHS greater-----	6.3	16.4	10.4	10.4
NHS less-----	10.5	12.2	2.3	6.1

Table 14. Comparison of NORC and NHS personal health expenses according to type of expenditure and level of agreement, by age: 1960—Con.

Type of expenditure and level of agreement	Under 15	15-34	35-54	55+
<u>OTHER HEALTH EXPENSES</u>				
<u>Total</u>				
	Percent distribution			
Same class interval-----	90.4	85.1	78.5	79.5
NHS greater-----	3.1	5.6	8.7	7.9
NHS less-----	6.5	9.3	12.8	12.6
<u>NHS direct interview</u>				
Same class interval-----	91.8	83.6	79.0	84.0
NHS greater-----	2.0	6.2	8.0	3.0
NHS less-----	6.2	10.2	13.0	13.0
<u>NHS self-enumeration</u>				
Same class interval-----	89.0	86.4	78.1	75.7
NHS greater-----	4.2	5.0	9.2	12.2
NHS less-----	6.8	8.6	12.7	12.1

Table 15. Comparison of NORC and NHS reports of personal health expenses according to type of expenditure and level of agreement, by education of family head: 1960

Type of expenditure and level of agreement	Elementary	High school	College
<u>TOTAL EXPENDITURE</u>			
<u>Total</u>			
Number of respondents ¹ -----	426	516	229
Same class interval-----	64.5	62.6	61.6
NHS greater-----	18.1	20.3	22.7
NHS less-----	17.4	17.1	15.7
<u>NHS direct interview</u>			
Number of respondents ¹ -----	206	252	110
Same class interval-----	61.2	68.2	58.2
NHS greater-----	19.4	17.5	27.3
NHS less-----	19.4	14.3	14.5
<u>NHS self-enumeration</u>			
Number of respondents ¹ -----	220	264	119
Same class interval-----	67.7	57.2	64.7
NHS greater-----	16.8	23.1	18.5
NHS less-----	15.5	19.7	16.8
<u>HOSPITAL OVERNIGHT</u>			
<u>Total</u>			
Same class interval-----	96.5	95.5	91.7
NHS greater-----	2.1	3.1	3.5
NHS less-----	1.4	1.4	4.8
<u>NHS direct interview</u>			
Same class interval-----	97.1	96.8	90.9
NHS greater-----	1.9	2.8	2.7
NHS less-----	1.0	0.4	6.4
<u>NHS self-enumeration</u>			
Same class interval-----	95.9	94.3	92.4
NHS greater-----	2.3	3.4	4.2
NHS less-----	1.8	2.3	3.4
<u>HOSPITAL—NOT OVERNIGHT</u>			
<u>Total</u>			
Same class interval-----	93.2	93.2	88.2
NHS greater-----	4.7	5.4	10.5
NHS less-----	2.1	1.4	1.3
<u>NHS direct interview</u>			
Same class interval-----	93.7	92.9	91.8
NHS greater-----	3.9	5.5	6.4
NHS less-----	2.4	1.6	1.8
<u>NHS self-enumeration</u>			
Same class interval-----	92.7	93.6	84.9
NHS greater-----	5.5	5.3	14.3
NHS less-----	1.8	1.1	0.8

¹Percentages for each type of expenditure are based on the same number of respondents throughout this table. Number of respondents in this table excludes those where education of head was unknown.

Table 15. Comparison of NORC and NHS reports of personal health expenses according to type of expenditure and level of agreement, by education of family head: 1960—Con.

Type of expenditure and level of agreement	Elementary	High school	College
<u>DOCTOR EXPENSES</u>			
<u>Total</u>			
	Percent distribution		
Same class interval-----	66.7	64.0	52.0
NHS greater-----	17.6	21.5	24.4
NHS less-----	15.7	14.5	23.6
<u>NHS direct interview</u>			
Same class interval-----	67.0	67.5	46.4
NHS greater-----	16.5	19.0	30.0
NHS less-----	16.5	13.5	23.6
<u>NHS self-enumeration</u>			
Same class interval-----	66.4	60.6	59.7
NHS greater-----	18.6	23.9	19.3
NHS less-----	15.0	15.5	21.0
<u>MEDICINE EXPENSES</u>			
<u>Total</u>			
Same class interval-----	76.3	73.0	77.7
NHS greater-----	11.7	12.8	8.3
NHS less-----	12.0	14.2	14.0
<u>NHS direct interview</u>			
Same class interval-----	70.4	79.8	77.3
NHS greater-----	14.6	11.5	6.4
NHS less-----	15.0	8.7	16.3
<u>NHS self-enumeration</u>			
Same class interval-----	81.8	66.7	78.2
NHS greater-----	9.1	14.0	10.1
NHS less-----	9.1	19.3	11.7
<u>DENTAL EXPENSES</u>			
<u>Total</u>			
Same class interval-----	81.9	82.6	74.2
NHS greater-----	10.8	9.1	15.3
NHS less-----	7.3	8.3	10.5
<u>NHS direct interview</u>			
Same class interval-----	78.6	86.5	68.2
NHS greater-----	11.2	6.3	21.8
NHS less-----	10.2	7.2	10.0
<u>NHS self-enumeration</u>			
Same class interval-----	85.0	78.8	79.8
NHS greater-----	10.5	11.7	9.3
NHS less-----	4.5	9.5	10.9

Table 15. Comparison of NORC and NHS reports of personal health expenses according to type of expenditure and level of agreement, by education of family head: 1960—Con.

Type of expenditure and level of agreement	Elementary	High school	College
<u>OTHER HEALTH EXPENSES</u>			
<u>Total</u>			
	Percent distribution		
Same class interval-----	84.3	84.3	83.4
NHS greater-----	4.9	6.0	7.9
NHS less-----	10.8	9.7	8.7
<u>NHS direct interview</u>			
Same class interval-----	84.9	85.7	84.5
NHS greater-----	4.9	4.0	5.5
NHS less-----	10.2	10.3	10.0
<u>NHS self-enumeration</u>			
Same class interval-----	83.6	83.0	82.4
NHS greater-----	5.0	8.0	10.1
NHS less-----	11.4	9.0	7.5

group, while in the latter case they were likely to appear in several subgroups. This hypothesis, of course, suggests a substantial positive intraclass correlation of reporting discrepancies within families, a not too unlikely possibility.

Among the unexplainable results is the extreme unreliability of the NHS direct interview reports of doctor and dentist expenses for individuals in families headed by someone who has completed at least 1 year of college. While this was in part an artifact of the more widespread use of physician and dental services by persons in families headed by individuals with a college education than by persons in families headed by someone with less education, this factor could hardly account for the entire discrepancy. If it did, one would expect a similar pattern of deviation in the self-enumeration cases, however, this did not occur. As unsatisfying as such an explanation is, it would appear most prudent to view the poor performance of the college families on the NHS direct interview as a sampling anomaly rather than as a substantive finding which necessitates special modification of the direct interview form.

ANALYSIS OF MAJOR DISCREPANCIES

For the purposes of detailed analysis, it was desirable to isolate a subgroup of individuals for which the two sets of expense reports were particularly inconsistent. It was felt that an examination of such cases would provide leads as to how the short interview forms might be improved.

A "major discrepancy" in any particular category of expense was defined as a difference of two or more class intervals between the NHS and NORC interviews. In addition, differences of \$100 or more within the highest (open-ended) class interval were also treated as major discrepancies. Those individuals for whom there was at least one major discrepancy were drawn into the special analysis. Many individuals had several major discrepancies—one with respect to the grand total and one with respect to each of several different expense components. There were other individuals, of course, for whom there were major discrepancies with respect to two or more expense com-

ponents but no discrepancy with respect to total expenses due to the compensating character of the errors.

Table 16 presents a distribution of the 348 cases which involved at least one category with a major discrepancy. The 170 cases in table 17 are those whose total expenditures reported to NHS were higher than those reported to NORC by two intervals or \$100 more in the open-ended interval. Similarly, the 161 cases distributed in table 18 reported lower expenses to NHS than to NORC. Also shown in table 18 are 17 cases with total expenses reported in the same interval in both interviews but with a major discrepancy in at least two categories that counterbalanced each other in the total expense category.

Considering only the discrepancy cases reporting greater expenditures to NHS (table 17), the categories that contained the greater amount of overstatements were doctor expenses (67 percent), medicine costs (44 percent), and other health expenses (21 percent). The patterns were the same for direct interviewing and for self-enumeration.

Of the discrepancy cases reporting less expenditure to NHS (table 18), the leading categories were medicine costs (59 percent), doctor expenses (46 percent), and other health expenses (30 percent). As in the overstatement group above, no large differences were observed between the patterns of discrepancy in direct interview and self-enumeration reports.

A detailed examination of each category of expenditure provides some insight into the reason for these discrepancies. In general, however, the overstatements reflected exaggerated estimates given in response to the abbreviated questionnaire, while the understatements were attributable to omissions of items which were elicited in the more detailed questions. Each of the 348 discrepant cases was individually examined to determine the reasons for NHS-NORC differences, and each component of health expense is analyzed separately below.

Overnight Hospitalizations

Of the overstatements for overnight hospital expenses in the short interviews, exactly one-half of the major discrepant cases were apparently due to general exaggeration of charges. These in-

Table 16. Distribution of all major discrepancy cases according to type of expenditure and level of agreement, by type of interview: 1960

Type of expenditure and level of agreement	Type of interview					
	Total		NHS direct		NHS self-enumeration	
	Number	Percent	Number	Percent	Number	Percent
<u>Total expenditure</u>						
Total ¹ -----	348	100	155	100	193	100
NHS greater-----	170	49	78	50	92	48
NHS less-----	161	46	71	46	90	46
Same class interval-----	17	5	6	4	11	6
<u>Hospital overnight</u>						
NHS greater-----	32	9	12	8	20	11
NHS less-----	28	8	12	8	16	8
Same class interval-----	21	6	7	4	14	7
No expense-----	267	77	124	80	143	74
<u>Hospital--not overnight</u>						
NHS greater-----	43	12	13	8	30	16
NHS less-----	10	3	3	2	7	3
Same class interval-----	8	2	4	3	4	2
No expense-----	287	83	135	87	152	79
<u>Doctor expenses</u>						
NHS greater-----	135	39	57	37	78	41
NHS less-----	90	26	49	32	41	21
Same class interval-----	65	19	24	15	41	21
No expense-----	58	16	25	16	33	17
<u>Medicine expenses</u>						
NHS greater-----	94	27	44	28	50	26
NHS less-----	126	36	56	36	70	36
Same class interval-----	105	30	46	30	59	31
No expense-----	23	7	9	6	14	7
<u>Dental expenses</u>						
NHS greater-----	56	16	26	17	30	16
NHS less-----	34	10	12	8	22	11
Same class interval-----	89	26	39	25	50	26
No expense-----	169	48	78	50	91	47
<u>Other health expenses</u>						
NHS greater-----	46	13	18	11	28	14
NHS less-----	67	19	37	24	30	16
Same class interval-----	35	10	12	8	23	12
No expense-----	200	58	88	57	112	58

¹Percentages for each type of expenditure are based on the same number of respondents throughout this table.

Table 17. Distribution of major discrepancy cases in which NHS was greater than NORC in total expenses according to type of expenditure and level of agreement, by type of interview: 1960

Type of expenditure and level of agreement	Type of interview					
	Total		NHS direct		NHS self-enumeration	
	Number	Percent	Number	Percent	Number	Percent
Total ¹ -----	170	100	78	100	92	100
<u>Hospital overnight</u>						
NHS greater-----	29	17	11	14	18	20
NHS less-----	5	3	3	4	2	2
Same class interval-----	8	5	2	3	6	6
No expense-----	128	75	62	79	66	72
<u>Hospital--not overnight</u>						
NHS greater-----	32	19	10	13	22	24
NHS less-----	5	3	2	3	3	3
Same class interval-----	3	2	-	-	3	3
No expense-----	130	76	66	84	64	70
<u>Doctor expenses</u>						
NHS greater-----	113	67	52	67	61	66
NHS less-----	10	6	5	6	5	6
Same class interval-----	26	15	11	14	15	16
No expense-----	21	12	10	13	11	12
<u>Medicine expenses</u>						
NHS greater-----	75	44	36	46	39	42
NHS less-----	24	14	10	13	14	15
Same class interval-----	55	33	24	31	31	34
No expense-----	16	9	8	10	8	9
<u>Dental expenses</u>						
NHS greater-----	42	25	21	27	21	23
NHS less-----	3	2	-	-	3	3
Same class interval-----	48	28	25	32	23	25
No expense-----	77	45	32	41	45	49
<u>Other health expenses</u>						
NHS greater-----	35	21	14	18	21	23
NHS less-----	17	10	8	10	9	10
Same class interval-----	14	8	6	8	8	9
No expense-----	104	61	50	64	54	58

¹Percentages for each type of expenditure are based on the same number of respondents throughout this table.

Table 18. Distribution of major discrepancy cases in which NHS was less than or the same as NORC in total expenses according to type of expenditure and level of agreement, by type of interview: 1960

Type of expenditure and level of agreement	NHS interview less in total expense						NHS and NORC interview same in total expense ¹		
	Total		Direct		Self-enumeration		Total	Direct	Self-enumeration
	Number	Percent	Number	Percent	Number	Percent			
Total ² -----	161	100	71	100	90	100	17	6	11
<u>Hospital overnight</u>									
NHS greater-----	2	1	1	1	1	1	1	-	1
NHS less-----	21	13	9	13	12	13	2	-	2
Same class interval-----	12	8	5	7	7	8	1	-	1
No expense-----	126	78	56	79	70	78	13	6	7
<u>Hospital--not overnight</u>									
NHS greater-----	10	6	3	4	7	8	1	-	1
NHS less-----	4	3	1	1	3	3	1	-	1
Same class interval-----	5	3	4	6	1	1	-	-	-
No expense-----	142	88	63	89	79	88	15	6	9
<u>Doctor expenses</u>									
NHS greater-----	13	8	3	4	10	11	9	2	7
NHS less-----	74	46	42	59	32	36	6	2	4
Same class interval-----	37	23	11	16	26	29	2	2	-
No expense-----	37	23	15	21	22	24	-	-	-
<u>Medicine expenses</u>									
NHS greater-----	13	8	6	8	7	8	6	2	4
NHS less-----	94	59	43	60	51	57	8	3	5
Same class interval-----	47	29	21	30	26	29	3	1	2
No expense-----	7	4	1	2	6	6	-	-	-
<u>Dental expenses</u>									
NHS greater-----	10	6	4	6	6	6	4	1	3
NHS less-----	27	17	11	15	16	18	4	1	3
Same class interval-----	39	24	14	20	25	28	2	-	2
No expense-----	85	53	42	59	43	48	7	4	3
<u>Other health expenses</u>									
NHS greater-----	6	4	1	2	5	6	5	3	2
NHS less-----	48	30	29	41	19	21	2	-	2
Same class interval-----	19	12	6	8	13	14	2	-	2
No expense-----	88	54	35	49	53	59	8	3	5

¹No percentages shown because totals are too small.

²Percentages for each type of expenditure are based on the same number of respondents throughout this table.

dividuals for whom charges were exaggerated are compensated for by an almost equal number for whom charges were underestimated (16 and 13 individuals, respectively). The two most frequent specific causes for overstatement were wrong data and duplication of charges. NORC screened for the reported date of last hospitalization and was able to find five cases where the hospitalization occurred prior to the survey year. In four cases, costs for hospital room and board and miscellaneous hospital charges were included more than once, resulting in the inflation of the total estimate of costs.

A study of the 28 understatements of hospital expense showed that 29 percent were found to have forgotten about a single hospitalization, 18 percent forgot the second or third hospitalization, and 7 percent included the overnight costs in the hospitalization not-overnight category (table 19).

Not-Overnight Hospitalization

This category was originally separated from overnight hospitalizations to avoid being overlooked if not specifically mentioned. Actual field experience, however, indicated that the respondents were often confused about the meaning of this item. As shown in table 20, 28 percent of the overstatements erroneously included regular doctor visits, 7 percent included overnight hospitalization, 2 percent mistakenly included nondoctor care, and 21 percent included the wrong date for the expense.

The cost of not-overnight hospitalizations was included under other categories in 70 percent of the understatements—30 percent doctor expense, 20 percent medicine, and 20 percent overnight hospitalizations. Of course, the numbers of cases were small, and this must be considered in evaluating the percentages.

Doctor Expenses

Over 70 percent of all overstatements of doctor expenses could not be attributed to anything more than general overstatement. Of the remaining specific reasons, free care and wrong date were the most numerous.

The major reasons for understatements of doctor expenses were the omissions of serious illnesses. In 26 percent of the understatements a

major condition was forgotten; in 23 percent a chronic illness. Forgetting to report visits to hospitals and office visits each accounted for 17 percent of the understatements. Omission of minor illnesses and charges for anesthetists and surgeons each accounted for about 10 percent. These data are presented in table 21.

Medicine Expenses

Virtually all of the overstatement in medicine expense appeared to be general exaggeration. Free care and errors in allocating family costs were other reasons for overstatement.

Understatements, however, were due to more specific reasons. Almost one-third were due to omission of a major condition which also required special medication. About one-fifth of all understatements were due to forgetting general medicines and tonics or failing to allocate general medicines to all family members. Other reasons are presented in table 22.

Dental Expenses

As in the case of doctor and medicine expenses, overstatements of dental expenses were largely general exaggerations of cost, accounting for 91 percent of the differences.

Understatements can be attributed to omissions of general examinations in 65 percent of the cases, to forgetting about fillings in 62 percent, and to omission of treatments, extraction, and bridgework in lesser numbers of cases. These details are listed in table 23.

All Other Health Expenses

The biggest single reason for both overstating and understating this category of expense was the mistake made in the cost of eyeglasses (15 and 72 percent, respectively). Omission of nondoctor care amounted to an additional 15 percent of the understatements and the omission of other medical appliances accounted for the remaining underreporting. These details are presented in table 24.

Table 19. Reasons for major discrepancies in overnight hospitalizations: 1960

Discrepancy	Number	Percent
Total overstatements-----	32	100
Wrong date-----	5	16
Duplication of charges-----	4	12
Included outpatient care-----	2	6
Included surgeon fee-----	2	6
Error in respondent-----	1	3
Included doctor visits-----	1	3
Included medicines-----	1	3
General error in estimate-----	16	50
Total understatements-----	28	100
Omitted only hospitalization-----	8	29
Omitted second or more hospitalizations-----	5	18
Reported as not-overnight stay-----	2	7
General error in estimate-----	13	46

Table 20. Reasons for major discrepancies in not-overnight hospitalizations: 1960

Discrepancy	Number	Percent
Total overstatements ¹ -----	43	100
Included doctor office visits-----	12	28
Wrong date-----	9	21
Included overnight stay-----	3	7
Included free care-----	3	7
Wrong respondent-----	2	5
Included nondoctor care-----	1	2
General error in estimate-----	13	30
Total understatements ¹ -----	10	100
Included in doctors-----	3	30
Included in medicine-----	2	20
Included in overnight stay-----	2	20
Omitted only hospitalization-----	1	10
Omitted lab tests-----	1	10
Error in other treatments-----	1	10

¹Total refers to number of cases although more than one reason may be given for the discrepancy. Therefore, individual numbers and percentages may add to more than their totals.

Table 21. Reasons for major discrepancies in doctor expenses: 1960

Discrepancy	Number	Percent
Total overstatements ¹ -----	135	100
Included free care-----	15	11
Wrong date-----	8	6
Wrong respondent-----	4	3
Included medicine-----	4	3
Included outpatient clinic-----	4	3
Included current pregnancy-----	3	2
Duplication of visits-----	1	1
Included nondoctor-----	1	1
Error in home visits-----	1	1
Error in office visits-----	1	1
General error in estimate-----	96	71
Total understatements ¹ -----	90	100
Omitted major condition-----	23	26
Omitted chronic illness-----	21	23
Omitted visits in hospital-----	15	17
Omitted office visits-----	15	17
Omitted minor illnesses-----	9	10
Omitted anesthetists-----	8	9
Omitted surgeon-----	8	9
Omitted tests and treatments pre- and post-hospital care-----	5	6
Care included in hospital outpatient-----	3	3
Omitted insurance payment-----	2	2
Omitted clinic visits in hospital cases-----	2	2
General error in estimate-----	4	4

¹Total refers to number of cases although more than one reason may be given for the discrepancy. Therefore, individual numbers and percentages may add to more than their totals.

Table 22. Reasons for major discrepancies in medicine expenses: 1960

Discrepancy	Number	Percent
Total overstatements ¹ -----	94	100
Free care-----	2	2
Included family total-----	1	1
Error in respondent-----	1	1
Duplication with doctor-----	1	1
Duplication with hospital-----	1	1
General error in estimate-----	90	96
Total understatements ¹ -----	119	100
Omitted major condition medicine-----	36	30
Omitted miscellaneous medicines-----	26	22
Family total not allocated-----	21	18
Omitted medicine for hospitalized condition-----	19	16
Omitted doctor suggested medicine-----	15	13
Omitted prescriptions-----	13	11
Wrong respondents-----	3	3
Wrong date-----	1	1
Included in doctor charges-----	2	2

¹Total refers to number of cases although more than one reason may be given for the discrepancy. Therefore, individual numbers and percentages may add to more than their totals.

Table 23. Reasons for major discrepancies in dental expenses: 1960

Discrepancy	Number	Percent
Total overstatements ¹ -----	56	100
Wrong respondents-----	3	5
Free care-----	2	4
Wrong dates-----	1	2
Included in doctors-----	1	2
General error in estimate-----	51	91
Total understatements ¹ -----	34	100
Omitted examination-----	22	65
Omitted fillings-----	21	62
Omitted other treatments-----	14	41
Omitted extractions-----	12	35
Omitted bridgework-----	10	29
Wrong date-----	1	3
Wrong respondent-----	2	6

¹Total refers to number of cases although more than one reason may be given for the discrepancy. Therefore, individual numbers and percentages may add to more than their totals.

Table 24. Reasons for major discrepancies in other health expenses: 1960

Discrepancy	Number	Percent
Total overstatements ¹ -----	46	100
Error in glasses-----	7	15
Free care included-----	2	4
Wrong dates-----	1	2
Wrong respondent-----	1	2
General error in estimate-----	35	76
Total understatements ¹ -----	67	100
Omitted glasses-----	48	72
Omitted nondoctor care-----	10	15
Omitted elastic hose-----	3	4
Wrong respondent-----	2	3
Omitted wheel chair-----	2	3
Omitted artificial leg-----	1	1
Omitted special corset-----	1	1
Omitted arch supports-----	1	1
Wrong date-----	1	1

¹Total refers to number of cases although more than one reason may be given for the discrepancy. Therefore, individual numbers and percentages may add to more than their totals.

III. CONCLUSIONS AND RECOMMENDATIONS

As compared with a detailed criterion interview, the short questionnaire provided reasonably accurate information on total personal health expenses and on major components of the expenses.

The quality of short-form reporting did not appear to vary from the detailed interview to such a degree as to indicate any serious bias in the estimates of expenditures by sex, age, or educational attainment of the head of the household.

Short direct interviews were slightly more accurate than self-enumerated reports. However, depending on the degree of accuracy desired, self-enumeration may be used as a reasonable substitute if direct interviewing time is limited.

In making overall estimates of health expenses, there was a general tendency for respondents to inflate estimates. Specific detailed probing reduced this general overstatement, but also added some costs which were overlooked.

Although there were substantial discrepancies in detailed comparisons, the overreporting tended to offset the underreporting so that the marginal frequency distributions and mean estimates of health expenses were not substantially different in NORC and NHS interviews.

Study of cases in which there were major discrepancies between expenses reported on the short NHS questionnaire and the detailed NORC interview indicate that NHS estimates could be improved by the measures listed below.

Consolidate not-overnight hospital outpatient and emergency care in doctor expenses.

Stress actual dates of period covered by survey.

Screen for actual date of last hospitalization to avoid errors in dates.

Probe for second and third hospitalizations during the survey year.

Use reminder probes on major conditions and chronic illnesses in connection with doctor and medicine expenses.

Use other specific reminder probes on hospital, office, anesthetist, and surgeon charges in aggregating doctor expenses.

Allocate general medicine, tonics, and vitamin costs among all family members.

Use reminder probes on dental cost question to assist recall of types of treatment.

Use a separate question on costs of eyeglasses, including any charges for examinations.

Use appropriate reminder probes for medical appliances.

The extent to which suggested additional probes are appropriate depends, again, on the degree of refinement desired relative to the problems of maintaining a short form questionnaire that is administratively practical. Although the short form tested in this study yielded reasonably accurate overall estimates, any of the above measures that could be incorporated would further refine the data.

APPENDIX I

QUESTIONNAIRES USED IN STUDY

A. Supplemental Questions Used in the National Health Survey

Two methods were used to collect the data on personal health expenditures in the initial interview of the National Health Survey in order to investigate the relative merits of data collection. In half of the households the questions were asked as a part of the direct interview while a self-enumeration questionnaire was left in the remaining half of the households.

NHS-4(a), reproduced below, was the questionnaire used in direct interview. NHS-4(b) is a reproduction of the letter and form left in each of the self-enumeration households. A separate page of questions was left for each person in the latter households in a booklet form.

B. Criterion Questionnaire Used by the National Opinion Research Center

This questionnaire was composed of three parts: the main criterion questionnaire, a hospital supplement, and a major condition supplement. Supplements were to be completed for each separate hospitalization episode and each major condition. The latter was defined as any condition which met one of the following criteria:

- a current pregnancy which did not involve hospitalization;
- surgery, bone setting, or other operations which did not involve hospitalization;
- conditions which involved expenditure of \$50 or more which did not involve hospitalization; and
- chronic illness determined on original household interview survey.

DIRECT INTERVIEW QUESTIONNAIRE

FORM NHS-4(a) (9-17-60)		COSTS FOR MEDICAL AND DENTAL CARE FOR PAST 12 MONTHS	
<p>Ask question 1 <i>only</i> for persons who were in a hospital (nursing home, sanitarium) overnight or longer during the past 12 months. Ask questions 2 - 6 for EVERYONE.</p>		<p>(Check one box): (1)</p> <input type="checkbox"/> In hospital (_____ times) <input type="checkbox"/> Not in hospital	
<p>1. (a) How much did your hospital bills come to for the (one time, two times, etc.) you were in the hospital this past year? In case you don't know the exact amount of the bills, give the best estimate you can.</p>		<input type="checkbox"/> No bills (Free care) \$ <input style="width: 60px; height: 20px;" type="text"/>	
<p>(b) Does this amount cover ALL of the hospital charges--for example, in addition to the cost of the room, does it include charges for the operating (or delivery) room, anesthesia, X-rays, tests, special treatments, etc? If not included originally in 1(a), correct amount in 1(a)</p>		<p>From bills or records: <input type="checkbox"/> All charges included <input type="checkbox"/> Some missed - Now Corrected Not from bills or records: <input type="checkbox"/> All charges included <input type="checkbox"/> Some missed - Now Corrected </p>	
<p>(c) Was any part of the hospital bill paid for by insurance, whether paid directly to the hospital or paid to you or your family? If "Yes" to 1(c), ask:</p>		<input type="checkbox"/> No part paid by insurance <input type="checkbox"/> Part paid by insurance and included in 1(a) <input type="checkbox"/> Part paid by insurance, not originally in 1(a) - Now Corrected	
<p>(d) Was the part paid by insurance included in the amount (in 1(a)) you gave me? If not included originally in 1(a), correct amount in 1(a)</p>			
<p>(e) Besides these hospital bills you have already told me about, how much did the bills for any special nurses at the hospital come to?</p>		<input type="checkbox"/> No other bills for special nurses \$ <input style="width: 60px; height: 20px;" type="text"/>	
<p>2. (a) During the past 12 months did you go to a hospital for any minor operations, emergency treatment, outpatient clinic services, X-rays, tests or any thing like that for which you did not stay overnight? If "Yes" to 2(a), ask:</p>		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<p>(b) How much altogether did these kinds of hospital bills come to?</p>		\$ <input style="width: 60px; height: 20px;" type="text"/>	
<p>(c) Was any part of these hospital bills paid for by any insurance, whether paid directly to the hospital, the doctor or to you or your family? If "Yes" to 2(c), ask:</p>		<input type="checkbox"/> No part paid by insurance <input type="checkbox"/> Part paid by insurance and included in 2(b) <input type="checkbox"/> Part paid by insurance, not originally in 2(b) - Now Corrected	
<p>(d) Was the part paid by insurance included in the amount (in 2(b)) you gave me? If not included originally in 2(b), correct amount in 2(b)</p>			
<p>3. (a) How much did all of your doctors' and osteopaths' bills come to for the past 12 months? This amount should include all doctors' bills for home and office visits as well as for clinics and hospitals.</p>		<input type="checkbox"/> No doctors' bills \$ <input style="width: 60px; height: 20px;" type="text"/>	
<p>(b) Does this amount cover all doctors' bills--for example, operations or treatments, check-ups or examinations, X-rays, tests, etc? If not included, correct amount in 3(a)</p>		<p>From bills or records: <input type="checkbox"/> All charges included <input type="checkbox"/> Some missed - Now Corrected Not from bills or records: <input type="checkbox"/> All charges included <input type="checkbox"/> Some missed - Now Corrected </p>	
<p>(c) Was any part of these doctors' bills paid for by insurance, whether paid directly to the doctor or to you or your family? If "Yes" to 3(c), ask:</p>		<input type="checkbox"/> No part paid by insurance <input type="checkbox"/> Part paid by insurance and included in 3(a) <input type="checkbox"/> Part paid by insurance, not originally in 3(a) - Now Corrected	
<p>(d) Was the part paid by insurance included in the amount (in 3(a)) you gave me? If not included, correct amount in 3(a)</p>			
<p>4. During the past 12 months, about how much did you spend (for yourself) for prescriptions, medicines, tonics, vitamins, pills and things like that?</p>		<input type="checkbox"/> No expenses for medicines, etc. \$ <input style="width: 60px; height: 20px;" type="text"/>	
<p>5. (a) How much did all of your dentists' bills come to for the past 12 months?</p>		<input type="checkbox"/> No dental bills \$ <input style="width: 60px; height: 20px;" type="text"/>	
<p>(b) Does this amount cover all dental expenses--for example, all fillings, extractions, cleanings, X-rays, bridgework, dental plates, straightening of teeth, etc? If not included, correct amount in 5(a)</p>		<p>From bills or records: <input type="checkbox"/> All charges included <input type="checkbox"/> Some missed - Now Corrected Not from bills or records: <input type="checkbox"/> All charges included <input type="checkbox"/> Some missed - Now Corrected </p>	
<p>6. We are interested in OTHER medical expenses you may have had during the past 12 months but we don't want to include any insurance premiums you may have paid. About how much did all OTHER medical expenses come to for you during the past 12 months--for example, things like eye glasses, hearing aids, braces, chiropractors' fees, home nursing care and the like, not counting those you have already told me about?</p>		<input type="checkbox"/> No other medical expenses \$ <input style="width: 60px; height: 20px;" type="text"/>	

SELF-ENUMERATION QUESTIONNAIRE

FORM NHS-4(b)
(9-18-60)

Form Approved
Budget Bureau No. 68-6013

U. S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON 25, D. C.

Dear Friend:

The Bureau of the Census is conducting a special survey on the cost of medical care as collecting agent for the U.S. Public Health Service. This study, when combined with other information, will serve to answer important questions about health and medical care costs in our Nation.

The Census interviewer who called at your household was asked to leave this form in order that all of the family members could take part in answering these questions, and that bills, receipts, and other records can be consulted.

Please mail the completed form within five days. A self-addressed envelope which requires no postage has been provided for your convenience.

Your cooperation in answering these questions will be a definite public service. The information will be given confidential treatment by the Bureau of the Census and the U.S. Public Health Service. Nothing will be published except statistical summaries.

Thank you.

Sincerely yours,



Robert W. Burgess
Director
Bureau of the Census

CONFIDENTIAL - This information is collected for the U.S. Public Health Service under authority of Public Law 652 of the 84th Congress (70 Stat 489; 42 U.S.C. 305). All information which would permit identification of the individual will be held strictly confidential, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to others for any other purposes (22 FR 1687).

USCOMM-DC 11481 P-60

COSTS FOR MEDICAL AND DENTAL CARE DURING THE PAST 12 MONTHS

From: _____ To: _____

PLEASE ANSWER THE QUESTIONS BELOW FOR:

Name of person _____

GENERAL INSTRUCTIONS

1. IF YOU DO NOT HAVE EXACT AMOUNTS FROM BILLS OR RECORDS, GIVE THE BEST ESTIMATE YOU CAN.
2. COUNT: All bills paid (or to be paid) by the person himself, his family or friends and any part paid by insurance whether paid directly to the hospital or doctor, or paid to the person or his family. If you do not know the exact amount paid by the insurance, estimate it.
3. DO NOT COUNT: Any amounts paid (or to be paid) by:
 - Workmen's compensation
 - Non-profit organizations such as the "Polio Foundation"
 - Charitable or Welfare Organizations
 - Military Services or Veterans Administration
 - Federal, State, City, or County Government

1 (a) Was this person in a hospital, (nursing home, sanitarium) overnight or longer during the past 12 months?

Yes No (Go to Question 2)

(b) How much did all of the hospital bills come to for the past 12 months?

Count all bills for all hospital stays during the past 12 months.

Be sure to include all hospital charges and not just the cost of the room and board, for example, charges for the operating or delivery room, anesthesia, X-rays, tests, special treatments, etc.

\$

(c) IN ADDITION TO the amount given above, how much were the bills for the surgeons, anesthetists, or other doctors' visits at the hospital?

No doctors' bills for hospital services.

\$

(d) Besides these hospital bills, how much did the bills for any special nurses at the hospital come to?

No other bills for special nurses.

\$

2 (a) During the past 12 months did this person go to a HOSPITAL for any operations, emergency treatment, out-patient clinics, X-rays, tests or any things like that for which he did not stay overnight?

Yes No (Go to Question 3)

(b) How much altogether did these kinds of hospital bills come to for this person?

\$

(c) IN ADDITION TO the amount given above, how much were the bills for the surgeons, anesthetists, or other doctors' visits at the hospital for this kind of care?

No doctors' bills for this kind of care

\$

ANSWER QUESTIONS 3, 4, 5 and 6 FOR THIS PERSON WHETHER OR NOT HE (OR SHE) HAS BEEN IN THE HOSPITAL DURING THE PAST 12 MONTHS.

3. IN ADDITION TO any amounts that you may have listed in Questions 1 and 2, how much did all of the doctors' or osteopaths' bills for this person come to for the past 12 months for home, office, or clinic visits?

Be sure to include all doctors' bills for all treatments, check-ups, X-rays, shots, tests, and the like.

No doctors' bills

\$

4. About how much was spent for this person for prescriptions, medicine, tonics, vitamins, pills, and things like that during the past 12 months?

No costs for medicine, etc.

\$

5. How much did all of the dentists' bills for this person come to for the past 12 months?

Be sure to include all dental costs for fillings, extractions, cleanings, X-rays, bridgework, dental plates, straightening of teeth, etc.

No dentists' bills

\$

6. About how much did all other medical expenses for this person come to for the past 12 months?

Include the costs of all such items as eye glasses, hearing aids, braces, chiropractors' fees, home nursing care, and the like, not included above.

No other medical expenses

\$

FOR OFFICE USE ONLY	PSU No.	Segment No.	Serial No.	Column No.
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10/60

MAIN CRITERION QUESTIONNAIRE

FAMILY NO. _____

RESPONDENT'S NAME: _____ PHONE NO.: _____

ADDRESS: _____ SUGGESTED TIME TO CALL: _____

=====

RECORD OF CALLS

	Date	Time	Results
1st			
2nd			
3rd			
4th			

Notes:

=====

This Main Questionnaire has: _____ Hospital Supplements
(number)

_____ Major Condition Supplements
(number)

=====

Time interview began: _____ Date of interview: _____

Time interview ended: _____ Signature of Interviewer: _____

For this family, year ago means _____ to _____

Names of Family Members: _____

Relation to Head: _____

Age: _____

Sex: _____

INTRODUCTION. Hello. I'm _____ and I'm working on the health survey for the Public Health Service. We talked to you a short time ago about your health and medical care and arranged to see you again today.

ASK QUESTION 1 FOR EACH MEMBER SEPARATELY, BEGINNING WITH FIRST MEMBER.

1. Let's start by talking about hospital, sanatorium, convalescent or nursing home care.

When was the last time (NAME OF MEMBER) was a patient in a hospital, sanatorium, convalescent or nursing home--even if (he) (she) didn't stay overnight? (What year and month was it?)

Never	8 - 1
More than year ago	2
Year ago or less	3

FOR EACH MEMBER REPORTING HOSPITALIZATION, ETC., YEAR AGO OR LESS, FILL IN A HOSPITAL SUPPLEMENT BEFORE YOU ASK Q. 2.

2. ASK ONLY IF THERE IS A MARRIED WOMAN UNDER 45 IN THE HOUSEHOLD:

A. And can you tell me if (MARRIED WOMAN UNDER 45) has been pregnant (at any other time) during the past 12 months--I mean from _____ to _____?

Yes	9 - 1*
No	2

*B. IF "YES": Is that a current pregnancy, was the baby born already, or did it end in a miscarriage?

Current	10 - 1#
Baby born	2**
Miscarriage	3**

**C. IF BABY ALREADY BORN, OR IF MISCARRIAGE: Did (WOMAN) go to hospital in connection with this (birth) (miscarriage)?

Yes	11 - 1###
No	2#

#IF CURRENT PREGNANCY OR BIRTH OR MISCARRIAGE WAS NOT HOSPITALIZED, ENTER CONDITION ON MAJOR CONDITION SUPPLEMENT AND FILL OUT AFTER ASKING QUESTION 5.

###IF WOMAN HOSPITALIZED, FILL OUT HOSPITALIZATION SUPPLEMENT BEFORE ASKING QUESTION 3.

3. ASK FOR EACH MEMBER SEPARATELY, BEGINNING WITH FIRST MEMBER.

A. In the past twelve months, I mean since _____, has (NAME OF MEMBER) had any surgery--like a boil lanced or tonsils removed--or any broken bones or fractures set, outside of a hospital?

Yes 12- 1*
No 2

*B. IF "YES": What was the condition?

4. And now about any (other) expensive illness (in addition to what you've already told me):

A. In these past twelve months--that is, since _____, have you (has PERSON) had any (other) illness, accident or condition for which the charges were as much as \$50 altogether for doctor's care, medicine, treatments and tests, and so on? Please combine what you had to pay and what any insurance paid in figuring the \$50 cost.

Yes 13- 1*
No 2

*B. IF "YES": What (was) (were) the condition(s)?

HAND WRITE CARD TO RESPONDENT AND READ Q. 5, INSERTING EACH CONDITION LISTED IN COLUMN FOR THAT PERSON. THEN REVIEW ANSWERS AND MAKE CORRECTIONS BY PUTTING LINE THROUGH CONDITION WHICH SHOULD BE LEFT OUT AND BY WRITING IN CONDITIONS WHICH SHOULD BE INCLUDED.

5. During the first interview, you mentioned that (PERSON) had (CONDITIONS LISTED) (none of the following conditions) during the past 12 months--that is, since _____. Now, I'd like you to check this list again to make sure we haven't made any mistakes or left something out.

All correct first interview?
Yes 15- 1
No 2

STOP! BEFORE ASKING Q. 6, PREPARE A MAJOR CONDITION SUPPLEMENT FOR EACH DIFFERENT CONDITION MENTIONED IN Q's. 2 - 5 FOR EACH MEMBER.

STARTING WITH FIRST MEMBER, ASK Q's. 6 - 8 BEFORE PROCEEDING TO THE NEXT MEMBER.

6. Up to now we've been talking about illnesses or conditions that may have involved quite a bit of expense during the past twelve months. Now I'd like to find out about any other minor medical expenses.

A. Aside from what we've talked about, (have you) (has PERSON) seen a doctor or osteopath at your home for any (other) illness or condition, even minor ones during the past year--that is, since _____?

Yes 16- 1*
No 2

*IF "YES" TO A, ASK B - D:

B. What were the illnesses or conditions requiring these home visits?

C. How many times altogether (have you) (did PERSON) see a doctor at your home? _____ times

D. And how much did all these doctor's calls to (you) (PERSON) at home cost you, including both what you had to pay and what insurance paid? \$ _____

7. A. Aside from what you've already told me about, (have you) (has PERSON) seen a doctor or osteopath at his office or at a clinic for any (other) illness or condition, even minor ones, during the past year--since _____?

Yes 17- 1*
No 2

*IF "YES" TO A, ASK B - D:

B. What were the illnesses or conditions?

C. How many times altogether (did you) (did PERSON) see the doctor at his office or clinic for these conditions? _____ times

42 D. And how much, altogether, did these office or clinic visits cost you, including what you paid and what insurance paid? \$ _____

8. HAND YELLOW CARD TO RESPONDENT AND ASK A - C. CIRCLE "YES" OR "NO" CODE FOR EACH ITEM IN PART A, BEFORE ASKING PARTS B AND C. Now just to be sure we haven't left anything out,--

A.	Yes	No
(1) A routine check-up or examination?	1*	2
(2) Any shots, inoculations, vaccinations, X-rays or tests?	1*	2
(3) Any chest or throat conditions like a cold, flu, virus, sinusitis, tonsillitis, bronchitis or pneumonia?	1*	2
(4) Measles, whooping cough, or chicken pox?	1*	2
(5) Any injuries like cuts, sprains, burns, bruises, broken arms or legs?	1*	2
(6) Digestive flu or other stomach trouble?	1*	2
(7) Any ear, eye or skin infections?	1*	2
(8) Any serious headaches or backaches?	1*	2
(9) Any kidney or bladder infections?	1*	2

*IF "YES" TO ANY ITEM, ASK B AND C AFTER ASKING ALL NINE ITEMS FOR THAT PERSON.

B. Now, not counting any visits you've already mentioned in other questions, about how many times did (you) (PERSON) see the doctor for these conditions? _____ times

C. And how much did he charge you for these additional visits? \$ _____ **

**DON'T FORGET TO GO BACK TO QUESTION 6, AND ASK Q's. 6 - 8 FOR THE NEXT PERSON.

9. ASK PART A - D FOR EACH MEMBER SEPARATELY, BEGINNING WITH FIRST MEMBER.

Now a few questions about the cost of medicines, drugs and vitamins and things like that.

A. In the past 12 months, since _____, in addition to the cost of medicines and drugs you may already have told me about for (PERSON), how much were you charged for any prescription medicines for any of the other illnesses or conditions (PERSON) had? \$ _____

B. What about other medicines, drugs or vitamins that some doctor may have told (PERSON) to use last year--how much were you charged altogether for them? \$ _____

C. And about how much did you spend for (PERSON) on other drugs and medicines that were not suggested by a doctor--like aspirins, vitamins, tonics, laxatives, mouth washes, cold pills, nose drops, cough medicines and things like that? \$ _____

USE THIS BOX FOR COSTS OF MEDICINES WHICH CANNOT BE DIVIDED AMONG INDIVIDUALS

D. Then the total cost of medicines and drugs you've told me about for (PERSON) comes to \$ _____. Does that sound about right? (IF NOT, MAKE THE NECESSARY CORRECTIONS.) \$ _____

10. A. ASK FOR EACH PERSON: Have you (has PERSON) had glasses made or replaced, or had (your) (his) (her) eyes examined in the past 12 months (other than that we've talked about)?

Yes 18- 1*
No 2

*IF "YES," ASK B AND C:

B. How much were you charged for the glasses? \$ _____ Total B + C

C. And (aside from the charges that you've already told me about), how much was the (additional) charge, if any, for the eye examinations and treatments? \$ _____ \$ _____

(ENTER AMOUNT OR CHECK ONE OF TWO BOXES, AS APPROPRIATE.)

Included in bill for glasses
Included in dr bills reported earlier

11. ASK EVERYBODY:

A. And during the 12 months since _____, did you have to buy or rent the following for anyone in the family? (ASK FOR EACH ITEM. IF ANYONE HAD ITEM, CIRCLE "YES" OR "NO" CODE FOR EACH PERSON. IF NO ONE HAD ITEM, CHECK "NO ONE" BOX BELOW.) (Who?) (For whom?)		Yes	No
(1) A hearing aid?	NO ONE <input type="checkbox"/>	1*	2
(2) Crutches?	NO ONE <input type="checkbox"/>	1*	2
(3) A truss?	NO ONE <input type="checkbox"/>	1*	2
(4) Braces?	NO ONE <input type="checkbox"/>	1*	2
(5) A wheel chair?	NO ONE <input type="checkbox"/>	1*	2
(6) Anything else we haven't already included? (SPECIFY) _____	NO ONE <input type="checkbox"/>	1*	2
*B. <u>IF "YES" TO ANY ITEM ABOVE:</u> About how much did (this) (these items) for (PERSON) cost during the past year--including what you paid and what insurance may have covered? (Not counting the glasses.)		\$ _____	

12. Now a few questions about some other kinds of health expenses and we'll be through.		Yes	19- 1*
A. Has (PERSON) had any dental care during the past 12 months, that is since ____?		No	2
*IF "YES," ASK B - H:			
B. Did (PERSON) have an examination of teeth or cleaning		Yes	No
C. Did (he) (she) have any fillings or in-lay work?		1	2
D. Did (he) (she) have any teeth pulled or other mouth surgery?		1	2
E. Did (he) (she) have any teeth straightening work?		1	2
F. Did (he) (she) have any bridgework or replacement of teeth?		1	2
G. Did (he) (she) have any other dental work, like gum treatments, X-rays and things like that?		1	2
H. About how much altogether did all this cost you during the past 12 months-- including what you paid and what insurance may have covered?		\$ _____	

13. Besides what you've already told me about, (have you) (has PERSON) seen any of the following during the past year?		Yes	No
A. A chiropodist or foot doctor?		20- 1*	2
B. A physiotherapist?		21- 1*	2
C. A chiropractor?		22- 1*	2
D. A visiting nurse?		23- 1*	2
E. Or some other medical person, other than those you've already told me about?		24- 1*	2

*F. IF "YES" TO ANY ITEM: About how much did it cost you for these visits? \$ _____

14. Now would you check to see if I have this all right? It cost (NAME)		
A. For hospital care (Q. 13 of Hospital Supplement)		\$ _____
B. For operations or bone settings outside a hospital and for other major conditions (Q. 6, Major Condition)		\$ _____
C. For doctor calls at home (Q. 6-D)		\$ _____
D. For doctor office calls (Q. 7-D)		\$ _____
E. For other doctor charges (Q. 8-C)		\$ _____
F. For other medicines and drugs not included already (Q. 9-D)		\$ _____
G. For glasses (Q. 10-B+C)		\$ _____
H. For other special items (Q. 11-B)		\$ _____
I. For dental expenses (Q. 12-H)		\$ _____
J. For other medical services (Q. 13-F)		\$ _____

44 K. That makes a total of \$ _____. Does that sound right? (IF NO, MAKE NECESSARY CORRECTIONS.) \$ _____

INTERVIEWER SUMMARY SHEET

(To be filled out immediately after you have left respondent's home)

1. Is there any information in this interview about which you feel dubious? Yes * No

*IF "YES," ANSWER A AND B:

A. Which information do you question?

B. Why are you doubtful about it?

2. In general, how accurate would you say the cost data are? Inaccurate Fairly accurate Completely accurate

3. Had this family completed a self-administered questionnaire? Yes * No

*IF "YES": What was respondent's reaction to your asking for a personal interview after (he) (she) had already provided data on the self-administered form? (PLEASE DESCRIBE IN DETAIL. IF ANY PROBLEMS OR RESENTMENT AROSE, EXPLAIN WHAT MADE YOU THINK THERE WAS RESENTMENT, WHY RESPONDENT WAS ANNOYED AND HOW YOU HANDLED PROBLEM.)

4. ANSWER IF RESPONDENT DID NOT FILL OUT SELF-ADMINISTERED QUESTIONNAIRE: Those respondents who were not asked to return self-administered questionnaires received a letter from Public Health Service. The letter said that a second interviewer was coming and asked them to check their records before the second interview.

A. When you called for an appointment interview, did this respondent remember receiving this letter from Public Health Service? Seemed to remember getting letter Could not remember getting letter

B. Was there any indication that respondent had checked records and prepared information in advance of interview? Yes, Seems to have checked records No, Probably did not check records

5. Was there any indication that respondent had discussed any of the medical cost items with other household members BEFORE YOU INTERVIEWED HIM? Yes, had obviously discussed No indication of discussion

6. A. Which person was your respondent? That is, who gave most of the information?

B. Did anyone else help provide information for the interview? Yes * No

*IF "YES," ANSWER (1) AND (2):

(1) Who helped?

(2) On which parts of the interview did someone else help?

7. Was there any evidence that you could have gotten more accurate information in any area if you had interviewed some other member of the family? Yes * No

*IF "YES," ANSWER A AND B:

A. To get what information?

B. Who should have been interviewed and why?

8. Did respondent refer to or check bills or records during any part of interview? Yes * No

*IF "YES": Which bills or records did respondents check to give you information? (PLEASE DESCRIBE IN DETAIL.)

9. Please attach an extra page (including family number) to give us any additional information which you think would help us to understand the interview or to get a clearer picture of this family's medical experiences and expenses.

10. Date Interview Completed: _____

11. Interviewer's Signature: _____

HOSPITAL SUPPLEMENT

Family No.: _____ Respondent's Name: _____

Name of Hospitalized Member: _____ Hospitalized Member No.: _____

1. What made it necessary for (PATIENT) to go to the hospital? (ENTER KIND OF ILLNESS, ACCIDENT OR CONDITION.)

2. A. Was (PATIENT) in the hospital for (this condition) (these conditions) on just one occasion since last _____, or was (he) (she) there for this condition on more than one occasion?

One occasion 30- 1
Two occasions 2
Three or more occasions 3*

*USE ANOTHER HOSPITAL SUPPLEMENT TO RECORD SEPARATE DATA ON 3rd, 4th, ETC. HOSPITALIZATIONS.

B. About how many days did (PATIENT) stay in the hospital (the first time) (the second time), and what kind of room did he have--private, semi-private or ward? (ENTER, IN THE APPROPRIATE SPACES BELOW, THE NUMBER OF DAYS PATIENT STAYED IN EACH TYPE OF ROOM. IF "EMERGENCY ROOM ONLY" OR IF "OTHER OUT-PATIENT CARE ONLY," CHECK APPROPRIATE BOX.)

First Hospitalization	
Kind of Room	Enter No. Days
Private	
Semi-private	
Ward	
Emergency room only	<input type="checkbox"/>
Other out-patient only	<input type="checkbox"/> *

Second Hospitalization	
Kind of Room	Enter No. Days
Private	
Semi-private	
Ward	
Emergency room only	<input type="checkbox"/>
Other out-patient only	<input type="checkbox"/> *

*IF PATIENT WAS NOT ASSIGNED A BED, BUT RECEIVED ONLY NON-EMERGENCY CARE AT THE OUT-PATIENT DEPARTMENT OR CLINIC, SKIP TO Q. 14 AND ENTER CONDITION LISTED IN Q. 1 ON MAJOR CONDITION SUPPLEMENT FOR LATER QUESTIONING.

3. ASK QUESTION 3 SEPARATELY FOR EACH HOSPITAL STAY (Q. 2-A). RECORD DATA ON FIRST AND SECOND HOSPITALIZATION BELOW AND USE ANOTHER SUPPLEMENT FOR ANSWERS ON THE THIRD, FOURTH, ETC. HOSPITALIZATIONS.

A. Now I'd like to ask you a few questions about the hospital expenses not counting any separate doctor bills or surgeon's fees--(On the first, second hospitalization) Were any of the hospital expenses paid directly to the hospital by any of the following groups--by Blue Cross, some other hospital plan or insurance company, an employer of someone in the family, Workmen's Compensation, a non-profit or government agency? (CIRCLE "YES" OR "NO" CODE FOR EACH ITEM IN PART A.)

	1st Hospitalization			2nd Hospitalization		
	A.		B.	A.		B.
	Yes	No	Amount	Yes	No	Amount
(1) Blue Cross	31-1*	2	\$ _____	3*	4	\$ _____
(2) Another hospital plan or insurance company	32-1*	2	\$ _____	3*	4	\$ _____
(3) An employer	33-1*	2	\$ _____	3*	4	\$ _____
(4) Workmen's Compensation	34-1*	2	\$ _____	3*	4	\$ _____
(5) Non-profit agency (SPECIFY) _____	35-1*	2	\$ _____	3*	4	\$ _____
(6) Government agency (SPECIFY) _____	36-1*	2	\$ _____	3*	4	\$ _____
(7) (ENTER TOTAL FOR EACH HOSPITALIZATION)			\$ _____			\$ _____

*B. FOR EACH "YES" IN A ABOVE: And how much altogether did (GROUP OR AGENCY) pay the hospital? (ENTER IN APPROPRIATE SPACE UNDER B ABOVE.)

7. ASK ONLY IF THERE WAS SURGERY OR A DELIVERY ("YES" TO Q. 6-A):

Now I'd like to ask you a few questions about any doctor bills you may have had in connection with the (first) (second) operation.

A. Who was the doctor who did the (first) (second) operation (set the broken bones)?

NAME: 1st _____

NAME: 2nd _____

B. Was there a doctor's bill in addition to the hospital bill for the (first) (second) operation?

	<u>First</u>	<u>Second</u>
Yes . . .	39- 1**	40- 1**
No . . .	2*	2*

*IF "NO," ASK C. THEN SKIP TO Q. 8.

C. Why not?

41-

**IF "YES," ASK D - G:

D. Was any of the surgeon's bill paid directly to the doctor by any of the following groups: Blue Shield, another surgical or medical plan or insurance company, an employer of someone in the family, Workmen's Compensation or a non-profit or government agency?

	<u>1st Operation</u>			<u>2nd Operation</u>		
	<u>Yes</u>	<u>No</u>	<u>Amount</u>	<u>Yes</u>	<u>No</u>	<u>Amount</u>
(1) Blue Shield	42-1#	2	\$ _____	4#	5	\$ _____
(2) Other surgical, medical plan or insurance . . .	43-1#	2	\$ _____	4#	5	\$ _____
(3) Employer	44-1#	2	\$ _____	4#	5	\$ _____
(4) Workmen's Compensation	45-1#	2	\$ _____	4#	5	\$ _____
(5) Non-profit agency (SPECIFY) _____	46-1+	2	\$ _____	4+	5	\$ _____
(6) Government agency (SPECIFY) _____	47-1#	2	\$ _____	4#	5	\$ _____

#E. FOR EACH "YES" IN D ABOVE: And how much did they pay? (ENTER IN APPROPRIATE SPACE UNDER E ABOVE.)

F. ASK EVERYBODY WHO SAID "YES" TO Q. 7-B: (In addition to this) How much did you have to pay the surgeon (the first time) (the second time) including anything you may have collected directly from any insurance group?

First \$ _____ Second \$ _____

G. Then the total charge for surgery (the first time) (the second time) amounted to (AMOUNT IN E + F)--

First \$ _____ Second \$ _____

Is that right?

Yes 1

IF NO, MAKE NECESSARY CORRECTIONS

8. ASK EVERYONE: Altogether, about how many doctors and osteopaths has (PATIENT) seen in the past year about this condition--both before, during and after (he) (she) was in the hospital?

NUMBER OF DOCTORS AND OSTEOPATHS: _____

IF NONE, SKIP TO Q. 11 BELOW.

A. How many times did doctors and osteopaths visit (PATIENT) while (he) (she) was actually in the hospital, approximately?

HOSPITAL VISITS: _____

B. Since last year at this time, how many times did a doctor or osteopath come to the home to see (PATIENT) about this condition?

HOME VISITS: _____

C. During the last 12 months, how many times did (PATIENT) see a doctor or osteopath about this condition at the doctor's office?

DOCTOR'S OFFICE VISITS: _____

D. (Besides this) And how many times did (PATIENT) go to a doctor's office for shots, X-rays, or some other kind of test or treatment for this condition from a nurse, technician or another assistant when (he) (she) DIDN'T SEE THE DOCTOR AT ALL?

OTHER DOCTOR VISITS: _____

E. And how many times did (PATIENT) go to an out-patient clinic or emergency room at a hospital, or to an industrial clinic, or some other clinic for examination, tests, or care in connection with this condition this past year?

CLINIC VISITS: _____

9. A. Now could you tell me if any of these doctor visits were paid for directly to the doctor by any of the following groups--Blue Shield, another medical plan or insurance company, an employer of someone in the family, Workmen's Compensation, a non-profit or government agency? (CIRCLE "YES" OR "NO" CODE FOR EACH.)

	A.		B.
	Yes	No	Amount
(1) Blue Shield	48-1*	2	\$ _____
(2) Another medical plan or an insurance company	49-1*	2	\$ _____
(3) Employer	50-1*	2	\$ _____
(4) Workmen's Compensation	51-1*	2	\$ _____
(5) Non-profit agency (SPECIFY) _____	52-1*	2	\$ _____
(6) Government agency (SPECIFY) _____	53-1*	2	\$ _____
(7) ENTER TOTAL			\$ _____

*B. FOR EACH "YES" IN A ABOVE: And how much did (EACH) pay the doctor? (ENTER IN APPROPRIATE SPACE IN B ABOVE)

10. In addition to what you've already told me about, how much did you have to pay the doctor for:

ASK A - E AS THEY APPLY:

- A. IF ANY HOSPITAL VISITS: His hospital visits? \$ _____
- B. IF ANY HOME VISITS: His home visits? \$ _____
- C. IF ANY OFFICE CARE BY DOCTORS OR NURSES: The office visits, including all charges for examinations, shots, tests, X-rays, and things like that which either the doctor, his nurse, or assistant did? \$ _____
- D. IF ANY CLINIC VISITS: And how much did you pay the clinic for the clinic visits? \$ _____
- E. So that the total amount you had to pay for these visits was (ADD A - D), including anything you got directly from any insurance \$ _____

Yes 1
IF NO, MAKE NECESSARY CORRECTIONS

11. A. Did (PATIENT) have any other expenses in the hospital you haven't already told me about that were not covered on the hospital bill, but were billed separately--things like (READ THROUGH LIST, CIRCLING "YES" OR "NO" CODE FOR EACH ITEM.)

	A.		B.
	Yes	No	Amount
(1) An anesthetist's fee that was NOT charged on hospital bill?	54-1*	2	\$ _____
(2) A pathologist's SEPARATE charge for laboratory tests?	55-1*	2	\$ _____
(3) A radiologist's SEPARATE charge for X-ray tests or treatments?	56-1*	2	\$ _____
(4) Special hospital nursing?	57-1*	2	\$ _____
(5) Oxygen?	58-1*	2	\$ _____
(6) An ambulance?	59-1*	2	\$ _____
(7) Anything else? (SPECIFY) _____	60-1*	2	\$ _____
ENTER TOTAL			\$ _____

*B. FOR EACH "YES" IN A ABOVE: And how much was (ITEM) including anything insurance paid as well as what you paid? (ENTER ABOVE)

12. ASK EVERYBODY:

A. During the last twelve months since _____, did (PATIENT) have any other expenses for this condition-- that is, not counting what you've already told me about? Expenses for things like: (READ THROUGH LIST, CIRCLING "YES" OR "NO" CODE FOR EACH ITEM.)

	A.		B.
	Yes	No	Amount
(1) Medicines the doctors or hospital <u>prescribed</u> for this condition?	61-1*	2	\$ _____
(2) Other <u>non-prescribed</u> medicines for this condition?	62-1*	2	\$ _____
(3) X-ray tests?	63-1*	2	\$ _____
(4) Other special tests like blood tests, electrocardiograms, urine analyses, and so on? 64-1*	64-1*	2	\$ _____
(5) Special treatments like X-ray treatments, heat or diathermy treatments, massages, and so on?	65-1*	2	\$ _____
(6) Home nursing care (for which you were charged)?	66-1*	2	\$ _____
(7) Any medical equipment or appliances like braces, crutches, wheel chair, a vaporizer or anything like that?	67-1*	2	\$ _____
(8) Anything else? (SPECIFY) _____	68-1*	2	\$ _____
	ENTER TOTAL		\$ _____

*B. FOR EACH "YES" IN A ABOVE: And what was the cost of (ITEM)--including anything that insurance covered, as well as what you paid? (ENTER ABOVE.)

13. ASK EVERYBODY:

Now let's check over these expenses for this condition again to make sure I have them all correct. (ENTER AMOUNTS BELOW AND INCLUDE EXTRA SUPPLEMENTS IF THREE OR MORE HOSPITALIZATIONS FOR THIS CONDITION.)

The total bill was	\$ _____	Q. 5
The total bill for surgery was	\$ _____	Q. 7-C
The total for doctor visits paid directly by insurance was	\$ _____	Q. 9
The total doctor visits you paid were	\$ _____	Q. 10-F
The total for other expenses in the hospital you had to pay was	\$ _____	Q. 11
And the total for all other expenses you just mentioned was	\$ _____	Q. 12
That makes a grand total of	\$ _____	

Does that sound right? Yes 1'
IF NO, MAKE NECESSARY CORRECTIONS

I M P O R T A N T !
*ENTER GROSS TOTAL FROM Q. 13 IN APPROPRIATE LINE ON Q. 14 OF THE MAIN CRITERION QUESTIONNAIRE BEFORE GOING ON TO ANOTHER SUPPLEMENT OR BACK TO MAIN QUESTIONNAIRE. Q. 2 OR Q. 3. DON'T FORGET TO ASK QUESTION 14 ON THIS SUPPLEMENT.

14. ASK EVERYBODY:

Now was (PATIENT) in the hospital for any other illness, accident, or condition during these past 12 months?

- IF YES: Fill out another Hospital Supplement for this person.
IF NO: Return to Q. 2 or to Q. 3 in the Main Questionnaire, depending on where you left off.

Family No.: _____ Respondent's Name: _____

Patient's Name: _____ Patient's Condition: _____

No.: _____

1. What sort of care or treatment did (PATIENT) get in connection with (CONDITION)? (For example, a boil lanced, shots, heat or physical therapy treatments, a bone set, etc.)

2. Altogether, how many doctors and osteopaths has (PATIENT) seen in the past year for this condition--that is, since _____? *
*IF NONE, SKIP TO Q. 4-B.

3. Since last year, how many times did a doctor or osteopath come to the home to see (PATIENT) about this condition? *
*IF ANY VISITS, ASK Q. 3-A.
*IF NO VISITS, SKIP TO Q. 4.

A. How much were your total charges for these home visits--including anything that insurance may have paid you or your doctor? \$ _____

4. A. During the last year, since _____, how many times did (PATIENT) see a doctor or osteopath about this condition at his office, at a clinic, or a hospital out-patient department? _____

B. (Besides this) And how many times did (PATIENT) go to a doctor's office when (he) (she) didn't see the doctor at all but got shots, X-rays, or some other kind of test or treatment for this condition from a nurse, technician or another assistant? _____

C. IF ANY OFFICE OR CLINIC CARE: How much did the doctor(s) charge for all the care (PATIENT) got at the (office) (clinic)? Let's include all bills for examinations, shots, tests, X-rays and so on given by the doctor or his assistants, and also include anything insurance may have paid you or your doctor. \$ _____

5. ASK EVERYBODY:

	A.		B.
	Any expense?		Amount of expense
	Yes	No	
(1) Medicines the doctor(s) prescribed for this condition?	1*	2	\$ _____
(2) Other non-prescribed medicines?	1*	2	\$ _____
(3) X-ray tests?	1*	2	\$ _____
(4) Other special tests like blood tests, electrocardiograms, urine analyses and so on?	1*	2	\$ _____
(5) Special treatments like X-ray treatments, massages, heat or diathermy treatments or any other kind of treatment?	1*	2	\$ _____
(6) Home nursing care (for which you were charged?)	1*	2	\$ _____
(7) Any medical equipment or appliances like braces, crutches, wheel chair, a vaporizer or anything like that?	1*	2	\$ _____
(8) Any other medical expense for this condition not already covered? (SPECIFY) _____	1*	2	\$ _____

*B. FOR EACH ITEM FOR WHICH ANY EXPENSES INCURRED: What were (PATIENT'S) total expenses for (ITEM)--including anything that insurance may have paid? (ENTER AMOUNT ON APPROPRIATE LINE UNDER B ABOVE.)

C. IF EXPENSES INCURRED FOR ANY OF ABOVE ITEMS, ENTER TOTAL HERE AND CHECK: That makes a total of \$ _____ for other expenses. Right? _____ \$ _____

6. That makes:

A. For home visits \$ _____ Q. 3-A

B. For office or clinic visits \$ _____ Q. 4-C

C. For other expenses \$ _____ Q. 5-C

D. Altogether that makes a total of (SUM OF 6-A, 6-B and 6-C ABOVE) that had to be paid in connection with this condition during the past year, since _____. Does this sound about right to you? \$ _____
IF NO: Make necessary corrections before asking Q. 7.

7. A. Now, was any of the care (PERSON) received in connection with this condition paid for by any of the following? (READ EACH OF THE FOUR ITEMS BELOW AND CIRCLE "YES" OR "NO" CODE FOR EACH. IF "YES" TO ANY ITEM, ASK B.)

	<u>Any payment by this source?</u>	
	<u>Yes</u>	<u>No</u>
(1) An employer of someone in the family?	1*	2
(2) By Workmen's Compensation?	1*	2
(3) By a non-profit agency? (SPECIFY) _____	1*	2
(4) Or by a government agency? (SPECIFY) _____	1*	2

*B. IF "YES" FOR ANY OF ABOVE GROUPS: Does the \$ _____ (TOTAL COST IN ITEM 6-D) include anything that (this group) (these groups) paid?

Yes, payment included in item 6-D 1**
No such payment included in item 6-D 2

**IF ANY OF ABOVE GROUPS PAID PART OF TOTAL REPORTED IN 6-D, ASK (1) AND (2):

- (1) And how much of the \$ _____ (TOTAL COST IN ITEM 6-D) was paid by (this group) (these groups)?
Above group(s) paid \$ _____ of total

(2) And what was that payment supposed to cover--I mean, how much of it was for doctor bills (either home, office or hospital calls) and how much of it was for other expenses?
\$ _____ was for doctors' bills
\$ _____ was for other expenses

DON'T FORGET TO COMPLETE A SEPARATE MAJOR CONDITION SUPPLEMENT FOR EACH DIFFERENT CONDITION. (SEE Q's. 2-5 IN MAIN CRITERION QUESTIONNAIRE)

APPENDIX II

DETAILED TABLES SHOWING GROSS DIFFERENCES IN REPORTED HEALTH EXPENSES

Table I. Comparison of NHS and NORC reports of total health expenses, by interval of expenditures: 1960

NORC interval of expenditures	NHS interval of expenditures											
	Total		Under \$25 ¹		\$25-49		\$50-99		\$100-299		\$300+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Total											
Total-----	1,203	100.0	502	41.8	195	16.2	188	15.6	208	17.3	110	9.1
Under \$25-----	494	41.1	394	32.8	63	5.3	26	2.1	7	0.6	4	0.3
\$25-49-----	216	18.0	63	5.3	88	7.3	49	4.1	16	1.3	-	-
\$50-99-----	193	16.0	33	2.7	33	2.7	79	6.6	47	3.9	1	0.1
\$100-299-----	199	16.5	11	0.9	10	0.8	32	2.7	120	10.0	26	2.2
\$300+-----	101	8.4	1	0.1	1	0.1	2	0.1	18	1.5	79	6.5
	Direct interview											
Total-----	586	100.0	234	40.0	100	17.0	103	17.6	99	16.9	50	8.5
Under \$25-----	241	41.1	186	31.8	36	6.1	13	2.2	4	0.7	2	0.3
\$25-49-----	107	18.3	30	5.1	45	7.7	24	4.1	8	1.4	-	-
\$50-99-----	94	16.0	11	1.9	15	2.5	47	8.0	20	3.4	1	0.2
\$100-299-----	95	16.2	6	1.0	3	0.5	17	2.9	59	10.0	10	1.7
\$300+-----	49	8.4	1	0.2	1	0.2	2	0.4	8	1.4	37	6.3
	Self-enumeration											
Total-----	617	100.0	268	43.4	95	15.4	85	13.8	109	17.7	60	9.7
Under \$25-----	253	41.0	208	33.7	27	4.4	13	2.1	3	0.5	2	0.3
\$25-49-----	109	17.7	33	5.3	43	7.0	25	4.1	8	1.3	-	-
\$50-99-----	99	16.1	22	3.6	18	2.9	32	5.2	27	4.4	-	-
\$100-299-----	104	16.8	5	0.8	7	1.1	15	2.4	61	9.9	16	2.6
\$300+-----	52	8.4	-	-	-	-	-	-	10	1.6	42	6.8
	Self-enumeration--passed edit											
Total-----	437	100.0	178	40.7	78	17.8	64	14.7	83	19.0	34	7.8
Under \$25-----	173	39.6	139	31.8	24	5.5	9	2.1	-	-	1	0.2
\$25-49-----	74	16.9	20	4.6	33	7.5	16	3.7	5	1.2	-	-
\$50-99-----	78	17.8	15	3.4	14	3.2	27	6.2	22	5.0	-	-
\$100-299-----	79	18.1	4	0.9	7	1.6	12	2.7	49	11.2	7	1.6
\$300+-----	33	7.6	-	-	-	-	-	-	7	1.6	26	6.0
	Self-enumeration--failed edit											
Total-----	180	100.0	90	50.0	17	9.5	21	11.7	26	14.4	26	14.4
Under \$25-----	80	44.4	69	38.4	3	1.7	4	2.2	3	1.6	1	0.5
\$25-49-----	35	19.4	13	7.2	10	5.6	9	5.0	3	1.6	-	-
\$50-99-----	21	11.7	7	3.9	4	2.2	5	2.8	5	2.8	-	-
\$100-199-----	25	13.9	1	0.5	-	-	3	1.7	12	6.7	9	5.0
\$300+-----	19	10.6	-	-	-	-	-	-	3	1.7	16	8.9

¹No expense included in this category. See explanation under medicine expenses on page 11.

Table II. Comparison of NHS and NORC reports of hospital overnight expenses, by interval of expenditures: 1960

NORC interval of expenditures	NHS interval of expenditures											
	Total		\$0		\$1-99		\$100-199		\$200-299		\$300+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Total											
Total-----	1,203	100.0	1,088	90.4	31	2.6	38	3.2	18	1.5	28	2.3
\$0-----	1,095	91.0	1,078	89.6	12	1.0	5	0.4	-	-	-	-
\$1-99-----	24	2.0	4	0.3	15	1.3	4	0.3	1	0.1	-	-
\$100-199-----	32	2.7	1	0.1	3	0.2	22	1.9	5	0.4	1	0.1
\$200-299-----	24	2.0	1	0.1	1	0.1	6	0.5	10	0.8	6	0.5
\$300+-----	28	2.3	4	0.3	-	-	1	0.1	2	0.2	21	1.7
	Direct interview											
Total-----	586	100.0	533	90.9	12	2.1	20	3.4	10	1.6	11	2.0
\$0-----	537	91.6	529	90.2	7	1.2	1	0.2	-	-	-	-
\$1-99-----	9	1.5	2	0.3	5	0.9	2	0.3	-	-	-	-
\$100-199-----	16	2.7	1	0.2	-	-	13	2.2	2	0.3	-	-
\$200-299-----	13	2.3	1	0.2	-	-	4	0.7	6	1.0	2	0.4
\$300+-----	11	1.9	-	-	-	-	-	-	2	0.3	9	1.6
	Self-enumeration											
Total-----	617	100.0	555	90.0	19	3.1	18	2.8	8	1.4	17	2.7
\$0-----	558	90.4	549	89.0	5	0.8	4	0.6	-	-	-	-
\$1-99-----	15	2.4	2	0.3	10	1.6	2	0.3	1	0.2	-	-
\$100-199-----	16	2.6	-	-	3	0.5	9	1.4	3	0.5	1	0.2
\$200-299-----	11	1.8	-	-	1	0.2	2	0.3	4	0.7	4	0.6
\$300+-----	17	2.8	4	0.7	-	-	1	0.2	-	-	12	1.9
	Self-enumeration--passed edit											
Total-----	437	100.0	401	91.7	13	3.0	13	3.0	4	0.9	6	1.4
\$0-----	398	91.1	395	90.4	2	0.5	1	0.2	-	-	-	-
\$1-99-----	11	2.5	2	0.4	7	1.6	2	0.5	-	-	-	-
\$100-199-----	12	2.7	-	-	3	0.7	8	1.8	1	0.2	-	-
\$200-299-----	7	1.6	-	-	1	0.2	2	0.5	3	0.7	1	0.2
\$300+-----	9	2.1	4	0.9	-	-	-	-	-	-	5	1.2
	Self-enumeration--failed edit											
Total-----	180	100.0	154	85.5	6	3.4	5	2.9	4	2.1	11	6.1
\$0-----	160	88.9	154	85.5	3	1.7	3	1.7	-	-	-	-
\$1-99-----	4	2.2	-	-	3	1.7	-	-	1	0.5	-	-
\$100-199-----	4	2.2	-	-	-	-	-	-	2	1.1	1	0.5
\$200-299-----	4	2.2	-	-	-	-	-	-	1	0.5	3	1.7
\$300+-----	8	4.5	-	-	-	-	1	0.6	-	-	7	3.9

Table III. Comparison of NHS and NORC reports of hospital—not overnight expenses, by interval of expenditures: 1960

NORC interval of expenditures	NHS interval of expenditures											
	Total		\$0		\$1-24		\$25-49		\$50-99		\$100+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Total											
Total-----	1,203	100.0	1,105	91.9	48	4.0	22	1.8	15	1.2	13	1.1
\$0-----	1,164	96.7	1,094	90.9	38	3.2	14	1.2	8	0.6	10	0.8
\$1-24-----	17	1.4	6	0.5	8	0.6	1	0.1	2	0.2	-	-
\$25-49-----	8	0.7	2	0.2	2	0.2	3	0.2	-	-	1	0.1
\$50-99-----	7	0.6	1	0.1	-	-	4	0.3	2	0.2	-	-
\$100+-----	7	0.6	2	0.2	-	-	-	-	3	0.2	2	0.2
	Direct interview											
Total-----	586	100.0	544	92.8	27	4.6	9	1.6	-	-	6	1.0
\$0-----	564	96.3	536	91.5	18	3.1	5	0.9	-	-	5	0.8
\$1-24-----	14	2.4	6	1.0	7	1.2	1	0.2	-	-	-	-
\$25-49-----	5	0.8	1	0.1	2	0.3	1	0.2	-	-	1	0.2
\$50-99-----	3	0.5	1	0.2	-	-	2	0.3	-	-	-	-
\$100+-----	-	-	-	-	-	-	-	-	-	-	-	-
	Self-enumeration											
Total-----	617	100.0	561	91.0	21	3.4	13	2.1	15	2.4	7	1.1
\$0-----	600	97.3	558	90.5	20	3.2	9	1.5	8	1.3	5	0.8
\$1-24-----	3	0.5	-	-	1	0.2	-	-	2	0.3	-	-
\$25-49-----	3	0.5	1	0.2	-	-	2	0.3	-	-	-	-
\$50-99-----	4	0.6	-	-	-	-	2	0.3	2	0.3	-	-
\$100+-----	7	1.1	2	0.3	-	-	-	-	3	0.5	2	0.3
	Self-enumeration—passed edit											
Total-----	437	100.0	400	91.5	17	3.9	8	1.8	8	1.9	4	0.9
\$0-----	426	97.5	399	91.3	16	3.7	6	1.4	3	0.7	2	0.4
\$1-24-----	3	0.7	-	-	1	0.2	-	-	2	0.5	-	-
\$25-49-----	-	-	-	-	-	-	-	-	-	-	-	-
\$50-99-----	3	0.7	-	-	-	-	2	0.4	1	0.3	-	-
\$100+-----	5	1.1	1	0.2	-	-	-	-	2	0.4	2	0.5
	Self-enumeration—failed edit											
Total-----	180	100.0	161	89.5	4	2.2	5	2.8	7	3.9	3	1.6
\$0-----	174	96.6	159	88.3	4	2.2	3	1.7	5	2.8	3	1.6
\$1-24-----	-	-	-	-	-	-	-	-	-	-	-	-
\$25-49-----	3	1.7	1	0.6	-	-	2	1.1	-	-	-	-
\$50-99-----	1	0.6	-	-	-	-	-	-	1	0.6	-	-
\$100+-----	2	1.1	1	0.6	-	-	-	-	1	0.5	-	-

Table IV. Comparison of NHS and NORC reports of doctor expenses, by interval of expenditures: 1960

NORC interval of expenditures	NHS interval of expenditures													
	Total		\$0		\$1-24		\$25-49		\$50-99		\$100-199		\$200+	
	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent
	Total													
Total-----	1,203	100.0	535	44.5	338	28.1	129	10.7	88	7.3	68	5.7	45	3.7
\$0-----	533	44.3	409	34.0	90	7.5	17	1.4	12	1.0	5	0.4	-	-
\$1-24-----	377	31.3	97	8.0	208	17.3	42	3.5	23	1.9	5	0.4	2	0.2
\$25-49-----	111	9.3	16	1.4	27	2.2	52	4.3	13	1.1	2	0.2	1	0.1
\$50-99-----	82	6.8	7	0.6	10	0.8	11	0.9	33	2.7	16	1.4	5	0.4
\$100-199-----	68	5.6	5	0.4	3	0.3	7	0.6	7	0.6	31	2.5	15	1.2
\$200+-----	32	2.7	1	0.1	-	-	-	-	-	-	9	0.8	22	1.8
	Direct interview													
Total-----	586	100.0	234	40.0	188	32.1	60	10.2	46	7.9	39	6.6	19	3.2
\$0-----	239	40.8	179	30.6	49	8.4	2	0.4	5	0.9	3	0.5	-	-
\$1-24-----	190	32.4	42	7.2	113	19.3	19	3.2	14	2.4	2	0.3	-	-
\$25-49-----	62	10.5	7	1.2	16	2.7	30	5.1	6	1.0	2	0.4	1	0.1
\$50-99-----	41	7.0	3	0.5	7	1.2	6	1.0	17	2.9	7	1.2	1	0.2
\$100-199-----	39	6.6	3	0.5	3	0.5	3	0.5	4	0.7	19	3.2	7	1.2
\$200+-----	16	2.7	-	-	-	-	-	-	-	-	6	1.0	10	1.7
	Self-enumeration													
Total-----	617	100.0	301	48.8	150	24.3	69	11.2	42	6.8	29	4.7	26	4.2
\$0-----	295	47.8	230	37.3	41	6.6	15	2.5	7	1.1	2	0.3	-	-
\$1-24-----	187	30.3	55	8.9	95	15.4	23	3.7	9	1.5	3	0.5	2	0.3
\$25-49-----	49	7.9	9	1.4	11	1.8	22	3.6	7	1.1	-	-	-	-
\$50-99-----	41	6.7	4	0.7	3	0.5	5	0.8	16	2.6	9	1.5	4	0.6
\$100-199-----	29	4.7	2	0.3	-	-	4	0.6	3	0.5	12	1.9	8	1.3
\$200+-----	16	2.6	1	0.2	-	-	-	-	-	-	3	0.5	12	2.0
	Self-enumeration--passed edit													
Total-----	437	100.0	215	49.2	106	24.3	53	12.1	33	7.5	20	4.6	10	2.3
\$0-----	205	46.9	163	37.3	27	6.2	9	2.1	5	1.1	1	0.2	-	-
\$1-24-----	128	29.3	39	8.9	67	15.3	16	3.6	4	0.9	2	0.5	-	-
\$25-49-----	44	10.1	7	1.6	9	2.1	21	4.8	7	1.6	-	-	-	-
\$50-99-----	33	7.6	3	0.7	3	0.7	4	0.9	14	3.2	7	1.6	2	0.5
\$100-199-----	18	4.1	2	0.5	-	-	3	0.7	3	0.7	8	1.8	2	0.4
\$200+-----	9	2.0	1	0.2	-	-	-	-	-	-	2	0.5	6	1.4
	Self-enumeration--failed edit													
Total-----	180	100.0	86	47.7	44	24.5	16	8.9	9	5.0	9	5.0	16	8.9
\$0-----	90	50.0	67	37.2	14	7.8	6	3.4	2	1.1	1	0.5	-	-
\$1-24-----	59	32.8	16	8.8	28	15.6	7	3.9	5	2.8	1	0.6	2	1.1
\$25-49-----	5	2.8	2	1.2	2	1.1	1	0.5	-	-	-	-	-	-
\$50-99-----	8	4.4	1	0.5	-	-	1	0.6	2	1.1	2	1.1	2	1.1
\$100-199-----	11	6.1	-	-	-	-	1	0.5	-	-	4	2.2	6	3.3
\$200+-----	7	3.9	-	-	-	-	-	-	-	-	1	0.6	6	3.4

Table V. Comparison of NHS and NORC reports of medicine expenses, by interval of expenditures: 1960

NORC interval of expenditures	NHS interval of expenditures									
	Total		Under \$25 ¹		\$25-49		\$50-99		\$100+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Total									
Total-----	1,203	100.0	920	76.5	142	11.8	90	7.5	51	4.2
Under \$25-----	888	73.8	794	66.0	67	5.5	26	2.2	1	0.1
\$25-49-----	173	14.4	91	7.6	53	4.4	23	1.9	6	0.5
\$50-99-----	92	7.6	30	2.5	18	1.5	30	2.5	14	1.1
\$100+-----	50	4.2	5	0.4	4	0.4	11	0.9	30	2.5
	Direct interview									
Total-----	586	100.0	442	75.4	75	12.8	43	7.4	26	4.4
Under \$25-----	432	73.7	382	65.1	36	6.2	14	2.4	-	-
\$25-49-----	88	15.0	48	8.2	30	5.1	10	1.7	-	-
\$50-99-----	38	6.5	10	1.8	7	1.2	13	2.2	8	1.3
\$100+-----	28	4.8	2	0.3	2	0.3	6	1.1	18	3.1
	Self-enumeration									
Total-----	617	100.0	478	77.4	67	10.9	47	7.6	25	4.1
Under \$25-----	456	73.9	412	66.7	31	5.1	12	1.9	1	0.2
\$25-49-----	85	13.8	43	7.0	23	3.7	13	2.1	6	1.0
\$50-99-----	54	8.8	20	3.2	11	1.8	17	2.8	6	1.0
\$100+-----	22	3.5	3	0.5	2	0.3	5	0.8	12	1.9
	Self-enumeration--passed edit									
Total-----	437	100.0	337	77.1	50	11.5	36	8.2	14	3.2
Under \$25-----	329	75.3	302	69.1	19	4.4	8	1.8	-	-
\$25-49-----	58	13.3	22	5.1	21	4.8	11	2.5	4	0.9
\$50-99-----	39	8.9	13	2.9	9	2.1	14	3.2	3	0.7
\$100+-----	11	2.5	-	-	1	0.2	3	0.7	7	1.6
	Self-enumeration--failed edit									
Total-----	180	100.0	141	78.3	17	9.5	11	6.1	11	6.1
Under \$25-----	127	70.6	110	61.1	12	6.7	4	2.2	1	0.6
\$25-49-----	27	15.0	21	11.7	2	1.1	2	1.1	2	1.1
\$50-99-----	15	8.3	7	3.9	2	1.1	3	1.7	3	1.6
\$100+-----	11	6.1	3	1.6	1	0.6	2	1.1	5	2.8

¹No expense included in this category. See explanation under medicine expenses on page 11.

Table VI. Comparison of NHS and NORC reports of dental expenses, by interval of expenditures: 1960

NORC interval of expenditures	NHS interval of expenditures											
	Total		\$0		\$1-24		\$25-49		\$50-99		\$100+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Total											
Total-----	1,203	100.0	774	64.3	214	17.8	105	8.7	44	3.7	66	5.5
\$0-----	773	64.3	709	58.9	41	3.4	14	1.2	3	0.3	6	0.5
\$1-24-----	247	20.5	52	4.3	156	13.0	33	2.7	5	0.4	1	0.1
\$25-49-----	76	6.3	6	0.5	13	1.1	45	3.7	10	0.8	2	0.2
\$50-99-----	51	4.2	2	0.2	3	0.2	10	0.8	23	1.9	13	1.1
\$100+-----	56	4.7	5	0.4	1	0.1	3	0.3	3	0.3	44	3.6
	Direct interview											
Total-----	586	100.0	381	65.0	107	18.3	46	7.8	22	3.8	30	5.1
\$0-----	375	64.0	345	58.9	20	3.4	5	0.8	2	0.4	3	0.5
\$1-24-----	128	21.9	31	5.3	79	13.5	14	2.4	3	0.5	1	0.2
\$25-49-----	37	6.3	2	0.3	6	1.0	21	3.6	7	1.2	1	0.2
\$50-99-----	26	4.4	1	0.2	2	0.4	5	0.8	10	1.7	8	1.3
\$100+-----	20	3.4	2	0.3	-	-	1	0.2	-	-	17	2.9
	Self-enumeration											
Total-----	617	100.0	393	63.7	107	17.3	59	9.6	22	3.6	36	5.8
\$0-----	398	64.5	364	59.0	21	3.4	9	1.5	1	0.2	3	0.4
\$1-24-----	119	19.3	21	3.4	77	12.5	19	3.1	2	0.3	-	-
\$25-49-----	39	6.3	4	0.6	7	1.1	24	3.9	3	0.5	1	0.2
\$50-99-----	25	4.1	1	0.2	1	0.2	5	0.8	13	2.1	5	0.8
\$100+-----	36	5.8	3	0.5	1	0.1	2	0.3	3	0.5	27	4.4
	Self-enumeration--passed edit											
Total-----	437	100.0	275	62.9	68	15.6	49	11.2	15	3.4	30	6.9
\$0-----	277	63.4	256	58.6	12	2.8	7	1.6	1	0.2	1	0.2
\$1-24-----	78	17.8	14	3.1	49	11.2	15	3.5	-	-	-	-
\$25-49-----	32	7.4	2	0.5	5	1.2	21	4.8	3	0.7	1	0.2
\$50-99-----	22	5.0	1	0.2	1	0.2	5	1.1	11	2.5	4	1.0
\$100+-----	28	6.4	2	0.5	1	0.2	1	0.2	-	-	24	5.5
	Self-enumeration--failed edit											
Total-----	180	100.0	118	65.5	39	21.7	10	5.6	7	3.9	6	3.3
\$0-----	121	67.2	108	60.0	9	5.0	2	1.1	-	-	2	1.1
\$1-24-----	41	22.8	7	3.9	28	15.6	4	2.2	2	1.1	-	-
\$25-49-----	7	3.9	2	1.1	2	1.1	3	1.7	-	-	-	-
\$50-99-----	3	1.7	-	-	-	-	-	-	2	1.1	1	0.6
\$100+-----	8	4.4	1	0.5	-	-	1	0.6	3	1.7	3	1.6

Table VII. Comparison of NHS and NORC reports of other health expenses, by interval of expenditures: 1960

NORC interval of expenditures	NHS interval of expenditures											
	Total		\$0		\$1-24		\$25-49		\$50-99		\$100+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Total											
Total-----	1,203	100.0	982	81.6	76	6.3	94	7.8	39	3.3	12	1.0
\$0-----	939	78.0	888	73.8	18	1.5	20	1.6	10	0.9	3	0.2
\$1-24-----	114	9.5	52	4.3	49	4.1	7	0.6	5	0.4	1	0.1
\$25-49-----	102	8.5	32	2.7	8	0.6	54	4.5	7	0.6	1	0.1
\$50-99-----	37	3.1	10	0.8	1	0.1	12	1.0	14	1.2	-	-
\$100+-----	11	0.9	-	-	-	-	1	0.1	3	0.2	7	0.6
	Direct interview											
Total-----	586	100.0	479	81.7	38	6.5	44	7.5	18	3.1	7	1.2
\$0-----	462	78.8	439	74.9	6	1.0	10	1.7	5	0.9	2	0.3
\$1-24-----	51	8.7	23	3.9	25	4.3	2	0.3	1	0.2	-	-
\$25-49-----	45	7.7	15	2.6	6	1.0	22	3.8	2	0.3	-	-
\$50-99-----	20	3.4	2	0.3	1	0.2	9	1.5	8	1.4	-	-
\$100+-----	8	1.4	-	-	-	-	1	0.2	2	0.3	5	0.9
	Self-enumeration											
Total-----	617	100.0	503	81.5	38	6.2	50	8.1	21	3.4	5	0.8
\$0-----	477	77.3	449	72.7	12	2.0	10	1.6	5	0.8	1	0.2
\$1-24-----	63	10.2	29	4.7	24	3.9	5	0.8	4	0.7	1	0.1
\$25-49-----	57	9.2	17	2.8	2	0.3	32	5.2	5	0.7	1	0.2
\$50-99-----	17	2.8	8	1.3	-	-	3	0.5	6	1.0	-	-
\$100+-----	3	0.5	-	-	-	-	-	-	1	0.2	2	0.3
	Self-enumeration--passed edit											
Total-----	437	100.0	359	82.2	26	5.9	38	8.7	12	2.7	2	0.5
\$0-----	332	75.9	314	71.8	7	1.6	8	1.8	3	0.7	-	-
\$1-24-----	45	10.3	23	5.3	18	4.1	4	0.9	-	-	-	-
\$25-49-----	42	9.6	14	3.2	1	0.2	23	5.3	4	0.9	-	-
\$50-99-----	16	3.7	8	1.9	-	-	3	0.7	5	1.1	-	-
\$100+-----	2	0.5	-	-	-	-	-	-	-	-	2	0.5
	Self-enumeration--failed edit											
Total-----	180	100.0	144	80.0	12	6.7	12	6.7	9	5.0	3	1.6
\$0-----	145	80.6	135	75.1	5	2.8	2	1.1	2	1.1	1	0.5
\$1-24-----	18	10.0	6	3.3	6	3.3	1	0.6	4	2.2	1	0.6
\$25-49-----	15	8.3	3	1.6	1	0.6	9	5.0	1	0.6	1	0.5
\$50-99-----	1	0.6	-	-	-	-	-	-	1	0.6	-	-
\$100+-----	1	0.5	-	-	-	-	-	-	1	0.5	-	-

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