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CODEBOOKS FOR INSURANCE PREFERENCE FILES: RELATION BETWEEN EXPENSE LIMIT AND PREMIUM

E. S. Bloomfield, L. Y. Weissler, A. B. Holland

October 1986

HEALTH INSURANCE EXPERIMENT

THE RAND CORPORATION

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PREFACE

The codebooks in this volume describe the contents of two data files from the Health Insurance Experiment (HIE), a large social experiment conducted by The RAND Corporation from 1974 to 1982 in six sites across the United States. The experiment was conducted under a grant from the U.S. Department of Health and Human Services. The HIE is issuing a number of data files, grouped in topical series, with associated documentation.

This volume documents the two files in the insurance preference series--survey instruments that gathered information on the amount that experiment participants would be willing to spend on health insurance. The survey instruments were administered to heads of families at the time of exit from the experiment. The files themselves consist of identifying variables for each respondent and question variables from the questionnaires.

The codebooks contained herein are basic references for users of the files. These insurance preference files and codebooks supersede all previously issued experiment data.

ACKNOWLEDGMENTS

The authors would like to thank Christine d'Arc Taylor for writing the introduction to the Health Insurance Experiment that appears as Sec. I of this volume. Betty Amo and Joice Polin provided much needed support in preparing the volume for publication, and Carol Edwards gathered vital information for Secs. II and III. Ann Wang reviewed the document and offered important critical input. Final production of this Note was supervised by Patricia Bedrosian. Last, the authors wish to thank Joseph Newhouse for his guidance and support.

CONTENTS

FIGURES

TABLES

I. INTRODUCTION

This section presents an overview of the Health Insurance Experiment (HIE) and its data collection and file development efforts. It provides essential background for understanding the contents of these codebooks. Section II describes the distinctive features of the data files these codebooks document and the insurance preference series of which they are a part. Section III presents the codebooks themselves.

EXPERIMENTAL DESIGN

The RAND Corporation conducted the Health Insurance Experiment from 1974 to 1982 in six sites across the United States: Dayton, Ohio; Seattle, Washington; Franklin County and Fitchburg, Massachusetts; and Georgetown County and Charleston, South Carolina.[1] The main purpose of the experiment was to assess how varying patients' cost of health services affected their use of services, their satisfaction with health care, the quality of their care, and the state of their health. A related purpose was to study how those outcomes were affected by the mode of delivery--fee for service or health maintenance organization (HMO).[2]

Over the course of the experiment, information of some kind was obtained for 26,148 persons. A total of 24,340 persons were administered a baseline interview (*baseline participants*[3]), of which

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[1]The sites were chosen to represent the four census regions of the country and both urban and rural areas. They also differed in the amount of delay to obtain an appointment, reflecting different degrees of stress on the ambulatory medical care system. Site selection is described in Philip J. Held, *Site Selection Criteria for the Health Insurance Study,* The RAND Corporation, N-2266-HHS, May 1985.

[2]For a discussion of the purposes and design of the HIE, see Joseph P. Newhouse, "A Design for a Health Insurance Experiment," *Inquiry,* Vol. 11, 1974, pp. 5-27. HIE is also called HIS, Health Insurance Study. The terms are synonymous.

[3]This and other distinctive HIE terms are defined in the Glossary at the end of this document.

7,700 were ultimately enrolled.[4] An additional 554 persons were enrolled later, all but a few of them newborns or adopted children under one year of age. Those 8,254 *insured enrollees* were assigned to an *experimental insurance treatment*, and data on their use of health services were collected throughout their period of participation.[5] Another 2,483 *adjunct enrollees* were not assigned to an insurance treatment but resided with insured enrollees or were members of a short-lived control group in Dayton.

Selection of Enrollees

Persons offered enrollment in the experiment represent a random sample from each site, subject to certain eligibility restrictions.[6] They were chosen by a two-stage baseline selection process. In each site an areawide probability sample of dwelling units was drawn. Their occupants were interviewed for eligibility, and those found eligible were questioned in depth about their socioeconomic characteristics and experience with health care (baseline interview).

Eligibility criteria excluded those whose health care delivery systems differed from options available to the general population. The following groups were excluded:

- Those who were eligible for Medicare or would become so during the experiment, i.e., those 62 years of age and older, or younger than 62 but with a Medicare-eligible condition such as end-stage renal disease.
- Those with family incomes over $25,000 (1973 dollars).

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[4]Of the remaining 16,640 persons, the 15,411 who did not enroll are called *baseline-only participants*; the other 1,229 are part of the adjunct enrollee group defined below.

[5]Note that "insured" in HIE terminology only means "assigned to an experimental treatment." By the same token, "uninsured" applies only to a participant not so assigned, not necessarily someone lacking health insurance altogether.

[6]Subject also to slight oversampling of low-income families in Dayton, Massachusetts, and South Carolina.

- Those institutionalized (jail, long-term hospital).
- Veterans with service-connected disabilities.
- Those in the military and their dependents.[7]

Project staff verified the accuracy of the information given by baseline participants with employers and insurance companies.

In the second selection stage, HIE staff drew a representative sample of eligible persons to be offered enrollment and assigned each family to one of the insurance plans described below. A sophisticated technique assured that, across plans, families closely resembled each other in 24 health and socioeconomic characteristics.[8]

Experimental Treatments

Sixteen experimental treatments distinguished between coinsurance rates, delivery systems, and maximum out-of-pocket expenditures. All but one of the treatments were health insurance plans, listed below as A-O. Enrollees who had gone through the baseline selection process were assigned to one of the plans. The remaining treatment involved a control group in Seattle, chosen separately.

Insurance Plans. Plans A-N entailed different degrees of cost sharing under the fee-for-service system. Within each cost-sharing group, listed below, plans also differed by the ceiling placed on maximum expenditure. Plan O involved participation in a prepaid group practice, a traditional type of HMO:

A. Free care (0% coinsurance) (one plan).
B-D. Family pays 25% of its medical bills (25% coinsurance) (three plans).

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[7]Details of HIE eligibility requirements are in Lorraine Clasquin and Marie E. Brown, *Rules of Operation for the Rand Health Insurance Study*, The RAND Corporation, R-1602-HEW, May 1977, Sec. II.

[8]The logic and techniques used to determine optimal sample sizes and assign individual families to experimental plans are described in Carl N. Morris, "A Finite Selection Model for Experimental Design of the Health Insurance Study," *Journal of Econometrics*, Vol. 11, 1979, pp. 43-61.

E-G. 50% coinsurance (three plans).

H-J. 50% coinsurance for dental and outpatient mental health services and 25% coinsurance for all other services (three plans).

K-M. 95% coinsurance (three plans).

N. 95% coinsurance on outpatient services; 0% on hospital care (one plan).[9]

O. 0% coinsurance if care was received at a Seattle HMO, Group Health Cooperative of Puget Sound; 95% if care was received outside the HMO (one plan).

Plans requiring coinsurance (B-N) placed a ceiling on annual out-of-pocket expenditures, above which care was free.[10] In all but one plan (N), the ceiling was a specified percentage of the family's income or a dollar limit, whichever was less. The percentage varied with family income and the dollar limit varied with the plan, as indicated below:

Plan	*Percentage of Family Income*	*Dollar Limit*
B-D	5, 10, or 15	1000/750[11]
E-G	5, 10, or 15	1000
H-J	5, 10, or 15	1000/750
K-M	5, 10, or 15	1000
N	--	150 per individual; 450 per family

[9]During the experiment's first year in Dayton, the provisions of plans A-N differed in two ways: Only plan A covered dental services for adults; and the coinsurance rate on plans K-N was 100 percent instead of 95 percent.

[10]During the experiment's first year in Dayton, expenditures for outpatient mental health care did not apply toward the ceiling.

[11]In plans B-D and H-J the $1000 limit applied during the first two years of enrollment for Dayton families who enrolled from November 1974 to February 1975; and during the first year of enrollment for Seattle families who enrolled from January to September 1976. The $750 limit applied during subsequent enrollment years for the aforementioned families, and during the entire enrollment period for all other families.

HMO Control Group. A random sample of existing members of the Group Health Cooperative (subject to HIE eligibility requirements) was drawn as a control group for the HMO experimental group assigned to plan 0. The control group was formed to compare HMO use by those who had *chosen* that delivery mode (i.e., members of the control group) with use by those experimentally *transferred* to an HMO from the fee-for-service system (i.e., members of the experimental group). Enrollees in the HMO control group continued with the Group Health Cooperative under their prior arrangements but provided the same data as HMO experimental members. With respect to the insurance provider, enrollees assigned to plans A-0 (including the HMO experimental group) were said to be HIE-insured; the HMO control group was termed HMO-insured.

Services Provided

Plans A-0 provided the same comprehensive benefits, including hospital, physician, dental, mental health, visual, and auditory services, drugs (including over-the-counter drugs for certain chronic conditions), and supplies. Services of nonphysician providers, such as audiologists, chiropractors, clinical psychologists, optometrists, physical therapists, and speech therapists, were also covered. The only noteworthy exclusions were nonpreventive orthodontic services, cosmetic surgery for preexisting conditions, and outpatient mental health visits exceeding 52 per year.

Enrollees were able to choose the physicians and other persons who provided their health care. However, if those in the HMO experimental group sought care outside the HMO that was available within, they were responsible for 95 percent of the cost. (For covered services, such as dental or chiropractic, that were unavailable at the HMO, members of the experimental HMO group were fully reimbursed.)

Enrollees in the HMO control group retained whatever benefit package they or their employer had purchased from the HMO. Members of both control and experimental groups were reimbursed 5 percent of the cost of care obtained outside the HMO to encourage the reporting of non-HMO care.

Terms of Enrollment

Families who accepted the insurance plan offered from plans A-O were enrolled in the experiment for either three or five years, the term randomly assigned. All members of the HMO control group were enrolled for five years.

Enrollees assigned any benefits from their existing health insurance policies to the HIE during the time they participated. No family was financially penalized by HIE enrollment. Enrollees were reimbursed for the cost of maintaining their policies, and if their HIE plan could, under any conceivable set of circumstances, provide less coverage than their private policies, they were paid the maximum difference.[12]

Table 1 indicates the timing of enrollment in the experiment and number of enrollees insured immediately after the baseline selection process in each site.

DATA COLLECTION

Over the course of the experiment, extensive data were collected on participants' demographic and economic characteristics, health status, and use of health services. Background information was obtained on local health care costs, providers, and types of services rendered. The data collection instruments are described in Table 2.

Table 2 shows the types of data gathered from the various participant groups. The most extensive data, especially longitudinal data on the use of health services, are available from the 8,254 insured enrollees, who participated in the experiment longest. The 15,411 baseline-only participants provided much demographic and socioeconomic data, as well as information on health status, experience with health care, and health-related attitudes. Limited data were obtained for the 2,483 adjunct enrollees.

Several subcontractors to RAND participated in the data collection effort. Until March 1975, Mathematica, Inc., supervised data collection, administered the insurance plans, and processed claim forms.

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[12]Calculation of the maximum difference is described in Appendix A.

Table 1

HIE ENROLLMENT PERIODS

Site	Number of Enrollees[1]	1974	1975	1976	1977	1978	1979	1980	1981	1982
Dayton	1137	Nov.						Feb.		
3-year	533					Feb.				
5-year	604									
Seattle	3112		Jan.						Sept.	
3-year	1500						Sept.			
5-year	1612									
Fitchburg	723			July					Oct.	
3-year	547						Oct.			
5-year	176									
Franklin Co.	889			July					Oct.	
3-year	649						Oct.			
5-year	240									
Charleston	779			Nov.						Feb.
3-year[2]	571					Nov.				
5-year	208									
Georgetown Co.	1060			Nov.						Feb.
3-year[3]	800					Nov.				
5-year	260									
Total	7700									

NOTE: Timelines mark the month and year in which the first person enrolled in the experiment and the month and year in which the last person left the experiment. Data on use of health services continued to be collected from several groups after the end dates shown here: one year afterward for the Dayton 5-year group and Seattle, Fitchburg, and Franklin County 3-year groups; six months afterward for the Dayton 3-year group.

[1]Numbers refer to enrollees insured immediately after the baseline selection process. An additional 554 persons were enrolled and insured later, nearly all of them newborns or adopted children under 1 year of age. Figures for Seattle include the HMO control group.

[2]Some of these enrollees were also members of a preenrollment group between November 1976 and February 1979. An additional 339 persons participated in the preenrollment phase but did not formally enroll in the experiment.

[3]Some of these enrollees were also members of a preenrollment group between November 1976 and February 1979. An additional 213 persons participated in the preenrollment phase but did not formally enroll in the experiment.

Table 2

PRINCIPAL HIE DATA COLLECTION INSTRUMENTS

Instrument	Topics Covered	Data Collected		
		How	When	From
1. Screening questionnaire [1]	Demographic information to establish basic eligibility	Interview	Beginning of HIE operation in site	Occupants of representative sample of dwelling units on geographic clusters in site
2. Baseline questionnaire, 2 parts	Income, employment Family composition	Interview	4-6 months before enrollment	Baseline participants
	Health status Health care experience and insurance coverage Satisfaction with medical care	Self-administered	4-6 months before enrollment	Baseline participants
3. Enrollment verification form	Changes in family composition, economics, or insurance coverage since baseline questionnaire	Interview	Between administration of baseline questionnaire and enrollment date	Baseline participants determined eligible
4. Medical history questionnaire (MHQ), 3 versions by age group: 0-4 years 5-13 years 14+ years	Form A: health status, attitudes, habits Form B: specific medical disorders	Administered by self or parent [2]	Just before enrollment and exit [3]	Insured enrollees
5. Medical screening examination, 3 versions by age group: 0-2 years 3-13 years 14+ years	Physiologic tests	Paramedical personnel	Just before enrollment and exit	Sample of insured enrollees at enrollment; all exiting enrollees
6. Health report	Use of medical or dental services and time spent obtaining them; any restricted activity or bed disability	Administered by self or parent	Biweekly during period of participation	Insured enrollees [4]

1. Administered as a separate questionnaire only in Dayton; part of baseline questionnaire in the other sites.
2. When "parent" appears in this column, a parent was asked to provide data for children 13 and younger.
3. "Exit" refers to normal departure from the experiment after completing the assigned enrollment period, three or five years. Those who "attrited," or voluntarily left the experiment early, received an "attrition" MHQ that was identical to the exit MHQ.
4. In the first year of the experiment in Dayton, the health report was administered weekly to a random half of Dayton enrollees. In the first year of the experiment in Massachusetts and South Carolina, 25 percent of enrollees were exempted to measure the reporting requirement's effect on the use of health services. Also at one point virtually all participants stopped filling out health reports, for budgetary reasons.

Table 2 (cont.)

Instrument	Topics Covered	Data Collected		
		How	When	From
7. Health care questionnaire, 3 versions by age group: 0-4 years 5-13 years 14+ years	Health status, attitudes, habits (subset of MHQ)	Administered by self or parent	Each anniversary of enrollment except at exit	Insured enrollees
8. Annual income report	Amount and sources of family income, taxes paid	Self-administered	Annually (April)	Head of insured family
9. Periodic employment report	Wages, hours worked, family payments for care of children or elderly, government program benefits received	Self-administered	Semiannually	Enrollees (head and family members 16 and older)
10. Assets and debts questionnaire	Family assets and liabilities	Self-administered	Exit	Head of insured family
11. Knowledge of coverage questionnaire	Details of HIE insurance plan	Self-administered	Specified intervals [5]	Insured enrollees
12. Insurance abstraction	Details of selected insurance policies	Abstraction	At time of knowledge of coverage questionnaire	Insurance company brochures
13. Chronic condition questionnaire	Status of condition, correctness of diagnosis, adequacy of treatment	Physician interview	At exit medical screening examination	Sample of insured enrollees found to have certain chronic conditions [6]
14. Evaluation questionnaire	Perceptions and attitudes about HIE and health care system	Self-administered	Exit	Head of insured family
15. Health notice	Use of medical or dental services	Administered by self or parent	Biweekly during preenrollment phase (South Carolina); 6 months-1 year after exit (other sites)	Preenrollees (South Carolina), insured enrollees who have exited (other sites)

5. Intended intervals were enrollment, 18 months, 3 years, and 5 years after enrollment (the last only for the 5-year participants). Actual mailings approximated those intervals in Massachusetts and South Carolina; the first mailing was 2-1/2 years and 1 year after enrollment in Dayton and Seattle, respectively.
6. Hypertension, diabetes, thyroid diseases, chronic heart diseases, chronic lung diseases, joint diseases, ulcers, cerebrovascular disease.

Table 2 (cont.)

Instrument	Topics Covered	Data Collected		
		How	When	From
16. Medical expense report (MER)--fee-for-service claim form, 4 types: Doctors' services and supplies Dental care Hospital and extended care Pharmacy	Each use of medical or dental service, drugs, and equipment; reason or diagnosis; treatment	Administered by self or parent	Time of occurrence	Insured enrollees and providers/suppliers
17. Services rendered report (SERR)--HMO equivalent of MER [7], 2 types: Doctors' services and supplies Hospital and extended care	Each use of medical service provided by HMO; reason or diagnosis; treatment	Abstraction	Annually to cover entire previous year	HMO records for insured enrollees in HMO experimental and control groups
18. Factor price survey	Wages and benefits of selected hospital personnel [8], average daily inpatient population	Phone and mail	Semiannually	Sample of local hospitals
19. Consumer price index	Prices of selected nonmedical products in the six HIE sites	Phone and inspection	Semiannually	Sample of local retailers
20. Physician capacity utilization survey (PCUTS)	Availability of services [9]	Phone	Annually	Sample of local physicians [10]
21. Dentist capacity utilization survey (DCUTS)	Similar to PCUTS	Phone	Annually	Sample of local dentists [11]
22. Insurance preference questionnaire	Willingness to pay higher premium to reduce out-of-pocket expense limit	Self-administered	Exit	Head of insured family

7. Pharmacy data were obtained directly from an HMO-supplied computer tape. Dental care was not available through the HMO; HMO participants reported claims for dental care and other non-HMO services on the MER.
8. Categories of personnel: registered nurses (general-duty), medical technicians, licensed professional nurses, nursing aides, kitchen helpers, general stenographers, and maids or porters.
9. Waiting time for appointments; appointments per hour; patients seen in office, home, and hospital; weekend office hours; office staffing; cost of office visit; whether new patients accepted.
10. Physicians (M.D. or D.O.) specializing in general practice, internal medicine, and pediatrics.
11. Except in Fitchburg, Franklin County, and Georgetown County, where all dentists were surveyed.

Thereafter, National Opinion Research Center managed data collection and Glen Slaughter and Associates handled insurance administration and claim processing. American Health Profiles, Inc., conducted the medical screening examinations at enrollment (October 1974 through January 1977); CompuHealth administered those examinations at exit (October 1977 through December 1981).

FILE DEVELOPMENT

Subcontractors sent the collected data to RAND, either in hardcopy form or as cleaned data tapes. At RAND the hardcopy data were encoded for machine readability and subjected to computerized checks for logical consistency and adherence to specified response ranges; outliers were checked only for fidelity to the original response and otherwise left unchanged. Limited cross-checking was done to assess logical consistency among a respondent's answers. All identifiers permitting information to be linked to a specific respondent were replaced twice to protect respondents' privacy.[13] The cleaned records were then arranged in the HIE version of standard computer file format, and the resulting files of *primary variables* made available for HIE analyses.

When an analyst needed information that required manipulation of primary data, *derived variables* were constructed. The analyst and a programmer determined a suitable way of obtaining the information by extracting, aggregating, or transforming primary data, and the programmer wrote the appropriate logic. With the analyst's approval, the new variable was entered on the master file.

Both primary and derived variable files are being issued to the public in a number of topical series. Appendix B provides a complete list of the files to be issued.

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[13]The first conversion was known only to the subcontractor, the second only to RAND. Neither institution could make the full link from the respondent's name to his or her identifier on the analytic files.

The machine-readable tape for each file includes data in both SAS[14] (Statistical Analysis System) and character formats, and an index of character-format variables.[15]

A codebook is also provided for each file. This volume contains the codebooks for the two primary variable files in the insurance preference series. Section II describes the files and the series they constitute. Section III presents the codebooks themselves.

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[14]A registered trademark of the SAS Institute Inc.

[15]These are the components of all files issued by RAND. Other institutions (e.g., National Archives) will distribute these files and may alter their contents.

II. THE INSURANCE PREFERENCE SERIES

This section provides background information concerning the insurance preference questionnaires, two survey instruments that gathered information on the amount experiment participants would be willing to spend on health insurance.

SERIES SAMPLE

Insurance preference questionnaires were self-administered questionnaires given to insured HIE families, excluding the following:

- Experimental and control group families enrolled in an HMO in Seattle, Washington.
- Families enrolled in the "free plan," fee-for-service plan A (0% coinsurance).
- Families who were terminated, i.e., became ineligible or refused to cooperate, or attrited, i.e., left voluntarily.

Questionnaires were fielded at normal exit from the study and were completed by each family's head. Families with two heads received two questionnaires.

Exiting families who did not return the questionnaire are included in the files, with data values listed as missing. The variable FINLSTAT indicates the reason the data are missing, if the reason could be ascertained. FINLSTAT is discussed later in this section.

THE SURVEY INSTRUMENT

There were two separate insurance preference questionnaires: a maximum-dollar-expenditure (MDE) version, and a fixed-dollar-limit (FDL) version. A family's maximum out-of-pocket expenditure, or deductible, was classified as either MDE or FDL, dependent upon the insurance plan in which they were enrolled. MDE was based upon a percentage of total family income, not to exceed a specified ceiling. FDL was a flat dollar figure unrelated to family income, based instead on the number of

individuals in a family, not to exceed $450 per family. A participating family's insurance plan determined the questionnaire version received; families enrolled in plans B-M received the MDE version, plan N received the FDL.[1]

Both questionnaire versions asked the participating families to presume enrollment in a national health insurance plan similar to the experiment plan, with an identical maximum out-of-pocket expenditure as they had at the time of exit. The questionnaires then presented hypothetical offers to reduce the amount of the family expenditure through payment of a specified premium. Three such offers were presented: lowering the family expenditure to two-thirds of the original amount, to one-third, and to zero (free care), with correspondingly higher premiums. The participants were asked whether they would be willing to pay the premium for each hypothetical offer.

The premiums quoted for each offer were randomly generated using an algorithm designed to produce premium quotes ranging from 10 percent of the change in family expenditure to almost 100 percent of the change.[2] As a result of this random generation, families with two heads did not receive two identical sets of offers, despite their having identical maximum out-of-pocket expenditures. Expenditure amounts and premiums were entered by hand on the questionnaires by HIE personnel before their administration to participants.

QUESTIONNAIRE ADMINISTRATION

Insurance preference questionnaires were mailed to the participating families, and the heads were instructed to complete the questionnaires and bring them, along with other exit materials, to the final medical screening examination. All participants received a screening examination at exit.

Exiting families who lived farther than 100 miles from the medical screening examination site were asked to have their own physician

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[1]See Sec. I.

[2]Premium computation is described in M. Susan Marquis and Charles E. Phelps, *Demand for Supplementary Health Insurance*, The RAND Corporation, R-3285-HHS, July 1985.

conduct the medical examination and to return the completed exit questionnaires by mail. Families had to complete both the medical screening examination and all exit questionnaires to receive a completion bonus.

Table 3 lists the dates of administration of the insurance preference questionnaires at all experiment sites. The dates begin with the initial mailing of the questionnaire and end with the completion of follow-up efforts regarding uncompleted screening examinations and partially or noncompleted questionnaires.

Some insurance preference questionnaires were partially, incorrectly, or ambiguously completed and required follow-up contact by the HIE. Such follow-up was done either by telephone or in person at the examination site.

Table 3

QUESTIONNAIRE ADMINISTRATION DATES

Site	Dates
Dayton 3-year	10/01/77-03/13/78
Dayton 5-year	09/28/79-05/08/80
Seattle 3-year	12/26/78-10/25/79
Seattle 5-year	02/02/81-12/01/81
Massachusetts 3-year	05/16/79-01/08/80
Massachusetts 5-year	04/30/81-01/01/82
South Carolina 3- and 5-year	07/28/81-05/01/82

The variable FINLSTAT indicates the status of the questionnaire, including the reasons the questionnaire was not returned, if the reason could be ascertained. Although recontact was attempted whenever questionnaires contained only partial information, such recontacts were

not always successful; in such cases, the partial information from the questionnaire was given for that family head and unanswered questions received a value of "Missing" (.).

RELATED FILES

Demographic and Eligibility Files

To analyze the insurance preference data using particular demographic and eligibility criteria, reference to the *master sample series* will be necessary. Volume 1 in the master sample series provides data concerning eligibility and family changes among enrollees.[3] Volume 2 presents demographic and baseline data for all enrollees and anyone considered for enrollment.[4]

Derived Variable Files

Related series of derived variable files are projected for publication.[5] The *aggregated claims series* presents aggregations of primary-variable data from the *claims line-item series*, including information on yearly health care expenditures and visit totals for each participant. The *health status and attitudes series* and the *medical disorder series* contain derived variables from the *medical history questionnaire* series and other sources, including data on health status, perceptions of general health and satisfaction, and the prevalence of certain medical disorders.

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[3]S. M. Polich and C. d'Arc Taylor, *Master Sample Series, Vol. 1: Codebook for Eligibility-Family Changes File*, The RAND Corporation, N-2264/1-HHS, May 1986.

[4]S. M. Polich et al., *Master Sample Series, Vol. 2: Codebook for Full Sample Demographic File*, The RAND Corporation, N-2264/2-HHS, May 1986.

[5]See Appendix B.

III. THE INSURANCE PREFERENCE CODEBOOKS

The MDE and FDL insurance preference questionnaires are presented in two separate files; codebooks for both files appear in this section.

CODEBOOK CONSTRUCTION

The codebooks describe each variable in the MDE and FDL files. Technical descriptions of each file, including the location and length of each variable, are provided in Appendix C. Variables are of two types: header variables and question variables.

Header Variables

The following eight header variables appear in the data records:

FILENAME	Denotes the particular file
PERSON	Identifies each participant by person number, permitting data to be gathered for a certain person across all files
FAMILY	Identifies the family for which the respondent was the head at time of exit[1]
SITE	Contains codes that identify the site where the participant was enrolled
INSTAT	(Insurance Status); indicates the HIE insurance status of the participant INSTAT = 1 identifies insured participants INSTAT = 2 identifies members of the Seattle HMO control group INSTAT = 3 indicates participants who were never insured

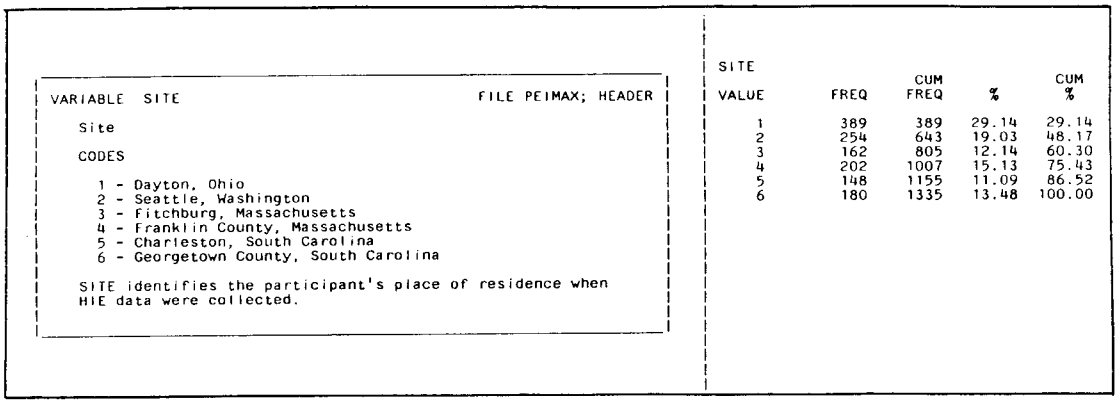
[1]The FAMILY variable changed each time a family's composition changed, thus it should not be used to link the insurance preference files to other data files. Within these files, it may be used to identify families at exit with two heads.

ENRTERM	(Enrollment Term); identifies terms of enrollment of participants
DATE	(Date Received); indicates the date the insurance preference questionnaire was received by the HIE, or the last date of contact with the participant concerning the document
FINLSTAT	(Final Questionnaire Status); indicates the completion status of the questionnaire

In the codebooks, the header variables are set off in boxes as illustrated in Fig. 1.

The box on the left provides a basic description of the variable, including the file name and response codes/definitions. File names for the codebooks in this volume are:

PEIMAX	MDE insurance preference, all sites at exit
PEIFAX	FDL insurance preference, all sites at exit



VARIABLE SITE — FILE PEIMAX; HEADER

Site

CODES

1 - Dayton, Ohio
2 - Seattle, Washington
3 - Fitchburg, Massachusetts
4 - Franklin County, Massachusetts
5 - Charleston, South Carolina
6 - Georgetown County, South Carolina

SITE identifies the participant's place of residence when HIE data were collected.

SITE

VALUE	FREQ	CUM FREQ	%	CUM %
1	389	389	29.14	29.14
2	254	643	19.03	48.17
3	162	805	12.14	60.30
4	202	1007	15.13	75.43
5	148	1155	11.09	86.52
6	180	1335	13.48	100.00

Fig. 1 -- Codebook header variable format

Below the box explanatory notes may appear. To the right of the box for most header variables is a table of response frequencies. The first column lists all response codes appearing for the variable. The

second and third columns show, respectively, the absolute and cumulative response frequencies for each code. The fourth and fifth columns show the corresponding absolute and cumulative percentages.

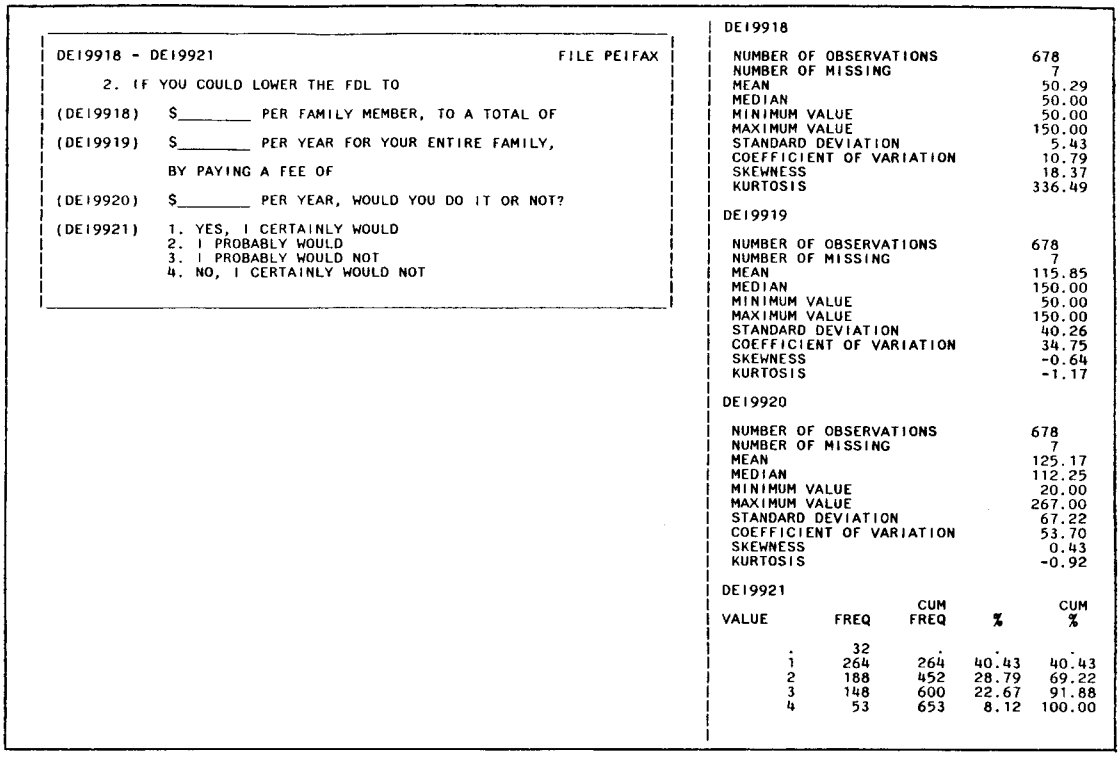
Question Variables

The main body of each codebook consists of the initial supposition of insurance coverage and the related offers to reduce the respondent's deductible by means of a payment of a higher premium. Each codebook follows its respective questionnaire as closely as possible. On the questionnaires, the three offers (i.e., lowering the family maximum expenditure to two-thirds of the original amount, to one-third, and to zero) are identified by question numbers 1-3. In the codebooks, the supposition of coverage and the offers are composed of multiple variables, with each variable identified by a data element indicator (DEI) number.

The supposition and offers are set off in separate variable boxes with the range of corresponding DEI numbers appearing in the upper left. Each DEI number appears to the left of the line in that the variable occurs in the codebook text; see Fig. 2. A table of response frequencies appears to the right of some variable boxes. For variables that consist of dollar amounts, simple univariate descriptive statistics appear to the right of the variable box. Each numeric missing value in the frequencies is denoted by a dot "."; each alphabetic missing value appears as a blank.

Warning

Some questionnaire responses may be improbable as a result of inaccuracies by respondents, or incorrect entry of dollar amounts on the questionnaires by HIE personnel. If a response or dollar amount was outside the normal range for a given question, the questionnaire was inspected to verify that the value on the data files matched the value on the survey instrument. If the response was on the survey instrument, the value was left unchanged.



DE19918 - DE19921 FILE PEIFAX

2. IF YOU COULD LOWER THE FDL TO

(DE19918) $_____ PER FAMILY MEMBER, TO A TOTAL OF

(DE19919) $_____ PER YEAR FOR YOUR ENTIRE FAMILY,

BY PAYING A FEE OF

(DE19920) $_____ PER YEAR, WOULD YOU DO IT OR NOT?

(DE19921) 1. YES, I CERTAINLY WOULD
2. I PROBABLY WOULD
3. I PROBABLY WOULD NOT
4. NO, I CERTAINLY WOULD NOT

DE19918

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	50.29
MEDIAN	50.00
MINIMUM VALUE	50.00
MAXIMUM VALUE	150.00
STANDARD DEVIATION	5.43
COEFFICIENT OF VARIATION	10.79
SKEWNESS	18.37
KURTOSIS	336.49

DE19919

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	115.85
MEDIAN	150.00
MINIMUM VALUE	50.00
MAXIMUM VALUE	150.00
STANDARD DEVIATION	40.26
COEFFICIENT OF VARIATION	34.75
SKEWNESS	-0.64
KURTOSIS	-1.17

DE19920

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	125.17
MEDIAN	112.25
MINIMUM VALUE	20.00
MAXIMUM VALUE	267.00
STANDARD DEVIATION	67.22
COEFFICIENT OF VARIATION	53.70
SKEWNESS	0.43
KURTOSIS	-0.92

DE19921

VALUE	FREQ	CUM FREQ	%	CUM %
.	32	.	.	.
1	264	264	40.43	40.43
2	188	452	28.79	69.22
3	148	600	22.67	91.88
4	53	653	8.12	100.00

Fig. 2 -- Codebook question variable format

THE MAXIMUM-DOLLAR-EXPENDITURE INSURANCE PREFERENCE CODEBOOK

VARIABLE FILENAME — FILE PEIMAX; HEADER

Name of file

FILENAME is a unique 6-character code that identifies this file as PEIMAX (Insurance Preference Questionnaire, MDE version, from 3-year and 5-year exit for all sites).

VARIABLE PERSON — FILE PEIMAX; HEADER

Person identifier

PERSON is an 8-character alphanumeric code that uniquely identifies the HIE participant to whom the following data refer. The second character of PERSON designates the site where the participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.

VARIABLE FAMILY — FILE PEIMAX; HEADER

Family identifier

FAMILY is an 8-character alphanumeric code that uniquely identifies the insured family to which the respondent belonged at exit. The second character of FAMILY designates the site where the family resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.

NOTE: Family identifiers may change between enrollment and exit, therefore this family identifier should not be used to link to other data files.

FILENAME

VALUE	FREQ	CUM FREQ	%	CUM %
PEIMAX	1335	1335	100.00	100.00

VARIABLE SITE FILE PEIMAX; HEADER

Site

CODES

1 - Dayton, Ohio
2 - Seattle, Washington
3 - Fitchburg, Massachusetts
4 - Franklin County, Massachusetts
5 - Charleston, South Carolina
6 - Georgetown County, South Carolina

SITE identifies the participant's place of residence when HIE data were collected.

SITE

VALUE	FREQ	CUM FREQ	%	CUM %
1	389	389	29.14	29.14
2	254	643	19.03	48.17
3	162	805	12.14	60.30
4	202	1007	15.13	75.43
5	148	1155	11.09	86.52
6	180	1335	13.48	100.00

VARIABLE INSTAT FILE PEIMAX; HEADER

Insurance status

CODES

1 - Ever insured
2 - Ever assigned to HMO control group
3 - Never insured

INSTAT describes the participant's insurance status in the Health Insurance Experiment.

INSTAT

VALUE	FREQ	CUM FREQ	%	CUM %
1	1335	1335	100.00	100.00

VARIABLE ENRTERM FILE PEIMAX; HEADER

Enrollment term

CODES

0 - None--person never enrolled
2 - None--participant in PEG period only
3 - 3 years
5 - 5 years

ENRTERM distinguishes the participants who accepted 3-year and 5-year terms of enrollment.

VARIABLE DATE FILE PEIMAX; HEADER

Date received

DATE is the date (YYYYMMDD) a document was received by mail at NORC, received at the examination center, or completed with assistance by telephone or in person (includes retrieval problems). Date range for this file is 19771007 to 19820319.

ENRTERM

VALUE	FREQ	CUM FREQ	%	CUM %
3	883	883	66.14	66.14
5	452	1335	33.86	100.00

VARIABLE FINLSTAT FILE PEIMAX; HEADER

Final questionnaire status

CODES

3 - Not returned; participant deceased
4 - Not returned; participant withdrawn
5 - Not returned; participant moved out of country
6 - Not returned; participant moved/unlocatable
7 - Not returned; participant refused to complete questionnaire
8 - Not returned; field period ended
11 - Completed as received; no follow-up necessary
21 - Completed after recontact
31 - Recontact required, but not obtained
41 - Corrections made by editors
51 - Completed with interviewer assistance, by phone or in person
71 - Recontact required but not attempted due to end of field period
80 - Questionnaire returned after field period; questionnaire blank, no follow-up attempted
81 - Questionnaire returned after field period; at least one question answered, no follow-up attempted

FINLSTAT indicates whether a data collection instrument was completed or returned and whether any follow-up efforts were required. Code values with a "1" in the second column indicate documents that are complete or partially complete.

NOTE: Code values 41-80 were not available for Dayton 3-year exit documents, but are used in all other exit documents, including Dayton 5-year exit.

FINLSTAT

VALUE	FREQ	CUM FREQ	%	CUM %
.	4	4	0.30	0.30
4	3	7	0.23	0.52
6	1	8	0.08	0.60
8	9	17	0.67	1.27
11	1270	1287	95.13	96.40
21	47	1334	3.52	99.93
81	1	1335	0.08	100.00

DEI9901 FILE PEIMAX

SUPPOSE YOU WERE ENROLLED IN A NATIONAL HEALTH INSURANCE PLAN JUST LIKE THE FAMILY HEALTH PROTECTION PLAN, AND YOU HAD THE SAME MAXIMUM DOLLAR EXPENDITURE (MDE), WHICH IS $_____ PER YEAR FOR YOUR FAMILY. (This was the MDE your family had during the most recent year of participation in the FHPP.)

DEI9902 - DEI9904 FILE PEIMAX

1. IF YOU COULD LOWER THE MDE TO

(DEI9902) $_____ BY PAYING A FEE OF

(DEI9903) $_____ PER YEAR, WOULD YOU DO IT OR NOT?

(DEI9904)
1. YES, I CERTAINLY WOULD
2. I PROBABLY WOULD
3. I PROBABLY WOULD NOT
4. NO, I CERTAINLY WOULD NOT

DEI9901

NUMBER OF OBSERVATIONS	1320
NUMBER OF MISSING	15
MEAN	730.82
MEDIAN	750.00
MINIMUM VALUE	0.00
MAXIMUM VALUE	1000.00
STANDARD DEVIATION	275.75
COEFFICIENT OF VARIATION	37.73
SKEWNESS	-0.99
KURTOSIS	0.13

DEI9902

NUMBER OF OBSERVATIONS	1320
NUMBER OF MISSING	15
MEAN	486.99
MEDIAN	500.00
MINIMUM VALUE	0.00
MAXIMUM VALUE	670.00
STANDARD DEVIATION	184.37
COEFFICIENT OF VARIATION	37.86
SKEWNESS	-0.99
KURTOSIS	0.12

DEI9903

NUMBER OF OBSERVATIONS	1319
NUMBER OF MISSING	16
MEAN	51.55
MEDIAN	41.00
MINIMUM VALUE	0.00
MAXIMUM VALUE	200.00
STANDARD DEVIATION	37.37
COEFFICIENT OF VARIATION	72.50
SKEWNESS	1.37
KURTOSIS	1.28

DEI9904

VALUE	FREQ	CUM FREQ	%	CUM %
.	37	.	.	.
1	578	578	44.53	44.53
2	427	1005	32.90	77.43
3	201	1206	15.49	92.91
4	92	1298	7.09	100.00

DEI9905 - DEI9907 FILE PEIMAX

2. IF YOU COULD LOWER THE MDE TO

(DEI9905) $_____ BY PAYING A FEE OF

(DEI9906) $_____ PER YEAR, WOULD YOU DO IT OR NOT?

(DEI9907) 1. YES, I CERTAINLY WOULD
2. I PROBABLY WOULD
3. I PROBABLY WOULD NOT
4. NO, I CERTAINLY WOULD NOT

DEI9905

NUMBER OF OBSERVATIONS	1320
NUMBER OF MISSING	15
MEAN	243.51
MEDIAN	250.00
MINIMUM VALUE	0.00
MAXIMUM VALUE	333.33
STANDARD DEVIATION	91.94
COEFFICIENT OF VARIATION	37.75
SKEWNESS	-1.00
KURTOSIS	0.14

DEI9906

NUMBER OF OBSERVATIONS	1320
NUMBER OF MISSING	15
MEAN	190.18
MEDIAN	161.66
MINIMUM VALUE	0.00
MAXIMUM VALUE	529.00
STANDARD DEVIATION	118.26
COEFFICIENT OF VARIATION	62.18
SKEWNESS	0.98
KURTOSIS	0.50

DEI9907

VALUE	FREQ	CUM FREQ	%	CUM %
.	55	.	.	.
1	370	370	28.91	28.91
2	369	739	28.83	57.73
3	368	1107	28.75	86.48
4	173	1280	13.52	100.00

DEI9908 - DEI9910 FILE PEIMAX

3. IF YOU COULD LOWER THE MDE TO

(DEI9908) $_____ BY PAYING A FEE OF

(DEI9909) $_____ PER YEAR, WOULD YOU DO IT OR NOT?

(DEI9910) 1. YES, I CERTAINLY WOULD
2. I PROBABLY WOULD
3. I PROBABLY WOULD NOT
4. NO, I CERTAINLY WOULD NOT

DEI2514 FILE PEIMAX

I.D. OF HIE PARTICIPANT WHO FILLED OUT THIS FORM

DEI9908

NUMBER OF OBSERVATIONS	1315
NUMBER OF MISSING	20
MEAN	0.40
MEDIAN	0.00
MINIMUM VALUE	0.00
MAXIMUM VALUE	330.00
STANDARD DEVIATION	10.64
COEFFICIENT OF VARIATION	2639.29
SKEWNESS	27.71
KURTOSIS	796.40

DEI9909

NUMBER OF OBSERVATIONS	1320
NUMBER OF MISSING	15
MEAN	326.57
MEDIAN	280.00
MINIMUM VALUE	0.00
MAXIMUM VALUE	893.00
STANDARD DEVIATION	204.96
COEFFICIENT OF VARIATION	62.76
SKEWNESS	0.87
KURTOSIS	0.14

DEI9910

VALUE	FREQ	CUM FREQ	%	CUM %
.	43	.	.	.
1	469	469	36.30	36.30
2	280	749	21.67	57.97
3	314	1063	24.30	82.28
4	229	1292	17.72	100.00

DEI9216 FILE PEIMAX

COMPLETED BY:

1. INFORMATION PROVIDED BY CORRECT RESPONDENT
2. INFORMATION PROVIDED BY SOMEONE ELSE IN FAMILY UNIT
3. INFORMATION PROVIDED BY SOMEONE OUT OF FAMILY UNIT

DEI9216

VALUE	FREQ	CUM FREQ	%	CUM %
.	202	.	.	.
1	1133	1133	100.00	100.00

THE FIXED-DOLLAR-LIMIT INSURANCE PREFERENCE CODEBOOK

VARIABLE FILENAME FILE PEIFAX; HEADER

Name of file

FILENAME is a unique 6-character code that identifies this file as PEIFAX (Insurance Preference Questionnaire, FDL version, from 3-year and 5-year exit for all sites).

VARIABLE PERSON FILE PEIFAX; HEADER

Person identifier

PERSON is an 8-character alphanumeric code that uniquely identifies the HIE participant to whom the following data refer. The second character of PERSON designates the site where the participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.

VARIABLE FAMILY FILE PEIFAX; HEADER

Family identifier

FAMILY is an 8-character alphanumeric code that uniquely identifies the insured family to which the respondent belonged at exit. The second character of FAMILY designates the site where the family resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchbburg; F=Franklin County; G=Charleston; H=Georgetown County.

NOTE: Family identifiers may change between enrollment and exit, therefore this family identifier should not be used to link to other data files.

FILENAME

VALUE	FREQ	CUM FREQ	%	CUM %
PEIFAX	685	685	100.00	100.00

VARIABLE SITE FILE PEIFAX; HEADER

Site

CODES

1 - Dayton, Ohio
2 - Seattle, Washington
3 - Fitchburg, Massachusetts
4 - Franklin County, Massachusetts
5 - Charleston, South Carolina
6 - Georgetown County, South Carolina

SITE identifies the participant's place of residence when HIE data were collected.

SITE

VALUE	FREQ	CUM FREQ	%	CUM %
1	62	62	9.05	9.05
2	166	228	24.23	33.29
3	90	318	13.14	46.42
4	128	446	18.69	65.11
5	96	542	14.02	79.12
6	143	685	20.88	100.00

VARIABLE INSTAT FILE PEIFAX; HEADER

Insurance status

CODES

1 - Ever insured
2 - Ever assigned to HMO control group
3 - Never insured

INSTAT describes the participant's insurance status in the Health Insurance Experiment.

INSTAT

VALUE	FREQ	CUM FREQ	%	CUM %
1	685	685	100.00	100.00

VARIABLE ENRTERM FILE PEIFAX; HEADER

Enrollment term

CODES

0 - None--person never enrolled
2 - None--participant in PEG period only
3 - 3 years
5 - 5 years

ENRTERM distinguishes the participants who accepted 3-year and 5-year terms of enrollment.

VARIABLE DATE FILE PEIFAX; HEADER

Date received

DATE is the date (YYYYMMDD) a document was received by mail at NORC, received at the examination center, or completed with assistance by telephone or in person (includes retrieval problems). Date range for this file is 19771007 to 19820318.

ENRTERM

VALUE	FREQ	CUM FREQ	%	CUM %
3	510	510	74.45	74.45
5	175	685	25.55	100.00

VARIABLE FINLSTAT FILE PEIFAX; HEADER

Final questionnaire status

CODES

3 - Not returned; participant deceased
4 - Not returned; participant withdrawn
5 - Not returned; participant moved out of country
6 - Not returned; participant moved/unlocatable
7 - Not returned; participant refused to complete questionnaire
8 - Not returned; field period ended
11 - Completed as received; no follow-up necessary
21 - Completed after recontact
31 - Recontact required, but not obtained
41 - Corrections made by editors
51 - Completed with interviewer assistance, by phone or in person
71 - Recontact required but not attempted due to end of field period
80 - Questionnaire returned after field period; questionnaire blank, no follow-up attempted
81 - Questionnaire returned after field period; at least one question answered, no follow-up attempted

FINLSTAT indicates whether a data collection instrument was completed or returned and whether any follow-up efforts were required. Code values with a "1" in the second column indicate documents that are complete or partially complete.

NOTE: Code values 41-80 were not available for Dayton 3-year exit documents, but are used in all other exit documents, including Dayton 5-year exit.

FINLSTAT

VALUE	FREQ	CUM FREQ	%	CUM %
4	2	2	0.29	0.29
7	1	3	0.15	0.44
8	5	8	0.73	1.17
11	637	645	92.99	94.16
21	39	684	5.69	99.85
81	1	685	0.15	100.00

DEI9912 - DEI9913 FILE PEIFAX

SUPPOSE YOU WERE ENROLLED IN A NATIONAL HEALTH INSURANCE PLAN JUST LIKE THE FAMILY HEALTH PROTECTION PLAN (FHPP), AND YOU HAD THE SAME FIXED DOLLAR LIMIT (FDL) OF

(DEI9912) $_____ PER YEAR FOR EACH FAMILY MEMBER,

TO A TOTAL OF

(DEI9913) $_____ PER YEAR FOR YOUR ENTIRE FAMILY.

DEI9912

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	150.88
MEDIAN	150.00
MINIMUM VALUE	150.00
MAXIMUM VALUE	450.00
STANDARD DEVIATION	16.28
COEFFICIENT OF VARIATION	10.79
SKEWNESS	18.37
KURTOSIS	336.49

DEI9913

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	347.57
MEDIAN	450.00
MINIMUM VALUE	150.00
MAXIMUM VALUE	450.00
STANDARD DEVIATION	120.76
COEFFICIENT OF VARIATION	34.75
SKEWNESS	-0.64
KURTOSIS	-1.17

DEI9914 - DEI9917 FILE PEIFAX

1. IF YOU COULD LOWER THE FDL TO

(DEI9914) $_____ PER FAMILY MEMBER, TO A TOTAL OF

(DEI9915) $_____ PER YEAR FOR YOUR ENTIRE FAMILY,

BY PAYING A FEE OF

(DEI9916) $_____ PER YEAR, WOULD YOU DO IT OR NOT?

(DEI9917) 1. YES, I CERTAINLY WOULD
2. I PROBABLY WOULD
3. I PROBABLY WOULD NOT
4. NO, I CERTAINLY WOULD NOT

DEI9914

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	100.66
MEDIAN	100.00
MINIMUM VALUE	100.00
MAXIMUM VALUE	300.00
STANDARD DEVIATION	11.02
COEFFICIENT OF VARIATION	10.95
SKEWNESS	17.67
KURTOSIS	316.78

DEI9915

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	231.50
MEDIAN	300.00
MINIMUM VALUE	100.00
MAXIMUM VALUE	300.00
STANDARD DEVIATION	80.53
COEFFICIENT OF VARIATION	34.79
SKEWNESS	-0.63
KURTOSIS	-1.18

DEI9916

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	45.30
MEDIAN	38.00
MINIMUM VALUE	5.00
MAXIMUM VALUE	103.00
STANDARD DEVIATION	27.04
COEFFICIENT OF VARIATION	59.68
SKEWNESS	0.50
KURTOSIS	-0.90

DEI9917

VALUE	FREQ	CUM FREQ	%	CUM %
.	24	.	.	.
1	325	325	49.17	49.17
2	223	548	33.74	82.91
3	86	634	13.01	95.92
4	27	661	4.09	100.00

DEI9918 - DEI9921 FILE PEIFAX

2. IF YOU COULD LOWER THE FDL TO

(DEI9918) $_____ PER FAMILY MEMBER, TO A TOTAL OF

(DEI9919) $_____ PER YEAR FOR YOUR ENTIRE FAMILY,

BY PAYING A FEE OF

(DEI9920) $_____ PER YEAR, WOULD YOU DO IT OR NOT?

(DEI9921) 1. YES, I CERTAINLY WOULD
2. I PROBABLY WOULD
3. I PROBABLY WOULD NOT
4. NO, I CERTAINLY WOULD NOT

DEI9918

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	50.29
MEDIAN	50.00
MINIMUM VALUE	50.00
MAXIMUM VALUE	150.00
STANDARD DEVIATION	5.43
COEFFICIENT OF VARIATION	10.79
SKEWNESS	18.37
KURTOSIS	336.49

DEI9919

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	115.85
MEDIAN	150.00
MINIMUM VALUE	50.00
MAXIMUM VALUE	150.00
STANDARD DEVIATION	40.26
COEFFICIENT OF VARIATION	34.75
SKEWNESS	-0.64
KURTOSIS	-1.17

DEI9920

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	125.17
MEDIAN	112.25
MINIMUM VALUE	20.00
MAXIMUM VALUE	267.00
STANDARD DEVIATION	67.22
COEFFICIENT OF VARIATION	53.70
SKEWNESS	0.43
KURTOSIS	-0.92

DEI9921

VALUE	FREQ	CUM FREQ	%	CUM %
.	32	.	.	.
1	264	264	40.43	40.43
2	188	452	28.79	69.22
3	148	600	22.67	91.88
4	53	653	8.12	100.00

DE19922 - DE19925 FILE PEIFAX

3. IF YOU COULD LOWER THE FDL TO

(DE19922) $_____ PER FAMILY MEMBER, TO A TOTAL OF

(DE19923) $_____ PER YEAR FOR YOUR ENTIRE FAMILY,

BY PAYING A FEE OF

(DE19924) $_____ PER YEAR, WOULD YOU DO IT OR NOT?

(DE19925) 1. YES, I CERTAINLY WOULD
2. I PROBABLY WOULD
3. I PROBABLY WOULD NOT
4. NO, I CERTAINLY WOULD NOT

DE19922

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	0.15
MEDIAN	0.00
MINIMUM VALUE	0.00
MAXIMUM VALUE	100.00
STANDARD DEVIATION	3.84
COEFFICIENT OF VARIATION	2603.84
SKEWNESS	26.04
KURTOSIS	678.00

DE19923

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	0.00
MEDIAN	0.00
MINIMUM VALUE	0.00
MAXIMUM VALUE	0.00
STANDARD DEVIATION	0.00
COEFFICIENT OF VARIATION	.
SKEWNESS	.
KURTOSIS	.

DE19924

NUMBER OF OBSERVATIONS	678
NUMBER OF MISSING	7
MEAN	204.85
MEDIAN	180.00
MINIMUM VALUE	20.00
MAXIMUM VALUE	443.00
STANDARD DEVIATION	113.32
COEFFICIENT OF VARIATION	55.32
SKEWNESS	0.45
KURTOSIS	-0.92

DE19925

VALUE	FREQ	CUM FREQ	%	CUM %
.	26	.	.	.
1	283	283	42.94	42.94
2	168	451	25.49	68.44
3	112	563	17.00	85.43
4	96	659	14.57	100.00

DEI2514 FILE PEIFAX

I.D. OF HIE PARTICIPANT WHO FILLED OUT THIS FORM

DEI9216 FILE PEIFAX

COMPLETED BY:

1. INFORMATION PROVIDED BY CORRECT RESPONDENT
2. INFORMATION PROVIDED BY SOMEONE ELSE IN FAMILY UNIT
3. INFORMATION PROVIDED BY SOMEONE OUT OF FAMILY UNIT

DEI9216

VALUE	FREQ	CUM FREQ	%	CUM %
.	9	.	.	.
1	675	675	99.85	99.85
2	1	676	0.15	100.00

Appendix A
PARTICIPATION INCENTIVE PAYMENTS

HIE-insured families were paid a participation incentive (PI) if their HIE plans could conceivably impose a greater financial burden than their existing health insurance policies.[1] Calculated yearly, the PI consisted of (1) an amount calculated to be the *maximum* difference between what the family would have to pay for health care under its HIE insurance plan and what it would have paid under its existing insurance plan, unless (2) the premium a family paid to maintain its existing insurance exceeded the maximum difference. In that case, the family was paid an amount equal to the premium payment.

The calculation of item 1 ignored the family's actual medical expenses. To illustrate, consider family X whose HIE plan specified 95 percent coinsurance up to a maximum out-of-pocket expenditure of $450, above which care was free.[2] Family X's existing insurance specified a $100 deductible, above which the family had to pay 20 percent coinsurance. Under its HIE policy, the family had to spend $473.68 for medical services (with the 5 percent reimbursement) to reach the $450 out-of-pocket maximum. For the same charge under its existing insurance, the family would have paid $100 (the deductible) plus 20 percent of the amount between $100 and $473.68. The maximum difference was thus 473.68 - 100 - 0.2 (473.68 - 100) = 298.94. Family X was entitled to $298.94 per year for that portion of its participation incentive.

The total PI could not exceed the MDE specified in the family's HIE plan unless the family's share of its insurance premium exceeded the MDE. For example, if family X paid an insurance premium of $300, its

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[1]Participation incentive payments were not offered to families receiving free care (plan A, described on p. 3) who had no premium to pay, families who had no health insurance before the experiment, and families whose other policies had equal or less generous terms, under all circumstances, than their HIE plan.

[2]In HIE terminology, maximum out-of-pocket expenditure is called "maximum dollar expenditure," or MDE.

total PI entitlement was $450, not $598.94 (300 + 298.94). If the family paid a premium of $600, its PI was $600 because the premium exceeded the MDE of $450. On the other hand, a family who had a high MDE in its HIE plan and an existing insurance policy with 0 percent coinsurance, no deductible, and an employer-paid premium was entitled to the full MDE amount. The purpose of PI payments was to ensure that a family was no worse off financially by participating in the experiment--whether because of the cost of its insurance premium or the "worse" terms of its HIE insurance plan compared with its existing policy.[3]

As encouragement for families to complete their assigned enrollment terms, a portion of the family's annual PI was withheld until the last year of the term.[4] The family received its full annual PI that last year, and the amount previously withheld was paid as part of a completion bonus when the family completed the physical screening examination and medical health questionnaire at exit.[5]

To measure enrollees' responsiveness to PI payments, a subset of families received their full annual PI in the next-to-last, as well as the last, year of their term. That "super PI bonus" was offered to 44.4 percent of the families assigned to insurance plans requiring 95 percent coinsurance, the highest rate (plans K-N, described on pp. 3-4). Super PI

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[3]Calculation of PI is further described in Clasquin and Brown, op. cit. The formula on p. 20 of that report should read PI = max[K x PG, PR].

[4]The percentage of PI withheld depended on the site and assigned enrollment term, as follows:

	3-yr Term	*5-yr Term*
Dayton	25	15
Seattle	25	15
Fitchburg	33.3	25
Franklin Co.	33.3	25
Charleston	33.3	20
Georgetown Co.	33.3	20

If the discounted PI was not enough to reimburse the cost of the family's insurance premium, however, the family received the full amount of its premium. The difference between the premium and the discounted PI was then subtracted from the withheld amount.

[5]The rest of the completion bonus was the largest annual PI to which the family had been entitled during its enrollment (minus the withheld amount) or $120, whichever was greater.

recipients represented all sites and both terms of enrollment except Dayton enrollees assigned to three-year terms, who had already begun their next-to-last year when super PI was instituted. Within the 95 percent coinsurance plans, super PI recipients were chosen using the "finite selection model." That model was developed by RAND to assign enrollees to experimental insurance plans so that, across plans, families resembled each other in 24 health and socioeconomic characteristics.[6]

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[6]The finite selection model is described in Carl N. Morris, "A Finite Selection Model for Experimental Design of the Health Insurance Study," *Journal of Econometrics*, Vol. 11, 1979, pp. 43-61.

Appendix B
HIE DATA FILES

This appendix identifies the data files that the HIE has either issued or expects to issue, grouped in topical series. As a tape of each file is issued, a companion codebook is published as a RAND Note. One Note may contain the codebooks for several files. In addition to issuing files and codebooks, HIE staff will prepare a user's guide to provide assistance in understanding and using the HIE database for analysis.

The list below cites codebooks for the files that have been issued, and file names for those not yet issued. At this time it is impossible to predict exact issue dates for future files and codebooks. This preliminary list is to alert prospective users to the variety of subject matter covered by the HIE database and to the existence of related files that should be used together.

Before ordering a file or codebook, be sure to verify its availability with the RAND Publications Department, using the reference numbers cited below (e.g., MS3).

ISSUED TO DATE

Master Sample Series

MS1. *Vol. 1: Codebook for Eligibility-Family Changes File*, by S. M. Polich and C. d'Arc Taylor, The RAND Corporation, N-2264/1-HHS, May 1986.

MS2. *Vol. 2: Codebook for Full Sample Demographic File*, by S. M. Polich, N. F. Campbell, C. d'Arc Taylor, D. L. Wesley, J. W. Keesey, and E. S. Bloomfield, The RAND Corporation, N-2264/2-HHS, May 1986.

Aggregated Claims Series

AC1. *Vol. 1: Codebook for Fee-for-Service Annual Expenditures and Visit Counts*, by C. E. Peterson, M. Nelsen, and E. S. Bloomfield, The RAND Corporation, N-2360/1-HHS, May 1986.

ISSUED TO DATE (cont.)

AC2-AC4. *Vol. 2: Codebooks for Fee-for-Service Visits--Outpatient, Inpatient, and Dental*, by C. E. Peterson, M. Nelsen, D. L. Wesley, and E. S. Bloomfield, The RAND Corporation, N-2360/2-HHS, June 1986.

AC2. FFS outpatient visits
AC3. FFS inpatient visits
AC4. FFS dental visits

AC5-AC6. *Vol. 3: Codebooks for Fee-for-Service Treatment Episodes and Annual Episode Counts*, by C. E. Peterson, C. d'Arc Taylor, and E. S. Bloomfield, The RAND Corporation, N-2360/3-HHS, June 1986.

AC5. FFS treatment episodes
AC6. FFS annual episode counts

Claims Line-Item Series

LI1-LI14. *Vol. 1: Codebooks for Fee-for-Service Claims*, by C. E. Peterson, M. Nelsen, D. L. Wesley, E. S. Bloomfield, and S. M. Polich, The RAND Corporation, N-2347/1-HHS, June 1986.

LI1. FFS data: hospital inpatient services
LI2. FFS data: inpatient physician procedures billed by institutions
LI3. FFS data: drugs prescribed by physicians
LI4. FFS data: supplies prescribed by physicians
LI5. FFS data: services rendered by physicians
LI6. FFS data: drugs sold by physicians
LI7. FFS data: supplies sold by physicians
LI8. FFS data: injections administered by physicians
LI9. FFS data: outpatient services billed by institutions
LI10. FFS data: services rendered by dentists
LI11. FFS data: drugs prescribed by dentists
LI12. FFS data: drugs purchased
LI13. FFS data: supplies purchased from pharmacies
LI14. FFS data: supplies purchased from nonpharmacy suppliers

LI15-LI25. *Vol. 2: Codebooks for Health Maintenance Organization Claims*, by C. E. Peterson, M. Nelsen, E. S. Bloomfield, D. L. Wesley, and A. M. Bell, The RAND Corporation, N-2347/2-HHS, August 1986.

LI15. Seattle HMO data: hospital inpatient services
LI16. Seattle HMO data: inpatient physician services
LI17. Seattle HMO data: drugs prescribed by physicians
LI18. Seattle HMO data: supplies prescribed by physicians
LI19. Seattle HMO data: services rendered by physicians
LI20. Seattle HMO data: drugs dispensed by physicians
LI21. Seattle HMO data: supplies dispensed by physicians

ISSUED TO DATE (cont.)

LI22. Seattle HMO data: injections administered by physicians
LI23. Seattle HMO data: outpatient services provided by institutions
LI24. Seattle HMO data: drugs dispensed
LI25. Seattle HMO data: supplies dispensed

LI26-LI29. *Vol. 3: Codebooks for Seattle Fee-for-Service Claims for Comparison with Health Maintenance Organization Claims*, C. E. Peterson, M. Nelsen, and D. L. Wesley, The RAND Corporation, N-2347/3-HHS, October 1986.

LI26. Seattle FFS data for HMO comparison: hospital inpatient services
LI27. Seattle FFS data for HMO comparison: inpatient physician procedures billed by institutions
LI28. Seattle FFS data for HMO comparison: outpatient services rendered by physicians
LI29. Seattle FFS data for HMO comparison: injections administered by physicians

HIE Reference Series

RF1. *Vol. 1: Codes Used in HIE Claims--Diagnoses, Symptoms, Procedures, Drugs, and Supplies*, by M. Nelsen and C. A. Edwards, The RAND Corporation, N-2349/1-HHS, May 1986.

Medical History Questionnaire Series

MH1A-MH3A. *Vol. 1: Codebooks for Adults at Enrollment and Exit, Form A*, by C. A. Edwards, A. B. Holland, L. Y. Weissler, and M. Nelsen, The RAND Corporation, N-2485/1-HHS, August 1986.

MH1A. Dayton adults at enrollment, Form A
MH2A. NonDayton adults at enrollment, Form A
MH3A. Adults at exit, Form A

MH1B-MH3B. *Vol. 2: Codebooks for Adults at Enrollment and Exit, Form B*, by C. A. Edwards, A. B. Holland, L. Y. Weissler, and M. Nelsen, The RAND Corporation, N-2485/2-HHS, October 1986.

MH1B. Dayton adults at enrollment, Form B
MH2B. NonDayton adults at enrollment, Form B
MH3B. Adults at exit, Form B

Insurance Preference

IP1. *Codebooks for Insurance Preference Files: Relation between Expense Limit and Premium*, by E. S. Bloomfield, L. Y. Weissler, and A. B. Holland, The RAND Corporation, N-2508-HHS, October 1986.

TO BE ISSUED

Master Sample Series

MS3. Supplemental data file

Aggregated Claims Series

AC7. HMO and Seattle FFS annual expenditures and visit counts

AC8. HMO and Seattle FFS outpatient visits

AC9. HMO and Seattle FFS inpatient visits

HIE Reference Series

RF2. Providers cited in HIE data

RF3. User's guide to HIE data

Medical Disorder Series

MD1. Adult medical disorders at enrollment and exit

MD2. Infant and child medical disorders at enrollment and exit

Health Status and Attitude Series

HS1. Adults at enrollment and exit

HS2. Children at enrollment and exit

Medical History Questionnaire Series

MH4A. Dayton children at enrollment, Form A

MH4B. Dayton children at enrollment, Form B

MH5A. NonDayton children at enrollment, Form A

MH5B. NonDayton children at enrollment, Form B

MH6A. Children at exit, Form A

MH6B. Children at exit, Form B

MH7A. Dayton infants at enrollment, Form A

MH7B. Dayton infants at enrollment, Form B

TO BE ISSUED (cont.)

MH8A. NonDayton infants at enrollment, Form A

MH8B. NonDayton infants at enrollment, Form B

MH9A. Infants at exit, Form A

MH9B. Infants at exit, Form B

Dental Examinations

DE1. Adults and children at enrollment and exit

Appendix C
FILE DICTIONARIES

This appendix describes the character versions of the insurance preference files in technical terms. Each dictionary has three parts: basic identifying data, a list of variables by alphabetic order, and a listing by location.

Table C.1

MAXIMUM DOLLAR EXPENDITURES: BASIC IDENTIFYING DATA

Data file name	PEIMAX01.PUF.DATA
Creation Date	August 14, 1986
Variable format	Character
Total number of data elements	21
Header length (bytes)	40
Primary data length (bytes)	96
Record length (bytes)	136

Table C.2

MAXIMUM DOLLAR EXPENDITURES:
LISTING BY ALPHABETIC ORDER

Name	Location	Length	Type
DATE	26	8	A
DEI2514	121	8	A
DEI9216	129	8	I
DEI9901	41	8	F
DEI9902	49	8	F
DEI9903	57	8	F
DEI9904	65	8	I
DEI9905	73	8	F
DEI9906	81	8	F
DEI9907	89	8	I
DEI9908	97	8	F
DEI9909	105	8	F
DEI9910	113	8	I
ENRTERM	25	1	A
FAMILY	15	8	A
FILENAME	1	6	A
FILLER	36	5	A
FINLSTAT	34	2	A
INSTAT	24	1	A
PERSON	7	8	A
SITE	23	1	A

Table C.3

MAXIMUM DOLLAR EXPENDITURES:
LISTING BY LOCATION

Name	Location	Length	Type
FILENAME	1	6	A
PERSON	7	8	A
FAMILY	15	8	A
SITE	23	1	A
INSTAT	24	1	A
ENRTERM	25	1	A
DATE	26	8	A
FINLSTAT	34	2	A
FILLER	36	5	A
DEI9901	41	8	F
DEI9902	49	8	F
DEI9903	57	8	F
DEI9904	65	8	I
DEI9905	73	8	F
DEI9906	81	8	F
DEI9907	89	8	I
DEI9908	97	8	F
DEI9909	105	8	F
DEI9910	113	8	I
DEI2514	121	8	A
DEI9216	129	8	I

NOTE: "Type" refers to whether the variable values are alphanumeric (A), integer (I), or fixed-decimal in 8.2 format (F). Missing values are represented differently for each type: A = bbbbbbbb, I = bbbbbb., and F = bbbbb.bb ("b" meaning blank). To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integers.

Table C.4

FIXED DOLLAR AMOUNT: BASIC IDENTIFYING DATA

Data file name	PEIFAX01.PUF.DATA
Creation Date	August 15, 1986
Variable format	Character
Total number of data elements	25
Header length (bytes)	40
Primary data length (bytes)	128
Record length (bytes)	168

Table C.5

FIXED DOLLAR AMOUNT:
LISTING BY ALPHABETIC ORDER

Name	Location	Length	Type
DATE	26	8	A
DEI2514	153	8	A
DEI9216	161	8	I
DEI9912	41	8	F
DEI9913	49	8	F
DEI9914	57	8	F
DEI9915	65	8	F
DEI9916	73	8	F
DEI9917	81	8	I
DEI9918	89	8	F
DEI9919	97	8	F
DEI9920	105	8	F
DEI9921	113	8	I
DEI9922	121	8	F
DEI9923	129	8	F
DEI9924	137	8	F
DEI9925	145	8	I
ENRTERM	25	1	A
FAMILY	15	8	A
FILENAME	1	6	A
FILLER	36	5	A
FINLSTAT	34	2	A
INSTAT	24	1	A
PERSON	7	8	A
SITE	23	1	A

Table C.6

FIXED DOLLAR AMOUNT:
LISTING BY LOCATION

Name	Location	Length	Type
FILENAME	1	6	A
PERSON	7	8	A
FAMILY	15	8	A
SITE	23	1	A
INSTAT	24	1	A
ENRTERM	25	1	A
DATE	26	8	A
FINLSTAT	34	2	A
FILLER	36	5	A
DEI9912	41	8	F
DEI9913	49	8	F
DEI9914	57	8	F
DEI9915	65	8	F
DEI9916	73	8	F
DEI9917	81	8	I
DEI9918	89	8	F
DEI9919	97	8	F
DEI9920	105	8	F
DEI9921	113	8	I
DEI9922	121	8	F
DEI9923	129	8	F
DEI9924	137	8	F
DEI9925	145	8	I
DEI2514	153	8	A
DEI9216	161	8	I

NOTE: "Type" refers to whether the variable values are alphanumeric (A), integer (I), or fixed-decimal in 8.2 format (F). Missing values are represented differently for each type: A = bbbbbbbb, I = bbbbbbb., and F = bbbbb.bb ("b" meaning blank). To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integers.

GLOSSARY

Adjunct enrollee	Uninsured member of insured family/household (person/family of interest) or member of Dayton control group.
Attrition	Departure from the experiment by voluntary withdrawal before completion of assigned enrollment term.
Baseline participant	Person considered for enrollment at the beginning of the experiment in the site. May or may not have enrolled.
Baseline-only participant	Person considered for enrollment at the beginning of the experiment in the site who did not enroll.
Coinsurance	The percentage of total medical costs that a family pays, e.g., 25% coinsurance means the family pays 25% of its medical expenses. The experimental insurance treatments of the HIE entailed varying coinsurance percentages.
Dayton control group	Group of 669 uninsured enrollees who participated from November 1974 to February 1976. Formed to compare the community's use of health services with use by insured Dayton enrollees. Members retained their own insurance but were asked to complete the same questionnaires as insured enrollees. Group was discontinued because complete data appeared unobtainable from them. Not included in eligibility-family changes file (see Appendix B).
DEI	A variable prefix for primary variables that stands for "data element indicator."
Derived variable	Variables constructed via extraction, aggregation, or transformation of primary variable data.
Enrollee	Person whose family or household signed an enrollment contract with the HIE. Includes insured and uninsured persons. Any of the following: HIE-insured, HMO-insured, person of interest, family of interest, member of Dayton control group. (See "primary enrollee", "secondary enrollee", "adjunct enrollee".)
Exit	Departure from the experiment after completion of assigned enrollment term, three or five years.

Experimental insurance treatment	One of 16 groups in which experimental subjects participated. Fifteen were insurance plans with varying coinsurance rates, out-of-pocket expenditure limits, and both FFS and HMO delivery systems. The 16th was the HMO control group.
FDL	Fixed Dollar Limit; insurance plan in which a family's maximum out-of-pocket expenditure was a flat dollar figure based on the number of individuals in the family. The expenditure was $150 per person to a maximum of $450 per family.
FFS	Fee-for-service; the private economic sector in which fees are charged.
GHC	Group Health Cooperative of Puget Sound, the Seattle HMO that participated in the experiment.
HIE	Health Insurance Experiment.
HIE-insured	Enrollee assigned to an experimental health insurance plan paid by the HIE (plans A-0, described on pp. 3-4). Includes members of HMO experimental group. Compare "HMO-insured."
HMO	Health maintenance organization; Group Health Cooperative of Puget Sound, the HMO that participated in the HIE.
HMO control group	Seattle enrollees drawn at random from existing HMO members who met HIE eligibility criteria. The HIE did not pay their insurance premiums.
HMO experimental group	Seattle enrollees experimentally transferred to HMO from fee-for-service system. The HIE paid their insurance premiums.
HMO-insured	Member of HMO control group.
MDE	Maximum Dollar Expenditure; refers to insurance plans in which a family's maximum out-of-pocket expenditure was based upon a percentage of total family income, not to exceed a specified limit.
MHQ	Medical history questionnaire; survey instruments that gathered self-reported health status and health satisfaction information primarily from insured participants. Survey instruments consisted of two separate forms, Form A and Form B.

NonDayton	Pertaining to any of the experiment sites excluding Dayton, Ohio.
Participant	Anyone with a record in the HIE database; includes baseline-only participants and enrollees.
PEG	South Carolina preenrollment group.
Primary enrollee	Baseline participant who enrolled and was insured.
Primary variable	Categories of primary HIE data obtained from the MHQs. See also "derived variable."
Provider	Any person, institution, or organization who provided health services, drugs, or supplies to an HIE participant.
SAS	Statistical Analysis System. HIE files contain data in both SAS and character formats.
Secondary enrollee	Person who was enrolled and insured after his/her family enrolled.
Suspension	Revocation of HIE-provided insurance benefits because of ineligibility expected to be temporary. Suspended persons remained enrollees.
Termination	Involuntary departure from the experiment. Cancellation of enrollment for permanent ineligibility or failure to fulfill obligations.
Uninsured	Neither HIE-insured nor HMO-insured. Person/family of interest or member of Dayton control group. Uninsured persons did not necessarily lack health insurance; they were uninsured only with respect to HIE experimental treatments.