N-2349/2-HHS

HIE REFERENCE SERIES

Volume 2: PROVIDERS CITED IN HIE DATA

S. M. Polich, M. Nelsen, D. L. Wesley

June 1987

HEALTH INSURANCE EXPERIMENT

THE RAND CORPORATION

The research reported herein was performed pursuant to Grant No. 016B-8001 from the U.S. Department of Health and Human Services, Washington, D.C.

Published by The RAND Corporation
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138

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PREFACE

This Note describes the contents of a data file from the Health Insurance Experiment (HIE), a major social experiment conducted by The RAND Corporation from 1974 to 1982 under a grant from the U.S. Department of Health and Human Services. The experiment assessed how variations in patients' share of health care costs, as determined by insurance plan, affected their use of health services, their satisfaction with care, the quality of their care, and the state of their health. A related purpose was to study how those outcomes were influenced by the mode of delivery, i.e., fee for service or health maintenance organization. RAND is issuing a number of HIE data files on tape, grouped in topical series, with associated documentation.

This Note documents the contents of the provider file. The provider file contains selected information concerning health professionals located within the six sites of the HIE. The bulk of this information pertains to the types of practices, the professional specialties, and the professional affiliations of providers who were members of the American Medical Association (AMA), American Osteopathic Association (AOA), or American Dental Association (ADA). This information may be of use to researchers who wish to know more about the professional backgrounds of these types of providers.

ACKNOWLEDGMENTS

We would like to acknowledge the contributions of several people. Susan Marquis and Joan Keesey designed and created the original provider file. We are indebted to Judith Fischer for a thorough and helpful review. Our thanks are also extended to Christine d'Arc Taylor, who wrote the first section of this Note. Mary Stout expertly prepared the document for publication and Patricia Bedrosian supervised the production of this Note. Finally, we want to thank Joseph Newhouse for his guidance and support.

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FIGURE

TABLES

I. INTRODUCTION

This section presents an overview of the Health Insurance Experiment (HIE) and its data collection and file development efforts. Here we supply essential background for understanding the contents of the codebook included in this Note. Section II describes the distinctive features of the provider file. Section III presents the codebook itself.

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, No. 1, March 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, No. 1, September 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 amount and 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.

[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]

This volume contains the codebook for the provider file of the *HIE reference series*. Section II provides background information on the file. Section III presents the codebook.

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

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

II. THE PROVIDER FILE

INTRODUCTION

The provider file is a basic reference file that contains selected *professional* information concerning the providers listed in the HIE public use files.[1] "Providers" can be people (e.g., physicians, nurses, dentists, pharmacists, therapists), institutions (e.g., hospitals, clinics, emergency rooms), or organizations (e.g., schools, stores, blood banks).

Each provider record contains a code designating the type and specialty of the provider. If the provider was a Doctor of Medicine, a Doctor of Osteopathy, or a dentist, *and practiced within one of the HIE sites,* additional information concerning that professional's gender, type of practice, specialty, and board certification may be available in the record. Providers located *outside* the experiment sites who provided HIE services (e.g., providers who provided emergency services for participants traveling away from home) are listed in the file only by provider type and specialty.

In some cases, the same provider may be listed multiply in this file with *different* provider identifiers. However, the basic provider information in that provider's multiple records is the same; i.e., such records are duplicate records. Multiple provider identifiers could occur because providers were assigned a new identifier for each practice location (e.g., practitioners with two offices, or institutions that changed addresses) or whenever the status of the practice was changed (e.g., practitioners changing from private to group practice).[2] Thus, a health practitioner or institution may have multiple listings on this file if any of the above conditions applied. Such multiple records can be linked using the variable LINKID, as explained below.

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[1]See Appendix B for a complete list of these files.

[2]New provider identifiers were also assigned in cases where the provider signed his/her name differently.

Depending on the billing practices of the providers, there may be separate provider records both for institutions and the practitioners who rendered service from those institutions (e.g., if the practitioner and the institution billed separately, they will both appear as providers in this file). Such records cannot be linked to each other.

DATA SOURCES

Glen Slaughter and Associates (GS&A), the subcontractor that processed the insurance claims for the HIE, collected and maintained an administrative file of providers. There were two primary sources of provider names:

1. *The name was given in response to a survey question.* During the baseline and enrollment periods, participants were asked to identify the providers (doctors, clinics, hospitals, etc.) from whom they received services in the year before enrollment.
2. *The name was given on a claim form.* Throughout the experiment, participants and providers filed claims.

Data concerning physicians, dentists, or doctors of osteopathy practicing in one of the HIE experimental sites were taken from data tapes supplied by the American Medical Association (AMA), the American Osteopathic Association (AOA), and the American Dental Association (ADA) in 1976. The AMA supplied another data tape in 1981. If a physician was on both the 1976 and 1981 AMA tapes, the information from the 1976 tape was used. Information concerning AOA practitioners and ADA dentists was provided only in 1976, and therefore data for osteopathic practitioners or dentists who provided initial HIE services *after* 1976 appear in this file as "missing."

VARIABLES ON THE PROVIDER FILE

PROVID

Each provider record listed in this file is identified by an eight-character alphanumeric identifier, which is found in the variable PROVID. This identifier allows users to link information about providers with the information contained in the claims databases (claims line-item series and aggregated claims series). As discussed above, there can be more than one PROVID identifier for the same provider. These values can be linked using the linking identifier variable, LINKID.

LINKID

Providers who had more than one provider identifier in PROVID were assigned one of their PROVID identifiers as a central or primary linking identifier; this identifier is found in the variable LINKID. If there is only one record or identifier in PROVID for a given provider, LINKID is blank for that provider.

PROVTYPE

The variable PROVTYPE contains a detailed classification code for the provider. This code was created by GS&A and shows the type of provider (e.g., physician, dentist, nurse, hospital) and the provider's specialty, if appropriate. GS&A used listings provided by the AMA, AOA, ADA, American Podiatry Association, and the American Hospital Association to determine a provider's classification. If the provider was not found in those listings, the provider was called to ascertain the necessary information.

AMA Variables

Ten variables indicate selected professional information concerning physicians, as provided to the HIE by the AMA from the AMA Physician Masterfile. These variables are:

- AMA_FMG indicates if the physician graduated from a foreign medical school.
- AMA_ACT indicates the physician's major professional activity.
- AMA_TYP indicates the physician's type of practice.
- AMA_EMP shows the physician's present employer.
- AMA_SPC1, AMA_SPC2, and AMA_SPC3 list up to three specialties for each physician.
- AMA_BRD1, AMA_BRD2, and AMA_BRD3 list up to three specialty board certifications.

AOA Variables

Seven American Osteopathic Association variables provide information concerning the professional activities of Doctors of Osteopathy. These AOA variables are:

- AOA_AFFL indicates the affiliation of each practitioner, e.g., individual practice, partnership, or group practice.
- AOA_PRIV indicates the percentage of time the doctor is involved in his/her practice.
- AOA_TYPE indicates the doctor's type of practice.
- AOA_SPEC indicates the percentage of time that part-time AOA specialists devote to their specialties.
- AOA_CERT indicates whether the doctor has an active certificate in his/her specialty.
- AOA_INT indicates the specialty interest of an AOA member who is a full- or part-time specialist.
- AOA_OCCU indicates whether the AOA member is in postgraduate study if they are not in private practice.

ADA Variables

Two variables are provided for American Dental Association providers:

- ADA_CODE indicates the ADA membership type of each ADA provider (e.g., intern, resident, student, or life member).
- ADA_PRAC indicates the type of practice of each ADA provider (e.g., general practitioner or oral surgeon).

RELATED FILES

Claims Line-Item Series

The claims line-item series consists of three sets of files containing records of claims filed with the HIE for services, drugs, or supplies rendered to HIE participants. Each claims record lists the provider(s) by the provider i.d. number, the date of the visit, the services rendered by the provider(s), and the charge or imputed charge for each service.

Multiple provider identifiers are used in the claims line-item files, including variables that list (if applicable) the referring physician, the referral physician, the admitting physician, and first and second attending physicians. All of these variables can be linked to PROVID in the provider file. See Appendix B for order information concerning these files.

Aggregated Claims Series

The aggregated claims series, a series of derived-variable files, present data taken from the claims line-item series that have been aggregated in different ways to suit different research purposes. They are discussed more fully in the introductions to the files of the claims line-item series. The fee-for-service (FFS) and health maintenance organization (HMO) visits files each contain several provider identifiers that can be linked to the variable PROVID on the provider file. See Appendix B for order information.

USING THE CODEBOOK

Variable Types

Two "header variables" precede the other variables in the provider file. The variable FILENAME denotes the file. The variable SITE indicates in which of four HIE experimental sites[3] the provider was located; it can be used to select analytic subsamples.

Variable Descriptions

The codebook in the following section contains descriptions of each variable in the provider file. A technical description of the character file, including the location and length of each variable, is provided in Appendix C. Each variable is presented in a box, as in Fig. 1 below.

```
VARIABLE  FMG                                        PROVIDER FILE

    Graduate of a foreign medical school

    CODES

      . - Missing or not applicable
      0 - Graduate of medical school in U.S. or Canada
      1 - Graduate of foreign medical school

    FMG indicates whether an AMA provider graduated from
    a North American or foreign medical school.
```

Fig. 1--Example of codebook format

At the right of most of the boxes is a table of statistics or response frequencies (not shown in the example). The columns of this table show, respectively, all response codes appearing for the variable, the absolute and cumulative response frequencies for each code, and the corresponding absolute and cumulative percentages.

[3]Although there are actually six different HIE sites, in this file the two sites in Massachusetts were merged into one site, as were the two in South Carolina, because of the possibility that these providers may have provided services to participants in the other state site. In all other HIE files, the six sites are differentiated.

III. CODEBOOK FOR PROVIDER FILE

VARIABLE FILENAME PROVIDER FILE

Name of file

FILENAME is a 6-digit code that uniquely identifies the file. This file name is PSPOAA.

FILENAME

VALUE	FREQ	CUM FREQ	%	CUM %
PSPOAA	22658	22658	100.00	100.00

VARIABLE SITE PROVIDER FILE

Site

CODES

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

SITE identifies the location of the participant who referred to this provider. Note the two sites in Massachusetts and the two sites in South Carolina have each been combined into one site.

SITE

VALUE	FREQ	CUM FREQ	%	CUM %
1	5095	5095	22.49	22.49
2	9047	14142	39.93	62.42
3	4520	18662	19.95	82.36
5	3996	22658	17.64	100.00

VARIABLE PROVID PROVIDER FILE

Provider identifier

PROVID is an 8-character alphanumeric identifier assigned by RAND. The format is two letters followed by six numbers. A provider may have multiple identifiers and therefore multiple records. These records can be linked using the variable LINKID.

VARIABLE PROVTYPE — PROVIDER FILE

Type of provider

PROVTYPE presents a five-digit code that indicates the type of provider (e.g., physician, dentist, clinic, hospital), including specialty of the provider, if applicable. The complete list of type codes is shown in Appendix D.

VARIABLE LINKID — PROVIDER FILE

Provider linking identifier

CODES

blank - there is only one PROVID for this provider

LINKID is an 8-character alphanumeric identifier that enables the linking of providers who have multiple identifiers in the variable PROVID. LINKID is taken from one of the PROVID identifiers of the provider.

VARIABLE SEX PROVIDER FILE

Sex

CODES

blank - Missing or not applicable
F - Female
M - Male

SEX indicates the sex of each human provider. Data were provided by professional associations. Such data are missing if the information was not available from the professional organization or if the provider was not located in an HIE experimental site.

SEX

VALUE	FREQ	CUM FREQ	%	CUM %
	15260	.	.	.
F	357	357	4.83	4.83
M	7041	7398	95.17	100.00

AMA VARIABLES

The following variables contain information pertaining to AMA providers. These data were supplied by the AMA in 1976 and 1981. If a physician was listed on both the 1976 and 1981 tapes, the information from the 1976 tape was used.

VARIABLE AMA_FMG PROVIDER FILE

Graduate of a foreign medical school

CODES

. - Missing or not applicable
0 - Graduate of medical school in U.S., Canada or Puerto Rico
1 - Graduate of foreign medical school

AMA_FMG indicates whether an AMA provider graduated from a North American or foreign medical school.

AMA_FMG

VALUE	FREQ	CUM FREQ	%	CUM %
.	16482	.	.	.
0	5630	5630	91.16	91.16
1	546	6176	8.84	100.00

VARIABLE AMA_ACT PROVIDER FILE

Professional activity of AMA provider

CODES

blank - Missing or not applicable
ADM - Administration
HPI - Hospital-based resident, first year
HPP - Hospital-based staff physician
HPR - Hospital-based resident, not first year
INA - Inactive
MTC - Medical teaching
NCL - Not classified
OFF - Office-based physician
OTH - Other
RES - Research

AMA_ACT indicates the major professional activity for each AMA provider as listed in the AMA Physician Masterfile.

AMA_ACT

VALUE	FREQ	CUM FREQ	%	CUM %
	16482	.	.	.
ADM	88	88	1.43	1.43
HPI	16	104	0.26	1.68
HPP	240	344	3.89	5.57
HPR	115	459	1.86	7.43
INA	252	711	4.08	11.51
MTC	76	787	1.23	12.74
NCL	156	943	2.53	15.27
OFF	5160	6103	83.55	98.82
OTH	12	6115	0.19	99.01
RES	61	6176	0.99	100.00

VARIABLE AMA_TYP PROVIDER FILE

Type of practice of AMA provider

CODES

. - Missing or not applicable
011 - Resident, first year
012 - Resident, all other years
020 - Direct patient care
030 - Administration
040 - Medical teaching
050 - Medical research
061 - Other patient care
062 - Other nonpatient care
071 - Inactive, retired
072 - Inactive, semi-retired
073 - Inactive, disabled
074 - Inactive, temporarily not in practice
075 - Inactive, other
100 - No classification

AMA_TYP indicates the type of practice for each AMA provider as listed in the AMA Physician Masterfile.

AMA_TYP

VALUE	FREQ	CUM FREQ	%	CUM %
.	16482	.	.	.
11	16	16	0.26	0.26
12	115	131	1.86	2.12
20	5347	5478	86.58	88.70
30	88	5566	1.43	90.12
40	75	5641	1.21	91.34
50	61	5702	0.99	92.33
61	26	5728	0.42	92.75
62	12	5740	0.19	92.94
71	174	5914	2.82	95.76
72	42	5956	0.68	96.44
73	13	5969	0.21	96.65
74	18	5987	0.29	96.94
75	5	5992	0.08	97.02
100	184	6176	2.98	100.00

VARIABLE AMA_EMP PROVIDER FILE

Present employment of AMA provider

CODES

. - Missing or not applicable
011 - Solo
012 - Partnership
020 - Arrangement (non-group)
030 - Group practice
040 - Medical school
050 - Not a government hospital
061 - City/county government hospital
062 - City/county government (other than hospital)
071 - State government hospital
072 - State government (other than hospital)
081 - Army hospital
082 - Navy hospital
083 - Air Force hospital
084 - U.S.P.H.S. hospital
085 - Veterans Administration hospital
086 - Other federal agency hospital
091 - Army (not hospital)
092 - Navy (not hospital)
093 - Air Force (not hospital)
094 - U.S.P.H.S. (not hospital)
096 - Other federal agency (not hospital)
100 - Other
110 - No classification

AMA_EMP indicates present employment for each AMA provider as listed in the AMA Physician Masterfile.

AMA_EMP

VALUE	FREQ	CUM FREQ	%	CUM %
.	16482	.	.	.
11	2013	2013	32.59	32.59
12	908	2921	14.70	47.30
20	275	3196	4.45	51.75
30	1599	4795	25.89	77.64
40	223	5018	3.61	81.25
50	295	5313	4.78	86.03
61	31	5344	0.50	86.53
62	14	5358	0.23	86.76
71	31	5389	0.50	87.26
72	26	5415	0.42	87.68
81	8	5423	0.13	87.81
82	10	5433	0.16	87.97
83	4	5437	0.07	88.03
84	9	5446	0.15	88.18
85	26	5472	0.42	88.60
86	7	5479	0.11	88.71
91	1	5480	0.02	88.73
92	1	5481	0.02	88.75
93	2	5483	0.03	88.78
94	3	5486	0.05	88.83
96	10	5496	0.16	88.99
100	231	5727	3.74	92.73
110	449	6176	7.27	100.00

VARIABLE AMA_SPC1 PROVIDER FILE

First specialty of AMA provider

CODES

blank - Missing or not applicable

AMA_SPC1 indicates the first self-reported specialty for AMA providers as listed in the AMA Physician Masterfile. The complete list of AMA codes is shown in Appendix E.

VARIABLE AMA_SPC2 PROVIDER FILE

Second specialty of AMA provider

CODES

blank - Missing or not applicable

AMA_SPC2 indicates the second self-reported specialty for AMA providers as listed in the AMA Physician Masterfile. The complete list of AMA codes is shown in Appendix E.

VARIABLE AMA_SPC3 PROVIDER FILE

Third specialty of AMA provider

CODES

blank - Missing or not applicable

AMA_SPC3 indicates the third self-reported specialty for AMA providers as listed in the AMA Physician Masterfile. The complete list of AMA codes is shown in Appendix E.

VARIABLE AMA_BRD1 PROVIDER FILE

First AMA specialty board certification

CODES

. - Missing or not applicable
00 - No Board recognition
03 - American Board of Allergy and Immunology
05 - American Board of Anesthesiology
10 - American Board of Colon and Rectal Surgery
15 - American Board of Dermatology
18 - American Board of Family Practice
20 - American Board of Internal Medicine
25 - American Board of Neurological Surgery
28 - American Board of Nuclear Medicine
30 - American Board of Obstetrics and Gynecology
35 - American Board of Ophthalmology
40 - American Board of Orthopaedic Surgery
45 - American Board of Otolaryngology
50 - American Board of Pathology
55 - American Board of Pediatrics
60 - American Board of Physical Medicine and Rehabilitation
65 - American Board of Plastic Surgery
70 - American Board of Preventive Medicine
75 - American Board of Psychiatry and Neurology
80 - American Board of Radiology
85 - American Board of Surgery
90 - American Board of Thoracic Surgery
95 - American Board of Urology

AMA_BRD1 indicates the first specialty board certification of AMA providers as listed in the AMA Physician Masterfile.

AMA_BRD1

VALUE	FREQ	CUM FREQ	%	CUM %
.	16482	.	.	.
0	2077	2077	33.63	33.63
3	7	2084	0.11	33.74
5	137	2221	2.22	35.96
10	4	2225	0.07	36.03
15	110	2335	1.78	37.81
18	619	2954	10.02	47.83
20	662	3616	10.72	58.55
25	50	3666	0.81	59.36
28	11	3677	0.18	59.54
30	394	4071	6.38	65.92
35	222	4293	3.60	69.51
40	279	4572	4.52	74.03
45	134	4706	2.17	76.20
50	63	4769	1.02	77.22
55	408	5177	6.61	83.82
60	15	5192	0.24	84.07
65	25	5217	0.41	84.47
70	6	5223	0.10	84.57
75	174	5397	2.82	87.39
80	266	5663	4.31	91.69
85	397	6060	6.43	98.12
95	116	6176	1.88	100.00

VARIABLE AMA_BRD2 PROVIDER FILE

Second AMA specialty board certification

CODES

. - Missing or not applicable
00 - No Board recognition
03 - American Board of Allergy and Immunology
05 - American Board of Anesthesiology
10 - American Board of Colon and Rectal Surgery
15 - American Board of Dermatology
18 - American Board of Family Practice
20 - American Board of Internal Medicine
25 - American Board of Neurological Surgery
28 - American Board of Nuclear Medicine
30 - American Board of Obstetrics and Gynecology
35 - American Board of Ophthalmology
40 - American Board of Orthopaedic Surgery
45 - American Board of Otolaryngology
50 - American Board of Pathology
55 - American Board of Pediatrics
60 - American Board of Physical Medicine and Rehabilitation
65 - American Board of Plastic Surgery
70 - American Board of Preventive Medicine
75 - American Board of Psychiatry and Neurology
80 - American Board of Radiology
85 - American Board of Surgery
90 - American Board of Thoracic Surgery
95 - American Board of Urology

AMA_BRD2 indicates the second specialty board certification of AMA providers as listed in the AMA Physician Masterfile.

AMA_BRD2

VALUE	FREQ	CUM FREQ	%	CUM %
.	16482	.	.	.
0	5994	5994	97.05	97.05
3	29	6023	0.47	97.52
5	1	6024	0.02	97.54
10	2	6026	0.03	97.57
15	5	6031	0.08	97.65
18	7	6038	0.11	97.77
20	5	6043	0.08	97.85
25	3	6046	0.05	97.90
28	25	6071	0.41	98.30
35	1	6072	0.02	98.32
45	5	6077	0.08	98.40
50	1	6078	0.02	98.41
55	1	6079	0.02	98.43
65	21	6100	0.34	98.77
75	7	6107	0.11	98.88
80	3	6110	0.05	98.93
85	8	6118	0.13	99.06
90	58	6176	0.94	100.00

VARIABLE AMA_BRD3 PROVIDER FILE

Third AMA specialty board certification

CODES

. - Missing or not applicable
00 - No Board recognition
28 - American Board of Nuclear Medicine

AMA_BRD3 indicates the third specialty board certification of AMA providers as listed in the AMA Physician Masterfile.

AMA_BRD3

VALUE	FREQ	CUM FREQ	%	CUM %
.	16482	.	.	.
0	6175	6175	99.98	99.98
28	1	6176	0.02	100.00

AOA VARIABLES

The following variables contain information pertaining to AOA providers. These data were provided to the HIE in 1976; data of AOA members who became part of the study after 1976 are listed in the variables as "missing."

VARIABLE AOA_AFFL PROVIDER FILE

AOA affiliation

CODES

. - Missing or not applicable
1 - Individual practice
2 - Small partnership
3 - Group practice

AOA_AFFL indicates the affiliation of each AOA provider, as listed by the AOA in 1976.

AOA_AFFL

VALUE	FREQ	CUM FREQ	%	CUM %
.	22448	.	.	.
1	156	156	74.29	74.29
2	34	190	16.19	90.48
3	20	210	9.52	100.00

VARIABLE AOA_PRIV PROVIDER FILE

Percent of working week in practice

CODES

. - Missing or not applicable
1 - 100%
2 - 75%
3 - 50%
4 - 25%

AOA_PRIV indicates the percent of time an AOA provider spent in practice, as listed by the AOA in 1976.

AOA_PRIV

VALUE	FREQ	CUM FREQ	%	CUM %
.	22448	.	.	.
1	203	203	96.67	96.67
2	3	206	1.43	98.10
3	2	208	0.95	99.05
4	2	210	0.95	100.00

VARIABLE AOA_TYPE PROVIDER FILE

Type of practice

CODES

. - Missing or not applicable
1 - General practice
2 - General, giving particular attention to specialty
3 - Full time devoted to specialty
4 - Full time devoted to osteopathic manipulation

AOA_TYPE indicates the type of practice of each AOA provider, as listed by the AOA in 1976.

AOA_TYPE

VALUE	FREQ	CUM FREQ	%	CUM %
.	22448	.	.	.
1	141	141	67.14	67.14
2	12	153	5.71	72.86
3	52	205	24.76	97.62
4	5	210	2.38	100.00

VARIABLE AOA_SPEC PROVIDER FILE

Time devoted to specialty if part-time

CODES

. - Missing or not applicable
1 - 75%
2 - 50%
3 - 25%

AOA_SPEC indicates the percent of time an AOA provider devoted to his/her specialty if the provider was a part-time specialist, as listed by the AOA in 1976.

AOA_SPEC

VALUE	FREQ	CUM FREQ	%	CUM %
.	22646	.	.	.
1	3	3	25.00	25.00
2	5	8	41.67	66.67
3	4	12	33.33	100.00

VARIABLE AOA_CERT PROVIDER FILE

Certified specialist

CODES

. - Missing or not applicable
0 - Unknown
102 - Certified in anesthesiology
105 - Certified in dermatology
113 - Certified in internal medicine
119 - Certified in obstetrics and gynecology
120 - Certified in ophthalmology
123 - Certified in orthopedic surgery
125 - Certified in otorhinolaryngology
133 - Certified in proctology
134 - Certified in psychiatry
138 - Certified in radiology
143 - Certified in surgery
145 - Certified in urological surgery
157 - Certified in general practice
161 - Certified in surgery and neurological surgery
257 - Certificate cancelled in general practice

AOA_CERT indicates whether an AOA provider had an active certificate in his/her specialty, as listed by the AOA in 1976.

AOA_CERT

VALUE	FREQ	CUM FREQ	%	CUM %
.	22472	.	.	.
0	117	117	62.90	62.90
102	4	121	2.15	65.05
105	1	122	0.54	65.59
113	5	127	2.69	68.28
119	3	130	1.61	69.89
120	4	134	2.15	72.04
123	5	139	2.69	74.73
125	2	141	1.08	75.81
133	1	142	0.54	76.34
134	1	143	0.54	76.88
138	5	148	2.69	79.57
143	7	155	3.76	83.33
145	2	157	1.08	84.41
157	27	184	14.52	98.93
161	1	185	0.54	99.46
257	1	186	0.54	100.00

VARIABLE AOA_INT PROVIDER FILE

Specialty interest

CODES

. - Missing or not applicable
02 - Anesthesiology
03 - Cardiology
06 - Dermatology
13 - Internal medicine
15 - Neurology and psychiatry
16 - Neurological surgery
17 - Obstetrical and gynecological surgery
18 - Obstetrics
19 - Obstetrics and gynecology
20 - Ophthalmology
22 - Ophthalmology and otorhinolaryngology
23 - Orthopedic surgery
25 - Otorhinolaryngology
33 - Proctology
38 - Radiology
43 - Surgery
44 - Thoracic surgery
45 - Urological surgery
46 - Urology

AOA_INT indicates the specialty interest of an AOA member who was a full-time or part-time specialist, as listed by the AOA in 1976.

AOA_INT

VALUE	FREQ	CUM FREQ	%	CUM %
.	22594	.	.	.
2	9	9	14.06	14.06
3	1	10	1.56	15.63
6	1	11	1.56	17.19
13	10	21	15.63	32.81
15	1	22	1.56	34.38
16	1	23	1.56	35.94
17	1	24	1.56	37.50
18	1	25	1.56	39.06
19	5	30	7.81	46.88
20	4	34	6.25	53.13
22	1	35	1.56	54.69
23	5	40	7.81	62.50
25	2	42	3.13	65.63
33	5	47	7.81	73.44
38	5	52	7.81	81.25
43	9	61	14.06	95.31
44	1	62	1.56	96.88
45	1	63	1.56	98.44
46	1	64	1.56	100.00

VARIABLE AOA_OCCU PROVIDER FILE

Occupation

CODES

. - Missing or not applicable
01 - Retired
03 - Intern
04 - Resident
09 - Professional hospital position
19 - Other postgraduate study
24 - Research, Veterans Administration

AOA_OCCU indicates whether an AOA provider was involved in other postgraduate study if he/she was not in private practice.

AOA_OCCU

VALUE	FREQ	CUM FREQ	%	CUM %
.	22644	.	.	.
1	3	3	21.43	21.43
3	2	5	14.29	35.71
4	4	9	28.57	64.29
9	2	11	14.29	78.57
19	2	13	14.29	92.86
24	1	14	7.14	100.00

ADA VARIABLES

The following variables contain information pertaining to ADA providers. These data were provided to the HIE in 1976; data concerning ADA members who became part of the HIE study after 1976 appear as "missing."

VARIABLE ADA_CODE PROVIDER FILE

ADA class code

CODES

. - Missing or not applicable
1 - Nonmember
3 - Life member
4 - Associate member
7 - Intern, resident, graduate member
8 - Student member

ADA_CODE indicates the membership type of each ADA provider.

ADA_CODE

VALUE	FREQ	CUM FREQ	%	CUM %
.	20631	.	.	.
1	1918	1918	94.62	94.62
3	57	1975	2.81	97.44
4	2	1977	0.10	97.53
7	20	1997	0.99	98.52
8	30	2027	1.48	100.00

VARIABLE ADA_PRAC PROVIDER FILE

Character of practice

CODES

. - Missing or not applicable
00 - General practioner
10 - Oral surgeon
15 - Endodontist
20 - Orthodontist
30 - Perodontist
40 - Periodontist
50 - Prosthodontist
80 - Faculty of dental school
82 - State public health dentist
90 - Retired

ADA_PRAC indicates the type of practice of each ADA provider.

ADA_PRAC

VALUE	FREQ	CUM FREQ	%	CUM %
.	20640	.	.	.
0	1651	1651	81.81	81.81
10	78	1729	3.87	85.68
15	24	1753	1.19	86.87
20	112	1865	5.55	92.42
30	47	1912	2.33	94.75
40	39	1951	1.93	96.68
50	2	1953	0.10	96.78
80	60	2013	2.97	99.75
82	1	2014	0.05	99.80
90	4	2018	0.20	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.

MS3. *Vol. 3: Codebook for Supplemental Data File*, by S. M. Polich and C. d'Arc Taylor, The RAND Corporation, N-2264/3-HHS, June 1987.

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

AC8-AC9. *Vol. 4: Codebooks for Health Maintenance Organization and Seattle Fee-for-Service Visits--Outpatient and Inpatient*, by C. E. Peterson, M. Nelsen, and D. L. Wesley, The RAND Corporation, N-2360/4-HHS, December 1986.

AC8. HMO and Seattle FFS outpatient visits
AC9. HMO and Seattle FFS inpatient visits

AC7. *Vol. 5: Codebook for Health Maintenance Organization and Seattle Fee-for-Service Annual Expenditures and Visit Counts*, by C. E. Peterson, M. Nelsen, D. L. Wesley, and A. M. Bell, The RAND Corporation, N-2360/5-HHS, December 1986.

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

ISSUED TO DATE (cont.)

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
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*, by 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.

RF2. *Vol. 2: Providers Cited in HIE Data*, by S. M. Polich, M. Nelsen and D. L. Wesley, The RAND Corporation, N-2349/2-HHS, June 1987.

Health Status and Attitude Series

HS1-HS2. *Vol. 1: Codebooks for Adults and Children at Enrollment and Exit*, by E. M. Sloss, L. L. Colbert, D. L. Wesley, A. M. Bell, and A. B. Holland, The RAND Corporation, N-2447/1-HHS, November 1986.

HS1. Adults at enrollment and exit
HS2. Children at enrollment and exit

ISSUED TO DATE (cont.)

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

MH4A-MH6B. *Vol. 3: Codebooks for Children at Enrollment and Exit*, by C. A. Edwards, A. M. Bell, D. L. Wesley, L. Y. Weissler, and M. Nelsen, The RAND Corporation, N-2485/3-HHS, November 1986.

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-MH9B. *Vol. 4: Codebooks for Infants at Enrollment and Exit*, by C. A. Edwards, A. B. Holland, D. L. Wesley, A. M. Bell, L. Y. Weissler, and M. Nelsen, The RAND Corporation, N-2485/4-HHS, December 1986.

MH7A. Dayton infants at enrollment, Form A
MH7B. Dayton infants at enrollment, Form B
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

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.

ISSUED TO DATE (cont.)

Medical Disorders Series

MD1. *Vol. 1: Codebook for Adults at Enrollment and Exit*, by B. H. Operskalski, L. L. Colbert, D. L. Wesley, E. S. Bloomfield, A. M. Bell, N. F. Campbell, and S. M. Polich, The RAND Corporation, N-2446/1-HHS, February 1987.

MD2. *Vol. 2: Codebook for Children at Enrollment and Exit*, by E. M. Sloss, D. L. Wesley, A. B. Holland, and L. L. Colbert, The RAND Corporation, N-2446/2-HHS, March 1987.

Dental Examinations

DE1. *Codebook for Adults and Children at Enrollment and Exit*, by E. S. Bloomfield, L. Y. Weissler, and A. M. Bell, The RAND Corporation, N-2506-HHS, February 1987.

TO BE ISSUED

HIE Reference Series

RF3. User's guide to HIE data

Appendix C
FILE DICTIONARY

This appendix describes the character version of the provider data file in technical terms. Basic identifying data (Table C.1) are followed by lists showing the location (starting column), length, and type of each variable (Tables C.2 and C.3).

Table C.1

PROVIDER FILE: BASIC IDENTIFYING DATA

Data file name	PSP0AA01.PUF.DATA
Creation date	June 30, 1987
Variable format	Character
Total number of data elements	26
Header length (bytes)	10
Primary data length (bytes)	184
Record length (bytes)	194

Table C.2

PROVIDER FILE:
LISTING BY ALPHABETIC ORDER

Name	Location	Length	Type
ADA_CODE	179	8	I
ADA_PRAC	187	8	I
AMA_ACT	51	8	A
AMA_BRD1	99	8	I
AMA_BRD2	107	8	I
AMA_BRD3	115	8	I
AMA_EMP	67	8	I
AMA_FMG	43	8	I
AMA_SPC1	75	8	A
AMA_SPC2	83	8	A
AMA_SPC3	91	8	A
AMA_TYP	59	8	I
AOA_AFFL	123	8	I
AOA_CERT	155	8	I
AOA_INT	163	8	I
AOA_OCCU	171	8	I
AOA_PRIV	131	8	I
AOA_SPEC	147	8	I
AOA_TYPE	139	8	I
FILENAME	1	6	A
FILLER	8	3	A
LINKID	27	8	A
PROVID	11	8	A
PROVTYPE	19	8	A
SEX	35	8	A
SITE	7	1	A

Table C.3

PROVIDER FILE:
LISTING BY LOCATION

Name	Location	Length	Type
FILENAME	1	6	A
SITE	7	1	A
FILLER	8	3	A
PROVID	11	8	A
PROVTYPE	19	8	A
LINKID	27	8	A
SEX	35	8	A
AMA_FMG	43	8	I
AMA_ACT	51	8	A
AMA_TYP	59	8	I
AMA_EMP	67	8	I
AMA_SPC1	75	8	A
AMA_SPC2	83	8	A
AMA_SPC3	91	8	A
AMA_BRD1	99	8	I
AMA_BRD2	107	8	I
AMA_BRD3	115	8	I
AOA_AFFL	123	8	I
AOA_PRIV	131	8	I
AOA_TYPE	139	8	I
AOA_SPEC	147	8	I
AOA_CERT	155	8	I
AOA_INT	163	8	I
AOA_OCCU	171	8	I
ADA_CODE	179	8	I
ADA_PRAC	187	8	I

NOTE: "Type" refers to whether the variable values are alphanumeric (A) or integer (I). Missing values are written differently for each variable type: I = bbbbbbb., A = bbbbbbbb. To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integer format.

Appendix D

PROVIDER TYPE CODES

Doctors of Medicine:

01101 - GP (includes family practice)
01102 - internal medicine
01103 - allergy
01104 - cardiovascular diseases
01105 - dermatology
01106 - gastroenterology
01107 - pulmonary diseases
01108 - pediatrics
01109 - pediatric allergy
01110 - pediatric cardiology
01111 - general surgery
01112 - colon and rectal surgery
01113 - neurological surgery
01114 - orthopedic surgery
01115 - plastic surgery
01116 - thoracic surgery
01117 - urology, urological surgery
01118 - ophthalmology, pediatric ophthalmology
01119 - otolaryngology
01120 - obstetrics, gynecology
01121 - anesthesiology
01122 - neurology
01123 - psychiatry
01124 - child psychiatry
01125 - radiology, pediatric radiology
01126 - diagnostic radiology
01127 - therapeutic radiology
01128 - pathology
01130 - physical medicine and rehabilitation (includes psysiatrist)
01131 - occupational medicine (includes insurance company physician)
01132 - general preventive medicine
01133 - public health (includes health department)
01134 - aerospace medicine
01135 - other specialty (includes nuclear physician, tumor specialist, clinical pharmacologist, psychosomatic illness specialist, myelodysplasia specialist, medical drug dependency)
01136 - other internal medicine (includes rheumatology, endocrinology, hematology, nephrology)
01137 - other surgery subspecialty (includes

pediatric surgery, intensive care unit surgery)
01138 - cardiovascular surgery, vascular surgery
01139 - neo-natologist
01140 - emergency room
01150 - acupuncture
01190 - resident, intern on staff at a hospital
01195 - specialty not determined
01199 - unspecified (includes weight loss)

Doctors of Osteopathy:

01201 - general practice
01202 - internal medicine
01208 - pediatrics
01211 - general surgery
01213 - neurosurgery
01214 - orthopedic surgery
01215 - oro-facial plastic surgery
01216 - thoracic surgery
01217 - urological surgery
01218 - ophthalmology
01219 - otorhinolaryngology
01220 - obstetrics, gynecology
01221 - anesthesiology
01222 - neurology
01223 - psychiatry
01225 - radiology
01228 - pathology and laboratory medicine
01230 - rehabilitation medicine
01236 - ophthalmology and otorhinolaryngology
01238 - proctology
01240 - dermatology
01241 - vascular surgery
01242 - emergency room
01280 - practice limited to manipulative therapy
01290 - resident, intern on hospital staff
01299 - unspecified (includes weight loss)

Medical Clinics:

01301 - GP (includes family practice)
01302 - internal medicine
01303 - allergy
01304 - cardiovascular diseases
01305 - dermatology
01306 - gastroenterology
01307 - pediatric allergy
01308 - pediatrics
01309 - pediatric allergy
01310 - pediatric cardiology

01311 - general surgery
01313 - neurological surgery
01314 - orthopedic surgery
01315 - plastic surgery
01316 - thoracic surgery
01317 - urology, urological surgery
01318 - ophthalmology, pediatric ophthalmology
01319 - otolaryngology
01320 - obstetrics, gynecology
01321 - anesthesiology
01322 - neurology
01323 - psychiatry
01324 - child psychiatry
01325 - radiology, pediatric radiology
01326 - diagnostic radiology
01327 - therapeutic radiology
01328 - pathology
01330 - physical medicine and rehabilitation (includes physiatrist)
01331 - occupational medicine (includes insurance company physician)
01332 - general preventive medicine
01333 - public health (includes health department)
01334 - aerospace medicine
01335 - other specialty (includes nuclear physician, tumor specialist, clinical pharmacologist, psychosomatic illness specialist, myelodysplasia specialist, medical drug dependency)
01336 - other internal medicine (includes rheumatology, endocrinology, hematology, nephrology)
01338 - cardiovascular, vascular surgery
01340 - emergency room
01380 - multi-specialty medical group or clinic
01381 - public health department
01385 - medical-dental clinic
01386 - mental health clinic
01387 - medical school
01388 - alcoholism treatment, methadone maintenance
01390 - resident, intern on staff at a hospital
01395 - specialty not determined
01399 - unspecified (includes weight loss)

Osteopathic Clinics:

01401 - general practice
01402 - internal medicine
01408 - pediatrics
01411 - general surgery
01413 - neurosurgery

01414 - orthopedic surgery
01417 - urological surgery
01418 - ophthalmology
01421 - anesthesiology
01425 - radiology
01428 - pathology and laboratory medicine
01480 - practice limited to maniuplative therapy
01486 - mental health clinic
01499 - unspecified (includes weight loss)

Hospital Outpatient Clinics:

02004 - cardiovascular diseases
02020 - obstetrics, gynecology
02023 - psychiatry
02080 - multi-specialty
02088 - alcoholism treatment, methadone maintenance
02099 - unspecified

Hospital Emergency Room:

02900 - hospital emergency room/department

Dentists:

03101 - general dental
03102 - oral surgery
03103 - endodontics
03104 - orthodontics
03105 - pedodontics (pediatric dentistry)
03106 - periodontics
03107 - prosthodontics
03108 - oral pathology
03109 - public health
03180 - multi-specialty
03190 - dental school
03199 - unspecified

Hospital Dental Outpatient Clinics:

03201 - general dental
03280 - multi-specialty
03290 - dental school

Dental Clinics:

03301 - general dental
03302 - oral surgery
03304 - orthodontics
03305 - pedodontice (pediatric dentistry)

03306 - periodontics
03307 - prosthodontics
03309 - public health
03380 - multi-specialty
03390 - dental school
03395 - unknown specialty
03399 - unspecified

Other Providers:

04101 - audiologist
04102 - chiropractor
04104 - medic, if specified
04105 - physician's assistant, extender, etc.
04106 - registered nurse, school nurse, visiting nurse, unspecified nurse
04107 - nurse, private duty
04108 - optometrist (includes school of optometry)
04109 - podiatrist, chiropodist
04110 - psychologist (includes Ph.D. in psychology and/or psychiatry)
04111 - therapist (speech, hearing, language, physical, occupational, etc.)
04112 - mental health (includes psychiatric nurse, biofeedback therapist, counselor, MSW, Ph.D. not psychologist or psychiatrist)
04113 - emergency mobile service (police, fire department, rescue service - includes paramedics)
04114 - home health care agency
04115 - midwife
04116 - dental hygienist
04117 - weight control program (non-professionally directed)
04118 - alcohol and drug abuse program (non-professionally directed)
04122 - military (if not designated as clinic)
04123 - nurse practitioner
04124 - women's health care specialist
04187 - research institute or foundation
04188 - family planning (includes planned parenthood)
04189 - child-related facility (child development, Head Start)
04190 - government agency
04191 - funeral home

04192 - other titled provider (psysiologist, clinical chemist with Ph.D., director of speech-hearing-language, naturopath, director of public health, MPH, dietician, x-ray technician)
04193 - screening/health association (cancer control, multiphasic screening, heart association, lead poisoning testing)
04194 - ambulances and mobile units
04195 - schools
04196 - psychologically oriented providers (creative life foundation, holistic health care facility, psychophysicist with a Ph.D.)
04197 - data systems
04198 - environmental manipulation (furnace cleaning, air conditioning)
04199 - all other providers not otherwise classified as suppliers or facilities

Laboratories:

04500 - laboratories

Pharmacies:

05101 - neighborhood
05102 - one of a chain
05103 - in medical arts building or hospital
05104 - in hospital (ambulatory care prescriptions and suppliers)
05105 - miscellaneous

Opticians:

05200 - optician

Other:

05500 - miscellaneous
05501 - optical companies
05502 - hearing aid centers
05503 - orthopedic supplies
05504 - shoe stores
05506 - blood banks
05507 - grocery and health food stores
05508 - department and sports stores
05509 - medical-surgical supply houses
05510 - biomedical suppliers
05511 - educational suppliers

Nursing Homes:

06101 - extended care facility (skilled nursing facility)
06102 - nursing care facility
06103 - resident care facility
06104 - health care facility

Miscellaneous Type Codes:

07998 - hospital, out of country
07999 - hospital, unspecified
09999 - unknown provider type
99999 - unknown provider type

The remaining type codes are for short-term or long-term hospitals. If the type code ends with the letter "S," it designates a short-term hospital (i.e., average length of stay for over 50 percent of all patients is less than 30 days). If the type code ends with the letter "L," it designates a long-term hospital (i.e., average length of stay for over 50 percent of all patients is 30 days or more).

State Government Hospitals:

1210S - general medical and surgical
1211S - hospital unit of an institution
1222L - psychiatric
1222S - psychiatric
1246L - hospital unit within an institution for the mentally retarded
1252L - children's psychiatric
1282S - alcoholism

County Government Hospitals:

1310S - general medical and surgical
1348L - chronic disease
1382S - alcoholism

City Government Hospitals:

1410S - general medical and surgical
1422S - psychiatric
1449S - other specialty

City-County Government Hospitals:

1510S - county general medical and surgical

Hospitals in a Government Hospital District:

1610S - general medical and surgical

Church-Operated Hospitals:

2110S - general medical and surgical
2144S - obstetrics and gynecology
2150S - childrens

Nongovernment, Not-for-Profit Hospitals:

2310L - general medical and surgical
2310S - general medical and surgical
2322L - psychiatric
2322S - psychiatric
2344S - obstetrics and gynecology
2345S - eye, ear, nose, and throat
2346L - rehabilitation
2347S - orthopedic
2349S - other specialty
2350S - children's general
2357L - children's orthopedic
2382L - alcoholism
2382S - alcoholism

Investor-Owned (For Profit) Partnerships:

3210S - general medical and surgical

Investor-Owned (For Profit) Hospitals:

3310S - general medical and surgical
3322L - psychiatric
3322S - psychiatric
3344S - obstetrics and gynecology
3346L - rehabilitation
3347S - orthopedic
3349L - other specialty
3349S - other specialty
3382L - alcoholism
3382S - alcoholism

Air Force Hospitals:

4110S - general medical and surgical

Army Hospitals:

4210S - general medical and surgical

Navy Hospitals:

4310S - general medical and surgical

Public Health Service Hospitals:

4410S - general medical and surgical

Veterans Administration Hospitals:

4510L - general medical and surgical
4510S - general medical and surgical
4522L - psychiatric

Other Federal Hospitals:

4610L - general medical and surgical
4610S - general medical and surgical

Public Health Service Indian Services Hospitals:

4710S - general medical and surgical

Non-Church, Not-for-Profit Osteopathic Hospitals:

6310S - general medical and surgical

Corporation For-Profit Osteopathic Hospitals:

7310S - general medical and surgical

Unspecified:

99999 - unspecified

Appendix E

AMA SPECIALTY CODES

A - Allergy
ABS - Abdominal surgery
ADL - Adolescent medicine
AI - Allergy and immunology
AM - Aerospace medicine
AN - Anesthesiology
BE - Broncho-esophagology
BLB - Bloodbanking
CD - Cardiovascular diseases
CDS - Cardiovascular surgery
CHN - Child neurology
CHP - Child psychiatry
CLP - Clinical pathology
CRS - Colon and rectal surgery
D - Dermatology
DIA - Diabetes
DMP - Dermatopathology
DR - Diagnostic radiology
EM - Emergency medicine
END - Endocrinology
FOP - Forensic pathology
FP - Family practice
GE - Gastroenterology
GER - Geriatrics
GP - General practice
GPM - General preventive medicine
GS - General surgery
GYN - Gynecology
HEM - Hematology
HNS - Head and neck surgery
HS - Hand surgery
HYP - Hypnosis
ID - Infectious diseases
IG - Immunology
IM - Internal medicine
IMO - Unknown
LM - Legal medicine
MFS - Maxillofacial surgery
N - Neurology
ND - Neoplastic diseases
NEP - Nephrology
NM - Nuclear medicine
NPM - Neonatal-perinatal medicine
NR - Nuclear radiology
NS - Neurological surgery
NTR - Nutrition
OBG - Obstetrics and gynecology

OBS - Obstetrics
OM - Occupational medicine
ON - Oncology
OPH - Ophthalmology
ORS - Orthopedic surgery
OS - Other specialty
OT - Otology
OTO - Otolaryngology
P - Psychiatry
PA - Clinical pharmacology
PD - Pediatrics
PDA - Pediatric allergy
PDC - Pediatric cardiology
PDE - Pediatric endocrinology
PDR - Pediatric radiology
PDS - Pediatric surgery
PH - Public health
PHO - Pediatric hematology-onocology
PM - Physical medicine and rehabilitation
PNP - Pediatric nephrology
PS - Plastic surgery
PTH - Pathology
PUD - Pulmonary diseases
PYA - Psychoanalysis
PYM - Psychosomatic medicine
R - Radiology
RHU - Rheumatology
TR - Therapeutic radiology
TRS - Traumatic surgery
TS - Thoracic surgery
U - Urology
US - Unspecified

GLOSSARY

Adjunct enrollee	Uninsured member of insured family/household or member of Dayton control group. Not part of sample in adult medical disorders file.
ADA	American Dental Association. Some variables are taken from data supplied by the ADA.
AMA	American Medical Association. Some variables are taken from data supplied by the AMA.
AOA	American Osteopathic Association. Some variables are taken from data supplied by the AOA.
Attrition	Departure from experiment by voluntary withdrawal *before* completion of assigned enrollment term. Compare "exit" and "termination."
Baseline	Period during which experimental subjects were selected. HIE staff drew representative sample of potential enrollees from areawide probability sample of dwelling units in each site. Each family that joined experiment was assigned to one of 15 health insurance plans; HMO control group did not participate in baseline process.
Baseline-only participant	Person who was considered for enrollment at beginning of experiment in given site, but who did not enroll. Not part of sample in adult medical disorders file.
Baseline participant	Person considered for enrollment at beginning of experiment in given site. May or may not have enrolled, either remaining baseline-only participant or becoming enrollee.
Contract year	One-year portion of enrollee's assigned enrollment term, three or five years. Reckoned for administrative purposes from date on which family signed enrollment contract. First contract year began on enrollment date, second contract year began on first anniversary of enrollment, and so on.
Dayton control group	Group of 669 uninsured enrollees who participated in experiment from November 1974 to February 1976. Formed to compare community's use of health services with use by insured Dayton enrollees. Members retained own insurance but were asked to complete same questionnaires as insured enrollees. Group was discontinued because complete data on members appeared unobtainable. Not part of sample in adult medical disorders file.

Derived variable	Variables derived from raw data obtained during experiment. Compare "primary variable."
Enrollee	Insured or uninsured person whose family/household signed enrollment contract with HIE. Any of the following: HIE-insured enrollee, HMO-insured enrollee, adjunct enrollee, member of Dayton control group.
Enrollment	Formal admission into experiment. Enrollment dates varied by site, ranging from November 1974 in Dayton to November 1978 in Charleston and Georgetown County. Nearly all enrollees filled out MHQ and random subsample took medical screening examination.
Exit	Departure from experiment *after* completion of assigned enrollment term, three or five years. Compare "attrition" and "termination."
Experimental insurance plan	One of 16 plans under which health care costs of HIE enrollees were insured. Fifteen were health insurance plans with varying coinsurance rates and out-of-pocket expenditure limits, and were in both FFS and HMO delivery systems. Sixteenth was HMO control group.
FFS	Fee for service, referring to fees charged for medical and dental services by providers in private economic sector.
GHC	Group Health Cooperative of Puget Sound--Seattle HMO that participated in experiment.
HIE	Health Insurance Experiment.
HIE-insured	Enrollee assigned to experimental health insurance plan paid by HIE (plans A-O, described on pp. 3-4). HIE-insured enrollees include members of HMO *experimental* group. Compare "HMO-insured."
HMO	Health maintenance organization. HMO that participated in experiment was Group Health Cooperative of Puget Sound.
HMO control group	Seattle enrollees drawn at random from existing HMO members who met HIE eligibility criteria. HIE did *not* pay insurance premiums for those enrollees.
HMO experimental group	Seattle enrollees experimentally transferred to HMO from FFS delivery system. HIE *did* pay insurance premiums for those enrollees.
HMO-insured	Member of HMO control group. Compare "HIE-insured."

Insured	Either HIE-insured or HMO-insured enrollee. Compare "uninsured."
MDE	Maximum dollar expenditure. Maximum out-of-pocket expense to be paid by HIE-insured family before health care became free. Amount depended on family's assigned health insurance plan.
Missing value	Value assigned to any participant for whom given variable was not constructed. Represented by "." in SAS-format file and by blank in character-format file.
Participant	Any person with record in any HIE data file. Participant group comprises baseline-only participants as well as all types of enrollees.
PEG	Preenrollment group. Composed of persons who participated in preenrollment phase in South Carolina and who may or may not have formally enrolled in experiment.
Primary variable	Original information element in HIE data file; unmanipulated raw data. Compare "derived variable."
Provider	Any person, institution, or organization who provided health services, drugs, or supplies to enrollee.
Replacement PEG	Persons in the South Carolina three-year group who replaced members of the Preenrollment Group (PEG) who had decided to drop out of the study before formally enrolling in the experiment.
SAS	Statistical Analysis System. HIE files contain data in both SAS and character formats.
Site	One of six locations (city or county) in which Health Insurance Experiment was conducted between November 1974 and February 1982.
Termination	Involuntary departure from experiment. Cancellation of enrollment because of permanent ineligibility or failure to fulfill obligations required for participation. Compare "attrition" and "exit."
Uninsured	Neither HIE-insured nor HMO-insured enrollee. May have been either adjunct enrollee or member of Dayton control group. Uninsured persons did not necessarily lack health insurance; they were uninsured only with respect to HIE insurance plans. Compare "insured."