

N-2347/2-HHS

CLAIMS LINE-ITEM SERIES

Volume 2: CODEBOOKS FOR HEALTH MAINTENANCE ORGANIZATION CLAIMS

C. E. Peterson, M. Nelsen, E. S. Bloomfield, D. L. Wesley, A. M. Bell

August 1986

HEALTH INSURANCE EXPERIMENT

Rand
SANTA MONICA, CA.

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PREFACE

The codebooks presented in this Note describe the contents of data files from the Health Insurance Experiment (HIE), a large social experiment conducted by The Rand Corporation from 1974 to 1982 under a grant from the U.S. Department of Health and Human Services, Washington, D.C. The HIE is issuing a number of tape data files concerning the experiment, grouped in series, with associated documentation.

The HMO claims line-item files contain health service usage data concerning HIE participants enrolled in an experimental group and a control group at Group Health Cooperative (GHC) of Puget Sound, a large prepaid health service in Seattle, Washington. This primary-variable information has been categorized into 11 files according to the type of health service rendered.

This volume is the second of three volumes in the claims line-item series. Primary data concerning the use of fee-for-service (FFS) health services by participants enrolled in FFS insurance plans are found in Vol. 1 of the series. Volume 1 also contains data pertaining to the use of FFS health services by GHC participants whenever such use was not covered by GHC; this includes *all* claimed dental care provided to GHC participants. Volume 3 contains data from Seattle FFS participants that can be used to compare FFS and HMO usage.

The codes used in the present volume (and in all claims files) are listed and defined in *HIE References: Codes Used in HIE Claims--Diagnoses, Symptoms, Procedures, Drugs, and Supplies*, The Rand Corporation, N-2349/1-HHS, May 1986.

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CONTENTS

PREFACE	iii
ACKNOWLEDGMENTS	v
FIGURES AND TABLES	xi
Section	
I. INTRODUCTION	1
Experimental Design	1
Selection of Enrollees	2
Experimental Treatments	3
Services Provided	5
Terms of Enrollment	6
Data Collection	6
File Development	11
II. THE HMO CLAIMS LINE-ITEM FILES	13
Instrument Design and Logic	16
The Coding Process	18
Sample Population	19
Charges	20
Charges for Institutional Inpatient Services	21
Charges for Physician Services	21
Charges for Institutional Outpatient Services	22
Charges for Drugs and Supplies	22
Charges for FFS Services	22
Using the HMO Claims Line-Item Files	22
The Insurance Family	22
Time Frame	23
Reconstructing Patient Histories	23
Related Files	24
FFS Claims Line-Item Files	24
Seattle FFS-Claims-for-HMO-Comparison Files	25
Aggregated Claims Series	25
Master Sample Series	27
The Codebooks	27
Header Variables	29
Codebook Use	29
Special Notes	30
Explanation of Common Variables	31
Diagnoses	31
Reason/Symptom for Visit	32
Treatment History/Status	32
SERR Number	32

III.	INPATIENT HOSPITAL SERVICES, HMO FILE 01	33
	Introduction	33
	Provider Number	34
	Category of Hospital Service	34
	Computing Total Inpatient Charges	35
	Computing Hospital Visits	35
	Codebook	37
	Directory of Variables	38
IV.	INPATIENT SERVICES RENDERED BY PHYSICIANS, HMO FILE 03	57
	Introduction	57
	Provider Number	58
	CRVS Code	58
	CRVSUNIT	59
	CRVS Modifiers	59
	GHC Code	59
	GHCUNITS	59
	Diagnosis Relation to Service	60
	Codebook	61
	Directory of Variables	62
V.	DRUGS PRESCRIBED BY PHYSICIANS, HMO FILE 04	83
	Introduction	83
	NDC Code	84
	Generic Codes	84
	Drug Therapeutic Code	84
	Diagnosis Relation to Drug	84
	Codebook	85
	Directory of Variables	86
VI.	SUPPLIES PRESCRIBED BY PHYSICIANS, HMO FILE 05	113
	Introduction	113
	Supply Code	114
	Diagnosis Relation to Supply	114
	Codebook	115
	Directory of Variables	116
VII.	OUTPATIENT SERVICES RENDERED BY PHYSICIANS, HMO FILE 06	139
	Introduction	139
	CRVS Code	140
	CRVSUNIT	140
	CRVS Modifiers	140
	GHC Code	141
	GHCUNITS	141
	Diagnosis Relation to Service	141
	Codebook	143
	Directory of Variables	144

VIII.	DRUGS PROVIDED BY PHYSICIANS, HMO FILE 08	171
	Introduction	171
	Prescription Variables	172
	NDC Code	173
	Generic Codes	173
	Drug Therapeutic Code	173
	Diagnosis Relation to Drug	173
	Codebook	175
	Directory of Variables	176
IX.	SUPPLIES PROVIDED BY PHYSICIANS, HMO FILE 09	207
	Introduction	207
	Supply Code	208
	Diagnosis Relation to Supply	208
	Codebook	209
	Directory of Variables	210
X.	INJECTIONS ADMINISTERED BY PHYSICIANS, HMO FILE 10	233
	Introduction	233
	NDC Code	234
	Number of Injections	234
	Diagnosis Relation to Injection	234
	CRVS Code	235
	CRVSUNIT	235
	CRVS Modifiers	235
	GHC Code	236
	GHCUNITS	236
	Codebook	237
	Directory of Variables	238
XI.	OUTPATIENT SERVICES PROVIDED BY INSTITUTIONS, HMO FILE 11	273
	Introduction	273
	Category of Hospital Service	274
	Provider Number	274
	Codebook	275
	Directory of Variables	276
XII.	DRUGS DISPENSED, HMO FILE 15	299
	Introduction	299
	Prescription Variables	300
	NDC Code	301
	Generic Codes	301
	Drug Therapeutic Code	301
	Codebook	303
	Directory of Variables	304
XIII.	SUPPLIES DISPENSED, HMO FILE 18	327
	Introduction	327
	Codebook	329
	Directory of Variables	330

Appendix

A. PARTICIPATION INCENTIVE PAYMENTS	337
B. HIE DATA FILES	340
C. FILE DICTIONARIES	344
D. HOSPITAL/PCF SERR	366
E. FFS CLAIMS LINE-ITEM FILES	367
F. GHC CODES	369
G. NONPRESCRIPTION DRUGS COVERED BY THE HIE FOR CERTAIN CONDITIONS	371
GLOSSARY	373

FIGURES

1. Example of an outpatient SERR	17
2. Example of Codebook Format	28

TABLES

1. HIE Enrollment Periods	7
2. Principal HIE Data Collection Instruments	8
3. HMO Claims Line-Item Files	14
4. Aggregated Claims Series	26
C.1. HMO File 01: Basic Identifying Data	344
C.2. HMO File 01: Listing by Location	345
C.3. HMO File 03: Basic Identifying Data	346
C.4. HMO File 03: Listing by Location	347
C.5. HMO File 04: Basic Identifying Data	348
C.6. HMO File 04: Listing by Location	349
C.7. HMO File 05: Basic Identifying Data	350
C.8. HMO File 05: Listing by Location	351
C.9. HMO File 06: Basic Identifying Data	352
C.10. HMO File 06: Listing by Location	353
C.11. HMO File 08: Basic Identifying Data	354
C.12. HMO File 08: Listing by Location	355
C.13. HMO File 09: Basic Identifying Data	356
C.14. HMO File 09: Listing by Location	357
C.15. HMO File 10: Basic Identifying Data	358
C.16. HMO File 10: Listing by Location	359

C.17.	HMO File 11:	Basic Identifying Data	360
C.18.	HMO File 11:	Listing by Location	361
C.19.	HMO File 15:	Basic Identifying Data	362
C.20.	HMO File 15:	Listing by Location	363
C.21.	HMO File 18:	Basic Identifying Data	364
C.22.	HMO File 18:	Listing by Location	365

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 this codebook. Section II describes the distinctive features of the HMO claims line-item series. Subsequent sections present the file codebooks within this series.

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; Fitchburg and Franklin County, Massachusetts; and Charleston and Georgetown County, 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 7,700 were ultimately enrolled.⁴ An additional 554 persons were

¹The 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.

²For 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.

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

⁴Of 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.

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 comprise 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.

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

⁵Note that "insured" in HIE terminology means only "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.

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

⁷Details 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.

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-0. 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).
- 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).

⁸The 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.

- 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:

<i>Plan</i>	<i>Percentage of Family Income</i>	<i>Dollar Limit</i>
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

HMO Control Group. A random sample of existing members of the Group Health Cooperative (subject to HIE eligibility requirements) was

⁹During 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.

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

¹¹In 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.

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-0 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.

¹²Calculation 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.

¹Numbers 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.

²Some 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.

³Some 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 Health status Health care experience and insurance coverage Satisfaction with medical care	Interview Self-administered	4-6 months before enrollment 4-6 months before enrollment	Baseline participants 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 I ∞ I
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]
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

For footnotes, see p. 10.

Table 2 (cont.)

Instrument	Topics Covered	Data Collected		
		How	When	From
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)
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

For footnotes, see p. 10.

Table 2 (cont.)

Instrument	Topics Covered	Data Collected			From
		How	When		
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]	

- Administered as a separate questionnaire only in Dayton; part of baseline questionnaire in the other sites.
- When "parent" appears in this column, a parent was asked to provide data for children 13 and younger.
- "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.
- 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.
- 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.
- Hypertension, diabetes, thyroid diseases, chronic heart diseases, chronic lung diseases, joint diseases, ulcers, cerebrovascular disease.
- 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.
- Categories of personnel: registered nurses (general-duty), medical technicians, licensed professional nurses, nursing aides, kitchen helpers, general stenographers, and maids or porters.
- 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.
- Physicians (M.D. or D.O.) specializing in general practice, internal medicine, and pediatrics.
- 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.

¹³The 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 SAS¹⁴ (Statistical Analysis System) and character formats, and an index of character-format variables.¹⁵

A codebook of variables is provided for each file. This volume contains the 11 primary-variable file codebooks in the HMO claims line-item series. Section II describes the series; Secs. III-XIII present the individual file codebooks.

¹⁴A registered trademark of the SAS Institute Inc.

¹⁵This is the content of all files issued by Rand. Other institutions (e.g., National Archives) will distribute these files and may alter their contents.

II. THE HMO CLAIMS LINE-ITEM FILES

The HMO claims line-item files contain primary data concerning the medical usage of HIE participants enrolled in an experimental and a control group at Group Health Cooperative (GHC) of Puget Sound, a large prepaid group practice in Seattle, Washington. These files provide basic data on GHC participants' use of inpatient and outpatient health services, drugs, and supplies, and the imputed costs of such care during the HIE. The majority of health services found in these files were rendered by GHC providers.¹ However, fee-for-service (FFS) health care usage by GHC participants that was *completely* covered by GHC is also found on the HMO claims line-item files. Records pertaining to claims for FFS usage by GHC participants that were *not* covered by GHC are found in the FFS claims line-item files.² These include *all* claim records for dental care provided to GHC participants, because dental care was not available at GHC.³

Each instance of a rendered service, drug, or supply is called a "line item." Line-item data and data associated with the line items comprise the records found in these files; there is one record for each line item. *If an HMO participant used no health services during the experiment, there will be no claims line-item records for that person in these files.* Line-item records were organized into eleven files, according to the type of health service involved. Thus, an HMO claims line-item file contains all the instances of a certain kind of health service. Table 3 gives a brief overview of the HMO claims line-item files and highlights some of the variables in each file.

¹"Providers" include hospitals, clinics, laboratories, physicians, pharmacies--in short, any person, institution, or organization who provided medical or dental services, drugs, or supplies to an HIE participant.

²C. E. Peterson et al., *Claims Line-Item Series, Vol. 1: Codebooks for Fee-For-Service Claims*, The Rand Corporation, N-2347/1-HHS, June 1986.

³Dental care was completely reimbursed by the HIE for the experimental group and was reimbursed 5 percent for the control group.

Table 3
HMO CLAIMS LINE-ITEM FILES

File	Sample	Examples of Variables
(01) Hospital Inpatient Services	Records concerning inpatient hospital services provided to HMO participants	Diagnoses, categories of hospital service, imputed charges
(03) Inpatient Services Rendered by Physicians	Records concerning inpatient procedures and services provided by physicians to HMO participants	Physician services, diagnoses, admitting and attending physicians, imputed charges
(04) Drugs Prescribed by Physicians	Drug prescriptions or suggestions written by HMO physicians for HMO participants	Drugs, dosages, drug generic codes, symptoms, diagnoses, treatment history, referral physicians (no imputed charges)
(05) Supplies Prescribed by Physicians	Supply prescriptions or suggestions written by HMO physicians for HMO participants	Supplies, symptoms, diagnoses, treatment history, referral physicians (no imputed charges)
(06) Outpatient Services Rendered by Physicians	Records of outpatient services provided by physicians to HMO participants	Physician services, diagnoses, symptoms, referral physicians, treatment history, imputed charges
(08) Drugs Provided by Physicians	Records of drugs provided directly by physicians to HMO participants	Drugs, symptoms, diagnoses, NDC and generic codes, dosage instructions (no imputed charges)
(09) Supplies Provided by Physicians	Records of supplies provided by physicians to HMO participants	Supplies, symptoms, diagnoses, treatment history (no imputed charges)

Table 3 (cont.)

File	Sample	Examples of Variables
(10) Injections Administered by Physicians	Records of injections given by physicians to HMO participants	Injected drugs, symptoms, diagnoses, drug generic codes, drug therapeutic codes, treatment history, imputed charges
(11) Outpatient Services Provided by Institutions	Hospital/clinic records of outpatient services provided to HMO participants	Physician services, diagnoses, symptoms, referral physicians, treatment history, (no imputed charges)
(15) Drugs Dispensed	Records of drugs dispensed at HMO pharmacies to HMO participants	Drugs, dosages, drug regimen, drug generic codes, drug therapeutic codes (no imputed charges)
(18) Supplies Dispensed	Records of supplies (primarily eyewear) dispensed to HMO participants	Supplies dispensed, primary diagnoses, prescribers (no imputed charges)

In this section, we explain in detail the processes of data gathering, data extraction, and data organization in the HMO claims line-item series. Sections III-XIII present the file codebooks.

INSTRUMENT DESIGN AND LOGIC

Data concerning HIE participants were abstracted from GHC records and placed onto documents called Services Rendered Reports (SERRs).⁴ These reports were designed to correspond with the Medical Expense Reports (MERs) used as insurance claim documents in the FFS sector. SERRs were not an analytic entity in themselves, but provided a way of grouping medical services as if they had been on a claim form. An outpatient SERR is shown in Fig. 1.⁵ Like the MERs, SERRs were designed to facilitate the linking of a patient's medical problems with the specific treatments and services rendered for those problems. The units of observation in the HMO claims line-item files are the line items, which are *the specific services, drugs, or supplies that were rendered to the participant*. As shown in Fig. 1, the line items are entered in the spaces provided in the bottom third of the SERR.

Health services provided by GHC were abstracted yearly for outpatient records and every six months for inpatient records and were placed on SERRs. Because this information was abstracted after the fact from central records, outpatient and inpatient SERRs could encompass several different services rendered on the same date during one visit or could contain services performed on different days that were medically related. For example, lab tests performed some time after the visit might be placed on the same SERR.

⁴Abstractors were trained at GHC and supervised by a Rand HIE physician. For greater detail on the abstraction of HMO medical service data, see George A. Goldberg, *The Health Insurance Experiment's Guidelines for Abstracting Health Services Rendered by Group Health Cooperative of Puget Sound*, The Rand Corporation, N-1948-HHS, February 1983.

⁵The other type of SERR used by the HIE was a Hospital/PCF SERR, which is shown in Appendix D.

PHYSICIANS, DOCTORS, SUPPLIERS AND OUTPATIENT SERR

Last Name of Patient		First Name	MI	Name(s) of Provider(s)		Area Location	
GHC Medical History Number			Patient's Family Number		Patient's Individual Number		Plan
Reason for Visit	Referred From:		Was Illness or Injury Employment Related? YES <input type="checkbox"/> No <input type="checkbox"/>				
	Referring To		Was Illness or Injury Accident Related? YES <input type="checkbox"/> NO <input type="checkbox"/>		Date of Injury or Accident	Describe how and where accident occurred	
Describe the Primary Problem or Diagnosis That Brought the Patient to GHC and Any Other Problem(s) for Which Treatment Was Supplied. Please List Primary Problem or Diagnosis on Line A.			AI	Type of Problem (check one)		AI	Treatment History (omit if well care or pregnancy) Date Symptoms First Occurred this Episode (for pregnancy, give LMP) (omit for well care or chronic - not flare-up)
A.				<input type="checkbox"/> Acute Well Care (or pregnancy) <input type="checkbox"/> Flare-up of Chronic Chronic (not flare-up)			<input type="checkbox"/> Initial Visit for this episode <input type="checkbox"/> Repeat Visit for this episode Symptom Date _____
B.				<input type="checkbox"/> Acute Well Care (or pregnancy) <input type="checkbox"/> Flare-up of Chronic Chronic (not flare-up)			<input type="checkbox"/> Initial Visit for this episode <input type="checkbox"/> Repeat Visit for this episode Symptom Date _____
C.				<input type="checkbox"/> Acute Well Care (or pregnancy) <input type="checkbox"/> Flare-up of Chronic Chronic (not flare-up)			<input type="checkbox"/> Initial Visit for this episode <input type="checkbox"/> Repeat Visit for this episode Symptom Date _____
D.				<input type="checkbox"/> Acute Well Care (or pregnancy) <input type="checkbox"/> Flare-up of Chronic Chronic (not flare-up)			<input type="checkbox"/> Initial Visit for this episode <input type="checkbox"/> Repeat Visit for this episode Symptom Date _____
Place of Visit Codes: O = Outpatient Clinic (Includes Laboratory or X-ray inside GHC); L = Outside X-ray or Laboratory; H = Patient's Home; IH = Inpatient Hospital; NH = Nursing Home; PCF or SNF; ER = Emergency Room; OL = Other Location AI = Abstractor's Inference							
A.	B.	C.	D.	E.	F.		
Date Of Service	Place of Service Use code above	Services Describe Each Medical or Surgical Procedure and Other Service or Supplies Furnished For Each Date Including Specific Lab Tests and the Specific Name of Any Drug Injected	Type of Office Visit (GHC Code)	Relate Treatment to Problem by Ref to A, B, C, or D above	Were Any Drugs Prescribed? Were any Supplies Prescribed or Suggested?		
1					<input type="checkbox"/> Yes <input type="checkbox"/> No A. If yes, specify drug(s) and/or supply(ies) B. Relate to Problem by Reference to 17 A, B, C or D above		
2					AI		
3							
4							
5							
6							

ABSTRACTOR _____ DATE _____
 FORM HIEI 100 5M

Fig. 1 -- Example of an outpatient SERR

Many GHC participants, because of medical necessity (emergencies, outside referrals, etc.), used FFS services from FFS providers. It is a standard HMO practice to pay for such necessary services. Thus, whenever GHC participants went outside GHC for FFS care, these claims, *if completely paid for by GHC*, were transferred from MERs to SERRs and included in the HMO line-item data.⁶ FFS-provided services to GHC participants can be identified in these files in two ways: (1) If the first character in the provider identifier (variable DEI5502) is an E, then the provider is FFS, or (2) if the GHC location (variable DEI6343) code is 23 or 24, indicating the service took place in a non-GHC facility, then the service is FFS.

If the FFS claim was *not* covered by GHC, the claims line-item data for that participant were entered in the FFS claims line-item files. Thus, users wishing to examine *all* health care usage by HMO participants must refer to both the HMO and FFS claims line-item files. HMO participants can be identified in the FFS files using the variable PERSON.

THE CODING PROCESS

Information from the SERRs was hand-copied onto data entry coding sheets. Supplemental coding information derived from existing coding systems was added: diagnosis codes from the *Hospital Adaptation of the ICDA* (HICDA)⁷; reason-for-visit codes from the *National Ambulatory Medical Care Survey: Symptom Classification* (NAMCS)⁸; physician procedure/service codes from the 1974 revision of the *California*

⁶Some FFS claims that GHC completely covered were *also* inadvertently included on the FFS claims line-item files; thus, duplicate records exist for such claims. In the FFS line-item files, these duplicate claims are identified as GHC-covered by a value of 48 in the variable DEI5560 (Reason for Noncoverage).

⁷Commission on Professional Hospital Activities, *Hospital Adaptation of the ICDA (International Classification of Diseases Adapted for Use in the United States)*, 2nd Edition, Ann Arbor, MI, May 1973.

⁸National Center for Health Statistics, Washington, D.C., May, 1974. Reprints available from National Technical Information Service, Springfield, VA (Document Number TB-289-245).

Relative Value Studies (CRVS)⁹; drug identification codes from the *National Drug Code Directory*¹⁰; and drug therapeutic class codes from *AMA Drug Evaluations, 1973*.¹¹ For some types of data, HIE researchers developed their own coding systems (e.g., supply codes) or added categories to existing coding systems (e.g., diagnosis codes). Codes and definitions for all existing and supplemental codes used in the claims files are combined in one reference volume.¹²

SAMPLE POPULATION

HMO participants were enrolled in one of two groups:

1. An experimental group of previously nonenrolled people who met HIE eligibility requirements were selected randomly by the HIE and admitted into Group Health Cooperative.
2. A control group was selected randomly from among people who were already enrolled for at least one year at GHC and who met HIE eligibility requirements. These people were covered by a variety of GHC plans that they or their employers had purchased.

The experimental group was drawn and assigned to GHC using the same unbiased allocation model that was used for the population enrolled in the HIE's various FFS insurance plans; thus, this group is comparable to the group on the FFS plans. The control group members were drawn as a random sample from the GHC population; these individuals had already voluntarily chosen GHC and, as a group, are not necessarily comparable to the HMO experimental group.

⁹California Medical Association, *California Relative Value Studies*, San Francisco, CA, 1975.

¹⁰Public Health Service, U.S. Dept. of Health and Human Services, Washington, D.C., June 1972.

¹¹Second edition, Publishing Sciences Group, Inc., Acton, MA.

¹²M. Nelsen and C. A. Edwards, *HIE References: Codes Used in HIE Claims--Diagnoses, Symptoms, Procedures, Drugs, and Supplies*, The Rand Corporation, N-2349/1-HHS, May 1986, hereafter referred to as *Codes Used*.

The HMO experimental and control groups together constituted slightly more than 1,800 people, or approximately 60 percent of the total Seattle sample of about 3,100 people. This was slightly less than 24 percent of all HIE participants.¹³ Half of the HMO experimental group remained in the HIE for three years and the remaining half for five years, whereas all the control group members were enrolled for five years.

The experimental group was given a package of benefits within GHC that matched as closely as possible the benefits available to FFS enrollees on the "free" (0 percent coinsurance) plan. Such benefits included dental and chiropractic services, which were not available at GHC; therefore HIE coverage allowed experimental group members to obtain them in the fee-for-service sector. In other words, the GHC experimental group had "free" care comparable to the "free" FFS plan, subject to the restriction that care had to be obtained at GHC if the service was available at GHC. If an experimental group participant chose to go to the FFS system for services that were available at GHC, the HIE reimbursed 5 percent of those charges. This provided an incentive for experimental group participants to file claims, thus allowing out-of-plan use to be measured.

Control group members were not provided a benefit package by the HIE because they retained whatever benefit package they had purchased by themselves or through an employer. As an incentive to report any out-of-plan use, control group members were also reimbursed 5 percent of all out-of-plan medical and dental expenses for which they filed claims.

CHARGES

Charges presented in the HMO claims line-item files are *imputed* and are contained in the variable IMPCHRG. For institutional inpatient services (File 01), GHC provided the imputed charge; for physician services, HIE analysts constructed the imputed charge. These imputation procedures are explained below. All imputed charges are expressed in

¹³Numbers are stated approximately because of changes in group compositions caused by births, attrition, and deaths.

actual dollars and cents for the year of service, unadjusted for inflation.

Charges for Institutional Inpatient Services

An HMO does not normally issue bills for services because services are prepaid. However, in the case of institutional inpatient services (File 01), GHC assisted in the study by providing "mock bills" for institutional charges using comparable Seattle market values for the hospital services rendered. GHC occasionally has reason to charge non-GHC people whom it treats for emergencies, and periodically surveys the Seattle market to determine charges for such services. The inpatient mock bills submitted to the HIE were therefore the actual charges that would have been billed had the GHC participants not been covered for hospitalization.

Charges for Physician Services

Charges for the services of GHC physicians and other health professionals were imputed by the HIE using CRVS codes and unit values. The CRVS coding system¹⁴ defines the procedures and services of physicians and other health professionals and assigns standard unit values to those services for use in computing medical charges; it was used by HIE researchers for this purpose. The calculation formula was based on the assigned CRVS units for the service and a dollar-amount-per-CRVS-unit provided annually by GHC. Different ratios were used for different types of services. Services that were *not* covered by the participant's GHC contract have an imputed charge of zero.

CRVS modifier codes were used to indicate special circumstances involved in certain physician services or procedures. A CRVS modifier of 1 indicates a service that was part of a group of auxiliary services directly related to a primary service. An example is a surgery (the primary service) with a postoperative visit (the associated service). However, in a few cases in the HMO claims line-item files, the CRVS units for a primary service were incorrectly assigned to *each service* in the group of services associated with it, i.e., services indicated by a

¹⁴Op. cit.

CRVS modifier of 1. Thus, when imputing charges for physician services involving modifier codes of 1, Rand analysts used appropriate deflation factors to compensate for any incorrect assignments of CRVS units.

Charges for Institutional Outpatient Services

No imputed charges are presented for outpatient services provided by hospital emergency rooms or clinics. GHC did not provide any "mock bills" for emergency room and clinic services. Such services are not expressed in CRVS codes and therefore could not be imputed by HIE analysts.

Charges for Drugs and Supplies

No standard values were available for calculating the costs of drugs or supplies. Also, GHC pharmacies charge less than the market price for drugs and supplies; thus, the costs of those products are not comparable to the costs of those purchased in the FFS sector. Therefore, imputed charges for drugs and supplies within GHC are not provided in the HMO claims data.

Charges for FFS Services

Fee-for-service charges that GHC covered were treated as if they were GHC services; thus, the *imputed* rather than actual FFS charges are presented in these files. Some of the original charges can be found in the FFS claims line-item files because, as noted earlier, some FFS services that GHC fully reimbursed were inadvertently included in the FFS claims line-item files.¹⁵

USING THE HMO CLAIMS LINE-ITEM FILES

The Insurance Family

The HIE had a number of ways of grouping participants into families, each designed to meet a particular analytical need. For the FFS and HMO claims series and most of the economic analyses of claims, the relevant family unit was called the "insurance family." However,

¹⁵These are the only instances of duplicate claims data within the claims files.

the claims line-item files are linked only to *individuals*. Family and household identification (ID) numbers that connect individuals with their insurance families are found in the eligibility-family changes file¹⁶ of the master sample series. Using these family ID numbers, line items can be grouped by family if the analyst desires.

Time Frame

A primary unit for economic analysis of claims data is the "contract year." The contract year was the same for each member of a given insurance family. It began on the enrollment date and ended on the day before the enrollment date anniversary. There were several enrollment dates for each site, but each member of an insurance family had the same enrollment date. Seattle FFS participants were enrolled at the first of each month from January 1 to September 1, 1976. Seattle HMO participants were enrolled at the first of each month from April 1 to September 1, 1976. The three-year and five-year groups enrolled at the same times and thus exited two years apart.

Reconstructing Patient Histories

Each line item in the HMO claims files can be linked to its original SERR by its SERR number.¹⁷ The SERRs can be linked in turn by participant and provider identifiers, allowing participant utilization to be reconstructed in whatever detail is desired.¹⁸ However, since one correctly completed SERR could result in entries in several different line-item files, it may sometimes involve considerable tracking to obtain a clear picture of what was rendered to a patient during one visit. Refer again to Table 3, to observe the following:

¹⁶S. 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.

¹⁷Some FFS claims covered by GHC were not given a SERR number; thus, when matching by SERR number, the user must drop records with missing SERR numbers to avoid erroneous matches.

¹⁸Note that separate SERRs were used for inpatient hospital and inpatient physician services. Thus, *total* inpatient services must be reconstructed using the person identifier and date of service to link the line-item services from the SERRs.

A patient went to a GHC facility where an office visit occurred, the patient received an injection, and the physician prescribed some medicine. That could result in records on as many as four different line-item files: one for the physician's services (File 06), one for the injection (File 10), one recording the medicine the physician prescribed (File 05), and one containing information indicating when and where the prescription was filled (File 15).

Thus, analysts and programmers will often have to look at many files to obtain a complete picture of services rendered on a given date by a particular provider.

RELATED FILES

FFS Claims Line-Item Files

The FFS claims line-item files are a group of files that contain data pertaining to the use of FFS health services primarily by FFS participants during the course of the HIE. However, as discussed, some data concerning the use of FFS services by HMO participants appear there--largely data involving HMO participants' claims for FFS care that were not covered by GHC. Because dental care was not available at GHC, all claimed dental usage by GHC participants also appears in the FFS claims files.

The file organization of the HMO claims line-item files is comparable to that of the FFS claims line-item files except for three files that were not applicable to HMO usage (FFS Files 12, 13, and 16, which deal with dental services and supplies). The organization of the FFS claims line-item files, with a summary of the important variables in each file, is presented in Appendix E. Note that inpatient and outpatient services of independent physicians are found in FFS File 06, but the services of GHC physicians are divided into two files: Inpatient physician services are found in HMO File 03 and outpatient physician services are in HMO File 06. However, *FFS participants' data in the FFS claims line-item files should not be used for direct comparisons to the data found in the HMO claims line-item files.* Such comparisons should use only the data available in the Seattle FFS-claims-for-HMO-comparison files, discussed below.

Seattle FFS-Claims-for-HMO-Comparison Files

Because of planned similarities in the Seattle FFS and HMO populations, Rand researchers used only the Seattle FFS participant data for comparison of health services utilization with that of the HMO group.¹⁹ However, because of a great many differences in types and valuations of medical services within the FFS and HMO systems, the line-item data from the Seattle FFS and HMO claims line-item files required intermediate analytic steps to render them comparable. Thus, the Seattle FFS-claims-for-HMO-comparison files²⁰ represent Seattle FFS data that have been adjusted for this comparison. The major comparison step involved imputing the line-item charges for Seattle FFS participants using the same imputation method as was used for the HMO system.

Users who plan to compare FFS and HMO usage should consult the Seattle FFS-claims-for-HMO-comparison files for further information concerning the steps necessary in such comparisons. Again we note that *only* the Seattle FFS-claims-for-HMO-comparison files should be used for FFS/HMO comparisons using HIE data.

Aggregated Claims Series

Claims line-item data from the HMO and FFS claims files have been aggregated in different ways to suit different research purposes. These files of derived variables constitute the aggregated claims series. Table 4 lists the different types of files found in the aggregated claims series, with a brief description of some of the important variables in each.

¹⁹For detailed information on the Rand analysis and its conclusions, see W. G. Manning et al., *A Controlled Trial of the Effect of a Prepaid Group Practice on the Utilization of Medical Services*, The Rand Corporation, R-3029-HHS, September 1985. However, researchers should note that such Rand analyses cannot be exactly replicated using these files because the HMO files presented here are *updated* versions of the files Rand researchers used.

²⁰To be issued as part of HIE documentation. See Appendix B for order information.

Table 4

AGGREGATED CLAIMS SERIES

File	Sample	Variables
FFS annual expenditures and visit counts	All insured FFS participants; one record per person per year	Annual totals for inpatient, outpatient, mental health and dental expenditures; annual counts of hospitalizations, physician visits, nonphysician visits, mental health visits, and dental visits.
HMO annual expenditures and visit counts (includes Seattle FFS)	All insured Seattle FFS and HMO participants and HMO control group in Seattle; one record per person per year	Annual totals for inpatient, outpatient, and mental health imputed expenditures; annual counts of hospitalizations, physician visits, nonphysician visits, and mental health visits
FFS visits -inpatient -outpatient -dental	Claims for health services for FFS-insured persons only; dental file includes claims for all insured persons; one record per person-provider-date of service	Covered expenses, visit type, diagnosis, procedure codes.
HMO and Seattle FFS visits -inpatient -outpatient	Claims for health services for insured Seattle FFS and HMO participants; one record per person-provider-date of service	Imputed expenses, visit type, diagnosis, procedure codes.
FFS treatment episodes and annual episode counts	Episode of treatment for insured FFS participants; one record per episode	Covered expenses summed by episode of treatment, diagnosis, episode type, amount of maximum dollar expenditure (MDE) remaining at beginning and end of episode.
	Episode counts and expenditures for insured FFS participants; one record per person per year	Annual episode counts and expenditures summed by type: acute, chronic, well care, outpatient, dental, and hospital.

Master Sample Series

Because the HIE has no way of knowing what kind of baseline and demographic information individual users will want to employ, no demographic information is provided on the claims files. Thus, variables from the following file must be merged with the chosen demographic information from the master sample series. Volume 1 in the master sample series provides data concerning eligibility and family changes among enrollees.²¹ Volume 2 presents demographic data for all enrollees and anyone considered for enrollment.²² Volume 3 contains supplemental data, including information about (1) eligible people who refused to enroll, (2) Seattle HMO participants who moved away from Seattle, and (3) identifiers that link newborns to their mothers.²³

THE CODEBOOKS

Each file in this volume has two main parts:

- Introduction: information on the data sources for the file, and notes concerning variables that require explanation.
- The file codebook: descriptions of each variable on the file.

The variable descriptions form the core of the codebook. They are arranged in boxes, as in Fig. 2:

²¹Op. cit.

²²S. M. Polich et al., *Master Sample Series, Vol. 2: Codebook for Full Sample Demographic File*, The Rand Corporation, N-2264/2-HHS, May 1986.

²³To be published as part of HIE documentation. See Appendix B for order information.

VARIABLE DEI5556	(Variable name)	HMO FILE01 (File label)
Accommodation	(Variable label)	
CODES:	(Variable values and their definitions)	
1 - 1 bed	(private)	
2 - 2 bed	(semi-private)	
3 - 3 plus beds	(ward)	
4 - Intensive care unit	or coronary care unit	
5 - Intermediate care unit		
6 - Nursery		
7 - Isolation		
8 - Mental health ward	or unit	
9 - Skilled nursing facility,	semi-private	
DEI5556 defines the accommodations provided by the hospital.	(Explanation)	

Fig. 2 -- Example of codebook format

Each box provides a basic description of the variable, including:

- Variable name, a unique letter-number combination beginning with DEI, for "data element indicator."
- Variable label, a capsule description.
- Variable values and their definitions, if necessary.
- Explanation of the variable.

Below the boxes appear essential explanatory notes, if any. For most variables, at the right of each box will be a table of response frequencies (not shown in the example) that will indicate (1) response codes, (2) frequencies, (3) cumulative frequencies, (4) percentage of the frequency, and (5) cumulative percentage of the frequency. For continuous variables such as imputed charges, the table will show statistics including (1) minimum and maximum values, (2) mean values, and (3) standard deviation. Some variables, such as "Provider" or "Person Identifier" do not have tables of frequencies because there are too many values for concise presentation.

Header Variables

Five identifying variables precede the variables on every file in the claims codebooks: FILENAME, PERSON, SITE, INSTAT, and CONTYR.

FILENAME denotes the particular file. PERSON identifies each respondent, permitting data to be gathered for a certain person across all files. SITE contains codes to identify each site. For all records in the HMO files, SITE = 2 (Seattle). INSTAT indicates HIE insurance status.

- INSTAT = 1 indicates participants who were ever insured under the HIE, including HMO experimental group participants.
- INSTAT = 2 identifies members of the Seattle HMO control group who were enrolled in the study but not insured under the HIE.
- INSTAT = 3 indicates participants who were never insured under the HIE.

For the HMO files in the following series, INSTAT = 1 or 2 for all files. Individuals with INSTAT = 3 will not show up in the claims line-item files; these include any person ever considered for participation who was not subsequently insured by the HIE. Such individuals are listed only in the full sample demographic file.²⁴

CONTYR identifies the participant's contract year of coverage for which the medical or dental claim was filed: 1-3 for three-year participants, and 1-5 for five-year participants.

Codebook Use

Variable directories that list the variables in each file and their page locations in the text are found at the beginning of each codebook. File dictionaries containing the hardcopy versions of the tape dictionaries supplied with each file are found in Appendix C. The dictionaries provide (1) basic identifying data concerning the file and (2) a listing of the variables by location.

²⁴Polich et al., op. cit.

To avoid unnecessary repetition and to make reference easier, variables that are used throughout the HMO claims line-item codebooks are described at the end of this section. Variables specific to certain files are introduced and explained in the relevant file introductions as they occur.

SPECIAL NOTES

- **The number of claims or visits should never be inferred from the frequencies.** In statistical analysis of these files, it is important to remember that the frequencies of the variables do *not* represent the number of claims or visits; they represent the number of line items. An example would be a physician who gave four injections. The physician identifier appears on four line-item records but represents only one visit and one claim. The frequencies are provided as a way for the user to verify that the HIE-provided tape has been properly read.
- **Users should not attempt to compare FFS and HMO claims line-item data directly.** Such data require intermediate analytic steps to render the data samples comparable. FFS/HMO comparison data should be drawn from the FFS/HMO claims comparison files,²⁵ where such data have already been processed by Rand staff.
- The values of variables relating to dates were not edited for accuracy beyond the data collection form itself, and there may be logical inconsistencies in some dates.
- *Most of the claims files variables are repeated across files and perform the same functions in each; however, a few have specialized uses within some files.* For example, DEI5502, Provider Number, refers in File 01 to the hospital that provided services; in File 03, DEI5502 refers to the *physician* who provided services. Any changes in a variable's use within a file are explained in the relevant file introductions and within the variable description in that file codebook.

²⁵Peterson et al., op. cit.

EXPLANATION OF COMMON VARIABLES

Diagnoses

HICDA codes are used to classify diagnoses.²⁶ Supplementary diagnosis codes were added under the direction of a Rand HIE physician to describe diagnoses not adequately reflected by any existing HICDA code. All HICDA and supplementary diagnosis codes used in the following files, with their definitions, are found in Sec. I of *Codes Used*. Because diagnosis codes are used throughout the claims files, there are too many possible values for presentation; thus, diagnosis frequencies are not presented.

Diagnoses are listed in the order they appeared on the SERR; in Files 01 and 03, the discharge diagnosis is listed first. Each diagnosis is defined by three variables: (1) an actual diagnosis, and, if included by the physician, (2) a diagnosis qualifier, and (3) an associated diagnosis. The possible qualifiers are "and, rule out, possible, probable, or question of, with or due to, not, or."

An example of a diagnosis would be "cold with fever" where "cold" is the actual diagnosis, "with" is the qualifier, and "fever" is the associated diagnosis. Occasionally, a physician could not make a diagnosis with certainty and listed only an associated diagnosis. In such cases, coders left the diagnosis space blank and entered only the physician's qualifier and the associated diagnosis code, attempting to reproduce the physician's wording as closely as possible.

In medical terminology, "rule out" is an implied command to the physician that means *try to rule out* or *prove it's not*. For example, a diagnosis might be written as "influenza rule out pneumonia." This means the physician is considering the possibility that pneumonia may exist but cannot yet conclude if it is "ruled in" or "ruled out." Therefore, he must make further efforts to rule it out as a possibility. Although "rule out" is a variation of "possible, probable, or question of," it was used to reproduce the physician's wording as closely as possible.

²⁶Commission on Professional Hospital Activities, op. cit.

Reason/Symptom for Visit

Three variables, DEI5503, DEI5505, and DEI5565, indicate up to three reasons/symptoms for the participant's visit to the physician (or other medical provider). Reasons/symptoms were coded from the NAMCS.²⁷ If the symptom did not appear on the NAMCS list, a code was assigned by the Health Insurance Experiment according to the category of the symptom. The reason-for-visit codes used in the claims files are defined in Sec. IV of *Codes Used*.

Treatment History/Status

A treatment history/status variable exists for each of the four possible diagnoses. Each treatment history/status variable indicates the nature of the participant's diagnosis/problem (i.e., chronic, acute, health maintenance, or pregnancy) and, in the case of a chronic or acute problem, whether this was an initial or repeat visit for the condition. The treatment history/status was filled in by the provider but was incorrect or omitted on occasion, particularly if the patient had switched providers. For these reasons, coding clerks inspected all treatment history/status codes and changed them when necessary.

SERR Number

The variable SERR Number (DEI6300) contains an identifying number that can be used to link the line items from a given SERR. Note that separate SERRs were used for inpatient hospital and inpatient physician services; thus, inpatient records must be linked using the person identifier and date of service. Some FFS claims that were covered by GHC and placed in the HMO files were given SERR numbers; however, others were *not* given SERR numbers. Thus, SERR numbers for those records are listed in this variable as missing, i.e., the variable value is a blank.

²⁷National Center for Health Statistics, op. cit.

III. INPATIENT HOSPITAL SERVICES, HMO FILE 01

INTRODUCTION

This codebook documents primary variables concerning basic hospital inpatient services rendered to HIE participants by Group Health Cooperative. *Excluded* from hospital service categories are most physician services, except certain hospital-based professional services such as pathology and radiology. Inpatient physician services are found in File 03, and outpatient physician services are listed in File 06.¹ The bulk of data in this file involves services rendered within Group Health Cooperative hospitals; however, some FFS data, representing HMO participants' use of FFS health services that were fully covered by GHC, are included here with the charges imputed. FFS services not wholly covered by GHC appear in the FFS claims line-item files.²

Specific information provided in this file includes dates of admission and discharge, the diagnoses provided by the hospital, the type of service provided by the hospital, and the imputed charge (provided by GHC) for the service. Other variables indicate the admitting and attending physician identifiers, the accommodations provided by the hospital, the discharge destination of the patient, and whether the hospitalization was accident- or employment-related.

The units of observation in this file are line items representing inpatient hospital services.³ For an explanation of common variables

¹A few FFS inpatient physician records were accidentally placed in the outpatient physician records in HMO File 06 and can be identified using the variable DEI5584 (Place of Service). If DEI5584 = 4, the service took place in a hospital inpatient setting.

²In the case of psychiatric inpatient care for HMO experimental group participants at FFS hospitals, GHC paid only for the first \$1,000 in services. Any subsequent charges were reimbursed in full by the HIE. Thus, the first \$1,000 of such psychiatric charges and services show up in the HMO files, but the remaining charges (if any) appear in the FFS claims line-item files for the participant.

³Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation to the unit of observation and does *not* represent the number of hospitalizations of the participant.

used in this codebook, see the final subsection of Sec. II. Below we provide explanations for specific variables in this file.

PROVIDER NUMBER

In this file, the variable DEI5502, Provider Number, refers to the hospital facility that rendered the inpatient service listed in DEI5557, Category of Service. The majority of cases in this file involve GHC hospitals. There were two Group Health hospitals, the Central and Eastside units, but the Eastside unit was not operational until halfway through the study; utilization data will reflect this.⁴ A few FFS hospitals, where GHC participants received GHC-covered services, are also shown on this file as providers.⁵ There is only one provider listed per line-item service.

CATEGORY OF HOSPITAL SERVICE

The variable DEI5557, Category of Hospital Service, indicates the type of hospital service that the participant received. The main categories are room and board services, pharmacy services, radiology (X-ray) services, laboratory services, and miscellaneous hospital supply services. Other categories include specialized services such as operating room, hospital pathologist or radiologist, blood transfusions, etc. The variable used in this file is the same as that used in the FFS claims line-item files; thus, some of the listed categories, especially those pertaining to charges, may not be relevant here.

Category 97 indicates services rendered to GHC control participants by GHC that were *not* covered by the participant's GHC contract. The imputed charge (IMPCHRG) for such services equals zero.

⁴A third GHC hospital was established outside Seattle (Tacoma) near the end of the study; data from participants using it may also be in this file.

⁵The first character of DEI5502 identifies whether the provider is a GHC or FFS facility: a "C" indicates GHC facilities, and an "E" indicates FFS facilities.

COMPUTING TOTAL INPATIENT CHARGES

To compute the total imputed charge for an inpatient stay, analysts will have to combine data from File 01 (hospital charges) and File 03 (inpatient physician charges). Some GHC-covered FFS inpatient physician charges are also found in File 06, and analysts should check for those as well. Such cases can be identified by using the location of service variable DEI5584 and checking for values indicating that the service was performed in a hospital or nursing home.

COMPUTING HOSPITAL VISITS

In HIE analyses, a hospital inpatient visit (hospitalization) is defined as a unique combination of person, provider, and date-of-admission/discharge variables. To avoid double-counting hospital visits, users may wish to note any back-to-back hospitalizations that occur. Back-to-back hospitalizations are defined as those in which the second admission was within one day of discharge from the first admission and was for the same or a related illness or condition (e.g., hospital transfers). In HIE analyses, back-to-back hospitalizations were collapsed and considered to be one visit. Users may want to consider a similar counting procedure for their own analyses.

CODEBOOK FOR HMO FILE 01
INPATIENT HOSPITAL SERVICES

DIRECTORY OF VARIABLES - HMO FILE 01
INPATIENT HOSPITAL SERVICES

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	39	DEI5512	Employment-related	46
PERSON	Person identifier	39	DEI5556	Accommodations	47
SITE	Site	39	DEI5557	Category of hospital service	48
INSTAT	Insurance status	40	IMPCHRG	Imputed line-item charge	50
CONTR	Contract year	40	DEI5522	1st diagnosis	50
DEI6300	SERR number	41	DEI5523	1st diagnosis qualifier	51
DEI5502	Provider number	41	DEI5524	1st associated diagnosis	51
DEI5513	Admission date	41	DEI5525	2nd diagnosis	52
DEI5555	Date of service	42	DEI5526	2nd diagnosis qualifier	52
DEI5514	Discharge date	42	DEI5527	2nd associated diagnosis	53
DEI5520	Discharge destination	43	DEI5528	3rd diagnosis	53
DEI5521	Discharge institution	43	DEI5529	3rd diagnosis qualifier	54
DEI5515	Admitting physician number	44	DEI5530	3rd associated diagnosis	54
DEI5508	1st attending physician #	44	DEI5531	4th diagnosis	55
DEI5509	2nd attending physician #	45	DEI5532	4th diagnosis qualifier	55
DEI5519	Patient status	45	DEI5533	4th associated diagnosis	56
DEI5511	Accident-related	46			

FILENAME			
VALUE	FREQ	CUM FREQ	CUM %
PE012A	8846	8846	100.00
SITE			
VALUE	FREQ	CUM FREQ	CUM %
2	8846	8846	100.00

VARIABLE FILENAME HMO FILE 01

Name of file

FILENAME is a 6-character code that uniquely identifies the file. The file name is PE012A.

VARIABLE PERSON HMO FILE 01

Person identifier

PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.

VARIABLE SITE HMO FILE 01

Site

CODES

2 - Seattle, Washington

SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.

VARIABLE	INSTAT	HMO FILE 01
Insurance status		
CODES		
1 - Ever insured (includes HMO experimental group)		
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	5073	5073	57.35	57.35
2	3773	8846	42.65	100.00

VARIABLE	CONTYR	HMO FILE 01
Contract year		
CODES		
01 - First year		
02 - Second year		
03 - Third year		
04 - Fourth year		
05 - Fifth year		
CONTYR identifies the participant's contract year of coverage in which the service was performed.		

CONTYR VALUE	FREQ	CUM FREQ	%	CUM %
01	2138	2138	24.17	24.17
02	1922	4060	21.73	45.90
03	2254	6314	25.48	71.38
04	1372	7686	15.51	86.89
05	1160	8846	13.11	100.00

VARIABLE	DE16300	HMO FILE 01
SERR	number	
DE16300 indicates an identifier number which is used to link the line items from a given SERR.		

VARIABLE	DE15502	HMO FILE 01
Provider	number	
DE15502 is an 8-character code which refers, in this file, to the hospital, nursing facility, or any other health care facility in which the participant was an inpatient. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

NOTE: DE15502 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE	DE15513	HMO FILE 01
Admission	date	
CODES		
19760504 to 19810728 - Range on this file (YYMMDD)		
DE15513 indicates the participant's hospital admission date.		

VARIABLE	DE1555	HMO FILE 01
Date of service		
CODES		
19760504 to 19810728 - Range on this file (YYYYMMDD)		
DE1555 indicates the initial date that the hospital service was rendered.		

VARIABLE	DE1514	HMO FILE 01
Discharge date		
CODES		
19760509 to 19810729 - Range on this file (YYYYMMDD)		
DE1514 indicates the participant's hospital discharge date.		

DEI5520	VALUE	FREQ	CUM FREQ	%	CUM %
1	48	8618	8618	97.95	97.95
3	84	8702	8702	0.96	98.91
7	96	8798	8798	1.09	100.00

VARIABLE	DEI5520	HMO FILE 01
Discharge destination		
CODES		
1 - Not applicable, missing		
2 - Home		
3 - Home, with home health care		
4 - Hospital		
5 - Skilled nursing facility		
6 - Child care institution		
7 - Intermediate care facility		
Other		
DEI5520 states the destination of the patient upon leaving the hospital.		

VARIABLE	DEI5521	HMO FILE 01
Discharge institution		
CODES		
blank - Not applicable, missing		
DEI5521 indicates the identifier number of the participant's discharge destination if the participant was discharged to an institution (DEI5520 = 3 through 6).		

VARIABLE	DE15515	HMO FILE 01
Admitting physician number		
DE15515 indicates the admitting physician's identifier number. The admitting physician has primary responsibility for the patient's care while the participant is in the hospital. For more information on the physician, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DE15508	HMO FILE 01
1st attending physician number		
CODES		
blank - Not applicable, missing		
DE15508 indicates the attending physician's identifier number. It was used only when the admitting physician (see DE15515) did not continue as the primary physician. For more information on the physician, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DEI5509	HMO FILE 01
	2nd attending physician number	
	CODES	
	blank - Not applicable, missing	
	DEI5509 indicates the second attending physician's identifier. It was used when the admitting physician (see DEI5515) and the first attending physician (see DEI5508) did not continue as the primary physician. For more information on the physician, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DEI5519	HMO FILE 01
	Patient status	
	CODES	
	1 - Discharged	
	2 - Deceased	
	DEI5519 describes the patient's hospital status at the time GHC data was collected or the FFS claim was submitted.	

DEI5519	VALUE	FREQ	CUM FREQ	%	CUM %
	1	8750	8750	98.92	98.92
	2	96	8846	1.09	100.00

VARIABLE
DEI5511

Accident related
CODES
1 - Yes
2 - No
DEI5511 states whether the illness or injury was
accident related.

HMO FILE 01

VARIABLE
DEI5512

Employment related
CODES
1 - Yes
2 - No
DEI5512 states whether the illness or injury was
employment related.

HMO FILE 01

DEI5511					
VALUE	FREQ	CUM FREQ	%	CUM %	
1	1149	1149	12.99	12.99	
2	7697	8846	87.01	100.00	

DEI5512					
VALUE	FREQ	CUM FREQ	%	CUM %	
1	182	182	2.06	2.06	
2	8664	8846	97.94	100.00	

VARIABLE	DEI5556	HMO FILE 01
Accommodations		
CODES		
1	- Not applicable, missing	
2	- 1 bed (private)	
3	- 2 bed (semi-private)	
4	- 3 plus beds (ward)	
5	- Intensive care unit or coronary care unit	
6	- Intermediate care unit	
7	- Nursery	
8	- Isolation	
9	- Mental health ward or unit	
	- Skilled nursing facility, semi-private	
DEI5556 defines the accommodations provided by the hospital.		

DEI5556	VALUE	FREQ	CUM FREQ	%	CUM %
1	6348	20	20	0.80	0.80
2	1998	46	2018	79.98	80.79
3	101	2165	2064	1.84	82.63
4	294	2166	2165	4.04	86.67
5	30	2460	2166	0.04	86.71
6	8	2490	2460	11.77	98.48
7		2498	2490	1.20	99.68
8			2498	0.32	100.00

VARIABLE	DE15557	HMO FILE 01	DE15557 VALUE	FREQ	CUM FREQ	%	CUM %
Category of hospital service							
CODES							
1 - Room and board			1	2492	2492	28.17	28.17
2 - Pharmacy			2	2038	4530	23.04	51.21
3 - X-ray			3	297	4827	3.36	54.57
4 - Lab			4	1124	5951	12.71	67.27
5 - Miscellaneous hospital supplies			5	844	6795	9.54	76.81
6 - Special lab, non-invasive			6	80	6875	0.90	77.72
7 - Operating room, recovery supplies, cast room			7	416	7291	4.70	82.42
8 - Operating room, supplies and anesthesia			8	2	7293	0.02	82.44
9 - Professional: hospital-based therapeutic services and related supplies			9	288	7581	3.26	85.70
10 - Professional: hospital-based pathologist			12	30	7611	0.34	86.04
11 - Professional: hospital-based radiologist			14	3	7614	0.03	86.07
12 - Professional: hospital-based other - medication administration fee			15	79	7693	0.89	86.97
13 - Kidney dialysis			17	24	7717	0.27	87.24
14 - Hospital-based professional in Emergency Room			18	1	7718	0.01	87.25
15 - Emergency Room			19	3	7721	0.03	87.28
16 - Special duty nurse			20	5	7726	0.06	87.34
17 - Blood, packed cells, etc.			22	60	7786	0.68	88.02
18 - Take-home drugs			23	34	7820	0.38	88.40
19 - Personal (e.g., TV, phone, etc.)			24	47	7867	0.53	88.93
20 - Special lab, invasive (procedures and supplies)			25	47	7914	0.53	89.46
21 - Mental health procedures and supplies - mental health unit day care, electroconvulsive shock			27	36	7950	0.41	89.87
22 - Pharmacy (hospital's total charge for this category, divided by the length of stay)			28	6	7956	0.07	89.94
23 - X-ray (hospital's total charge for this category, divided by the length of stay)			29	10	7966	0.11	90.05
24 - Laboratory, regular (hospital's total charge for this category, divided by the length of stay)			30	8	7974	0.09	90.14
25 - Miscellaneous hospital supplies (hospital's total charge for this category, divided by the length of stay)			33	1	7975	0.01	90.15
26 - Special lab, non-invasive (hospital's total charge for this category, divided by the length of stay)			37	346	8321	3.91	94.07
27 - Therapeutic service (professional) (hospital's total charge of this category, divided by the length of stay)			38	371	8692	4.19	98.26
28 - Lump sum daily charge, excluding professional fee			39	29	8721	0.33	98.59
29 - Lump sum daily charge, including professional fee (cont.)			84	113	8834	1.28	99.86
			85	9	8843	0.10	99.97
			97	3	8846	0.03	100.00

VARIABLE DE15557 (cont.)

30	- Miscellaneous, blood transportation charge, ambulance, cot for mother
31	- Lump sum daily charge, excluding room and board
32	- Hyperalimentation - supplies and service
33	- Special surgical supplies (including cardiac pacemaker, Hunter tendon graft)
34	- Lump sum daily charge - nursery
35	- Insurance surcharge
36	- Dental clinic: hospital-based
37	- Anesthesia: professional (including anesthesia administration, anesthesia service, spinal block, etc.)
38	- Operating room/anesthesia supplies
39	- Anesthesia not otherwise specified
40	- Emergency Room, including professional fee
41	- Special blood procedures (including plasmaphoresis)
84	- GHC pharmacy/central supply not otherwise specified
85	- GHC routine laboratory/electrocardiogram not otherwise specified
97	- GHC services charged to patient because not covered under patient's GHC contract (IMPCHRG has a value of zero in this case)

DE15557 categorizes each hospital service rendered to a participant while in the hospital. Unless otherwise noted, a category refers to a single instance of the service or a daily imputed charge for the service. Excluded are most physician services except those that were hospital-based (e.g., radiology, pathology).

IMPCHRG
NUMBER OF OBSERVATIONS 8846
NUMBER OF MISSING 0
MEAN 65.94
MEDIAN 38.50
MINIMUM VALUE 0.00
MAXIMUM VALUE 2041.00
STANDARD DEVIATION 80.99
COEFFICIENT OF VARIATION 122.81
SKEWNESS 5.62
KURTOSIS 77.85

VARIABLE IMPCHRG HMO FILE 01
Imputed line-item charge
IMPCHRG indicates the amount of the "mock charge" supplied by GHC to the HIE for the inpatient service. Imputed charges are expressed in dollars for the year services were rendered, unadjusted for inflation.

VARIABLE DE15522 HMO FILE 01
1st diagnosis
CODES
blank - Not applicable, missing
DE15522 indicates the code of the first condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. In this file, DE15522 is the discharge diagnosis. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."

DEI5523					
VALUE	FREQ	CUM FREQ	%	CUM %	
1	7281	7281	82.31	82.31	
2	19	7300	0.22	82.52	
3	308	7608	3.48	86.01	
4	1238	8846	14.00	100.00	

VARIABLE	DEI5523	HMO FILE 01
1st diagnosis qualifier		
CODES		
1 - No qualifier given		
2 - Rule out		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by, secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DEI5523 indicates a diagnosis qualifier for the first diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible a diagnosis qualifier was used in the absence of a primary diagnosis.		

*NOTE: Value #9 is not a true diagnosis qualifier. Occasionally, health maintenance procedures were performed by the provider which did not pertain to any of the diagnoses on the SERR. In such cases, coders assigned a well-care code from the HICDA, and it was notated in this variable.

VARIABLE	DEI5524	HMO FILE 01
1st associated diagnosis		
CODES		
blank - Not applicable, missing		
DEI5524 indicates the associated diagnosis code when required by the diagnosis qualifier.		

VARIABLE	DE15525	HMO FILE 01
2nd diagnosis		
CODES		
blank - Not applicable, missing		
DE15525 indicates the code of a second condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HLE claims files are listed in Section I of "Codes Used."		

DE15526					
VALUE		FREQ	CUM FREQ	%	CUM %
1	5371	2613	2613	75.19	75.19
3	183	2796	2796	5.27	80.46
4	668	3464	3464	19.22	99.68
9	11	3475	3475	0.32	100.00

- 52 -

VARIABLE	DE15526	HMO FILE 01
2nd diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - Rule out		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by, secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DE15526 indicates a diagnosis qualifier for the 2nd diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible a diagnosis qualifier was used in the absence of a primary diagnosis.		

*NOTE: See note on DE15523.

VARIABLE	DE1527	HMO FILE 01
	2nd associated diagnosis	
	CODES	
	blank - Not applicable, missing	
	DE1527 indicates the associated diagnosis code when required by the qualifier.	

VARIABLE	DE1528	HMO FILE 01
	3rd diagnosis	
	CODES	
	blank - Not applicable, missing	
	DE1528 indicates the code of a third condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."	

DEI5529	VALUE	FREQ	CUM FREQ	%	CUM %
	1	7082	1300	73.70	73.70
	3	1300	1351	2.89	76.59
	4	377	1728	21.37	97.96
	5	36	1764	2.04	100.00

VARIABLE	DEI5529	HMO FILE 01
3rd diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - Rule out		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by, secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DEI5529 indicates a diagnosis qualifier for the 3rd diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible a diagnosis qualifier was used in the absence of a primary diagnosis.		

*NOTE: See note on DEI5523.

VARIABLE	DEI5530	HMO FILE 01
3rd associated diagnosis		
CODES		
blank - Not applicable, missing		
DEI5530 indicates the associated diagnosis code when required by the qualifier.		

VARIABLE	DEI5531	HMO FILE 01
4th diagnosis		
CODES		
blank - Not applicable, missing		
DEI5531 indicates the code of a fourth condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."		

VARIABLE	DEI5532	HMO FILE 01
4th diagnosis qualifier		
CODES		
- Not applicable, missing		
1 - No qualifier given		
2 - Rule out		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by, secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DEI5532 indicates a diagnosis qualifier for the 4th diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible that a diagnosis qualifier could be used in the absence of a primary diagnosis.		

*NOTE: See note on DEI5523.

DEI5532					
VALUE	FREQ	CUM FREQ	%	CUM %	
1	8167	615	90.57	90.57	1
3	615	650	5.16	95.73	5
4	29	679	4.27	100.00	1

VARIABLE	DEI5533	HMO FILE 01
4th associated diagnosis		
CODES		
blank - Not applicable, missing		
DEI5533 indicates the associated diagnosis code when required by the qualifier.		

IV. INPATIENT SERVICES RENDERED BY PHYSICIANS, HMO FILE 03

INTRODUCTION

This codebook documents primary variables concerning inpatient CRVS-codable¹ physician procedures and services rendered to HIE participants. Inpatient physician services *not* codable by CRVS (e.g., some radiology, pathology, and emergency room services) are recorded as hospital services in variable DEI5557, Category of Hospital Service, in File 01.

The bulk of data in this file involves services rendered within Group Health Cooperative hospitals by GHC physicians; however, some FFS inpatient physician data, representing HMO participants' use of FFS health services that were fully covered by GHC, are included here, with the charges imputed. FFS services not completely covered by GHC appear in the FFS claims line-item files.²

A few FFS inpatient physician service records that belong in this file were accidentally placed with the outpatient physician service records in HMO File 06. They can be identified in File 06 using the variable DEI5584 (Place of Service) and DEI6343 (GHC Location). If DEI5584 = 4, the service took place in a hospital inpatient setting, and if DEI6343 = 23 or 24, the service was non-GHC provided, i.e., an FFS service.

Specific information provided in this file includes the service performed by the physician, the admitting and attending physician identifiers, the admission and discharge dates, the discharge

¹California Medical Association, *California Relative Value Studies* (CRVS), San Francisco, CA, 1975. The CRVS coding system defines the procedures and services of physicians and health professionals. It was used by HIE researchers for this purpose.

²In the case of psychiatric inpatient care for HMO experimental group participants at FFS hospitals, GHC paid only for the first \$1,000 in services. Any subsequent charges were reimbursed in full by the HIE. Thus, the first \$1,000 of such psychiatric charges and services show up in the HMO files, but the remaining charges (if any) appear in the FFS claims line-item files for the participant.

destination, the diagnoses provided by the hospital, and the imputed charge for the service. Other variables indicate whether the hospitalization was accident- or employment-related.

The units of observation in this file are line items representing inpatient physician services.³ For an explanation of common variables used in this codebook, see the final subsection of Sec. II. Below we provide explanations for specific variables in this file.

PROVIDER NUMBER

In this file, the variable DEI5502, Provider Number, does *not* indicate an institution identifier, as it does in File 01. Instead, it identifies the first attending physician, who had primary responsibility for the patient. Thus, DEI5502 cannot be used to link File 03 records to those in File 01. To link File 03 and File 01 records, the user must check person identifier (PERSON) and date of service (DEI5555) in each file. DEI5502 may vary across line items associated with a given hospital admission if more than one physician provided services to the patient.

CRVS CODE

The variable DEI5606, CRVS Code, indicates the CRVS code for the service rendered by a physician or health professional. A small number of supplementary codes were added under the direction of a Rand HIE physician to describe services not adequately reflected by any existing CRVS code. Standard CRVS codes and HIE-created CRVS supplementary codes used in these files can be found in Sec. II of *Codes Used*. Code 99997 indicates a CRVS service rendered by a GHC provider to a GHC control group participant who was not covered by the participant's GHC contract. This could occur because the employer-provided GHC coverage of control group members was often not all-inclusive, and the participant may have used services not covered under his or her contract. The imputed charge for such services is zero.

³Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation to the unit of observation and does *not* represent the number of hospitalizations of the participant.

CRVSUNIT

The variable CRVSUNIT indicates the unit value of the procedure or service listed in DEI5606, CRVS Code, as given in the CRVS manual cited above. CRVS units reflect the differing complexity and time requirements for different physician services. For CRVS codes lacking printed unit values, a Rand HIE physician assigned a unit value to the procedure or service.

CRVS MODIFIERS

The variables DEI5607 and DEI5608, first and second CRVS modifiers, indicate codes for up to two special circumstances that may have been involved in the CRVS procedure shown in DEI5606, CRVS Code. These modifier codes are usually dependent upon the type of CRVS procedure; modifier code definitions can be found in the CRVS code manual cited above. The most frequently used modifiers were 80 (assistant surgeon for the procedure), 58 (office visit included with surgical procedure), 52 (incidental surgical procedure with reduced value), 30-49 (related to anesthesia), and 26, 27 (related to pathology and radiology interpretations).

GHC CODE

The variable DEI6303, GHC Code, indicates codes created by GHC to summarize the nature of inpatient physician services and visits to HIE participants. GHC inpatient codes used in this file are defined in the variable box.

GHCUNITS

The variable GHCUNITS indicates the unit value assigned by Group Health Cooperative to the procedure or service found in the variable DEI6303, GHC Code. GHC units were created to give analysts the option of analyzing the relative value of physician/health professional services from the GHC point of view. They are not necessarily equal to the CRVS unit values for corresponding CRVS services and were not used by the HIE for imputing charges.

DIAGNOSIS RELATION TO SERVICE

Four variables, DEI5596 - DEI5599, indicate whether a specific service is related to one or more of the four possible diagnoses.

CODEBOOK FOR HMO FILE 03
INPATIENT SERVICES RENDERED BY PHYSICIANS

DIRECTORY OF VARIABLES - HMO FILE 03
INPATIENT SERVICES RENDERED BY PHYSICIANS

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	63	IMPOHRG	Imputed line-item charge	71
PERSON	Person identifier	63	DE16303	GHC code	72
SITE	Site	63	GHCUNITS	GHC units	73
INSTAT	Insurance status	64	DE16343	GHC location	74
CONTYR	Contract year	64	DE15596	1st diagnosis related?	75
DE16300	SERR number	65	DE15522	1st diagnosis	75
DE15502	Provider number	65	DE15523	1st diagnosis qualifier	76
DE15513	Admission date	65	DE15524	1st associated diagnosis	76
DE15555	Date of hospital service	66	DE15597	2nd diagnosis related?	77
DE15514	Discharge date	66	DE15525	2nd diagnosis	77
DE15584	Place of service	67	DE15526	2nd diagnosis qualifier	78
DE15515	Admitting physician number	67	DE15527	2nd associated diagnosis	78
DE15509	2nd attending physician number	68	DE15598	3rd diagnosis related?	79
DE15511	Accident-related	68	DE15528	3rd diagnosis	79
DE15512	Employment-related	69	DE15529	3rd diagnosis qualifier	80
DE15566	Date of injury	69	DE15530	3rd associated diagnosis	80
DE15606	CRVS code	70	DE15599	4th diagnosis related?	81
DE15607	1st CRVS modifier	70	DE15531	4th diagnosis	81
DE15608	2nd CRVS modifier	71	DE15532	4th diagnosis qualifier	82
CRVSUNIT	CRVS units	71	DE15533	4th associated diagnosis	82

VARIABLE FILENAME		HMO FILE 03	
Name of file			
FILENAME is a 6-character code that uniquely identifies the file. The file name is PE032A.			
PERSON		HMO FILE 03	
Person identifier			
PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.			
VARIABLE SITE		HMO FILE 03	
Site			
CODES			
2 - Seattle, Washington			
SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.			
FILENAME	VALUE	FREQ	CUM FREQ
PE032A	4028	4028	100.00
			100.00
SITE	VALUE	FREQ	CUM FREQ
2	4028	4028	100.00
			100.00

VARIABLE	INSTAT	HMO FILE 03
Insurance status		
CODES		
1 - Ever insured (includes HMO experimental group)		
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	2389	2389	59.31	59.31
2	1639	4028	40.69	100.00

VARIABLE	CONTYR	HMO FILE 03
Contract year		
CODES		
01 - First year		
02 - Second year		
03 - Third year		
04 - Fourth year		
05 - Fifth year		
CONTYR identifies the participant's contract year of coverage in which the service was performed.		

CONTYR VALUE	FREQ	CUM FREQ	%	CUM %
01	1047	1047	25.99	25.99
02	922	1969	22.89	48.88
03	973	2942	24.16	73.04
04	642	3584	15.94	88.98
05	444	4028	11.02	100.00

VARIABLE DE16300	HMO FILE 03
SERR number	
DE16300 indicates an identifier number which is used to link the line items from a given SERR.	

VARIABLE DE15502	HMO FILE 03
Provider number	
DE15502 is an 8-character code which refers, in this file, to the first attending physician for the service rendered. The majority of cases involve GHC physicians. For further information about the physician, this number can be linked to information in the provider file of the HIE reference series.	

NOTE: DE15502 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE DE15513	HMO FILE 03
Admission date	
CODES	
19760504 to 19810728 - Range on this file (YYYYMMDD)	
DE15513 indicates the participant's hospital admission date.	

VARIABLE	DEI5555	HMO FILE 03
	Date of hospital service	
	CODES	
	19760504 to 19810729 - Range on this file (YYYYMMDD)	
	DEI5555 indicates the initial date that the hospital service was rendered.	

VARIABLE	DEI5514	HMO FILE 03
	Discharge date	
	CODES	
	19760509 to 19810729 - Range on this file (YYYYMMDD)	
	DEI5514 indicates the participant's hospital discharge date.	

DE15584					
VALUE	4	FREQ	4028	CUM FREQ	4028
				%	100.00
				CUM %	100.00

VARIABLE	DE15584	HMO FILE 03
Place of service		
CODES		
1 - Missing		
2 - Doctor's office		
3 - Independent laboratory		
4 - Patient's home		
5 - Hospital		
6 - Nursing home		
7 - Emergency room		
8 - Outpatient surgery		
9 - Other outpatient hospital, including hospital clinic		
DE15584 indicates where the physician rendered medical services.		

VARIABLE	DE15515	HMO FILE 03
Admitting physician number		
DE15515 indicates the admitting physician's identifier number. The admitting physician has primary responsibility for the patient's care while the participant is in the hospital. In most cases, DE15515 is the same as DE15502, the provider number. For more information on the physician, this number can be linked to information in the provider file of the HIE reference series.		

DEI5512					
VALUE	FREQ	CUM FREQ	%	CUM %	
1	34	34	0.84	0.84	
2	3994	4028	99.16	100.00	

VARIABLE	DEI5512	HMO FILE 03
Employment related		
CODES		
1 - Yes		
2 - No		
DEI5512 states whether the illness or injury was employment related.		

VARIABLE	DEI5566	HMO FILE 03
Date of injury		
CODES		
19720621 - 19810324 - Not applicable, missing		
DEI5566 indicates the date (if any) the participant was injured.		

VARIABLE DE15606 HMO FILE 03

CRVS code

DE15606 indicates a five-digit California Relative Value Studies (CRVS) code identifying the completed service provided or ordered by the physician. CRVS codes used in these files are defined in Section II of "Codes Used." A small number of codes were added under the direction of a Rand HIE physician to describe services not adequately reflected by existing CRVS codes.

NOTE: A CRVS code of 99997 indicates a service rendered by a GHC provider to a GHC control participant that was not covered by the participant's GHC contract. The imputed charge for such services is zero.

VARIABLE DE15607 HMO FILE 03

First CRVS modifier

CODES

. - Not applicable, missing

DE15607 indicates the code for a special circumstance involved in the CRVS procedure shown in DE15606, CRVS Code. CRVS modifier code definitions are discussed in the introduction to this section.

DE15607	VALUE	FREQ	CUM FREQ	%	CUM %
	26	3537	1	0.20	0.20
	30	266	267	54.18	54.38
	50	2	269	0.41	54.79
	51	8	277	1.63	56.42
	52	2	279	0.41	56.82
	58	42	321	8.55	65.38
	80	169	490	34.42	99.80
	81	1	491	0.20	100.00

VARIABLE	DEI6303	HMO FILE 03	DEI6303	VALUE	FREQ	CUM FREQ	%	CUM %
GHC code								
CODES								
Blank - Not applicable, missing								
Initial hospital care								
HAB - Brief				HAB	1079	1079	3.63	3.63
HAN - Intermediate				HAC	107	1186	2.65	6.27
HAC - Comprehensive				HAH	78	1264	1.66	7.94
HAU - Unusually complex				HAN	49	1313	7.02	14.95
HAX - Cannot be determined				HAS	207	1520	4.37	19.33
HAS - Ambulatory surgery on short-stay form				HCA	129	1649	0.20	19.53
HAH - Performed by house staff				HCH	6	1655	0.07	19.60
Established patient, follow-up hospital care				HCL	2	1657	1.59	21.19
HFB - Brief				HCN	47	1704	0.03	21.23
HFL - Limited (usual visit)				HCR	14	1718	0.48	21.70
HFN - Intermediate				HEB	1	1719	0.03	21.74
HFE - Extended				HEL	1	1720	0.71	22.45
HFF - Final for discharge				HFB	21	1741	0.24	22.69
HNA - Routine newborn care admission				HFE	7	1748	0.10	22.79
HNF - Routine newborn care follow-up				HFF	3	1751	0.10	22.89
HFX - Cannot be determined				HFH	198	1949	6.71	29.60
HFH - Performed by house staff				HFL	1799	2028	61.00	90.61
Critical care services				HFN	11	2039	0.37	90.98
HCA - Initial, prolonged presence				HNA	76	2115	2.58	93.56
HCB - Brief follow-up				HNF	96	2211	3.26	96.81
HCL - Limited follow-up				HSC	2	2213	0.07	96.88
HCN - Intermediate follow-up				HSE	2	2215	0.07	96.95
HCE - Extended follow-up				HSX	1	2216	0.03	96.98
HCH - Cannot be determined				HSL	58	2274	1.97	98.95
HCR - Initial by house staff				HSN	27	2301	0.92	99.86
Consultations				PT3	4	2305	0.14	100.00
HSL - Initial limited								
HSN - Initial intermediate								
HSE - Initial extended								
HSC - Initial comprehensive								
HSM - Initial unusually complex								
HSX - Initial cannot be determined								
HEB - Follow-up brief								
HEL - Follow-up limited								
HEN - Follow-up intermediate								
HEE - Follow-up extended								
HEX - Follow-up cannot be determined								

(cont.)

VARIABLE DE16303 (cont.)

HSH - Initial by house staff
 HEH - Follow-up by house staff
 PT3 - Physical therapy
 DE16303 indicates a code developed by the HIE to summarize the types of physician inpatient visits to HIE participants.

VARIABLE GHCUNITS HMO FILE 03
 GHC Units
 GHCUNITS assigns a unit value to the physician service defined in DE16303, GHC Code. GHC unit values were created by the Group Health Cooperative to reflect their own assessment of the time requirements and complexity of different GHC physician services.

GHCUNITS	
NUMBER OF OBSERVATIONS	2949
NUMBER OF MISSING	1079
MEAN	5.53
MEDIAN	3.90
MINIMUM VALUE	0.00
MAXIMUM VALUE	18.50
STANDARD DEVIATION	5.80
COEFFICIENT OF VARIATION	104.89
SKEWNESS	1.50
KURTOSIS	0.81

VARIABLE	DEI6343	HMO FILE 03
GHC location		
1 - Clinic 1	12	
2 - Clinic 2	14	
3 - Clinic 3	22	
4 - Clinic 4		
5 - Clinic 5		
6 - Clinic 6		
7 - Clinic 7		
8 - Clinic 8		
9 - Clinic 9		
10 - Clinic 10		
11 - Non-GHC extended care facility		
12 - Hospital 1, inside Seattle		
13 - Clinic 11		
14 - Hospital 2, inside Seattle		
15 - Hospital 3, outside Seattle		
16 - Emergency room		
17 - Clinic 12		
18 - Clinic 13		
19 - Clinic 14		
20 - Specialty clinic		
21 - Clinic 15		
22 - GHC extended care facility		
23 - Non-GHC, inside GHC area		
24 - Non-GHC, outside GHC area		
25 - Clinic 16		
DEI6343 identifies the GHC location where the service was performed, or indicates that it was performed at a non-GHC (FFS) location.		

DEI6343				
VALUE				
	12	3035	CUM	
	14	984	FREQ	
	22	9		
		3035		CUM
		4019		%
		4028		
				75.35
				24.43
				0.22
				100.00

DE15596				
VALUE	FREQ	CUM FREQ	%	CUM %
1	4002	4002	99.36	99.36
2	26	4028	0.65	100.00

VARIABLE	DE15596	HMO FILE 03
1st diagnosis related?		
CODES		
1 - Yes		
2 - No		
DE15596 indicates whether the service rendered by the provider was medically related to the first diagnosis or problem.		

VARIABLE	DE15522	HMO FILE 03
1st diagnosis		
CODES		
Blank - Not applicable, missing		
DE15522 indicates the code of the first condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. In this file, DE15522 is the discharge diagnosis. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."		

DE15523	VALUE	FREQ	CUM FREQ	%	CUM %
	1	3334	3334	82.77	82.77
	2	16	3350	0.40	83.17
	3	151	3501	3.75	86.92
	4	527	4028	13.08	100.00

VARIABLE	DE15523	HMO FILE 03
	1st diagnosis qualifier	
	CODES	
	1 - No qualifier given	
	2 - Rule out	
	3 - Probable/possible/?/question of	
	4 - With, associated with, complicated by, secondary to, due to	
	5 - Not, turned out not to be, was not	
	6 - Or, versus	
	9 - Well-care code assigned*	
	DE15523 indicates a diagnosis qualifier for the first diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible a diagnosis qualifier was used in the absence of a primary diagnosis.	

*NOTE: Value #9 is not a true diagnosis qualifier. Occasionally, health maintenance procedures were performed by the provider which did not pertain to any of the diagnoses on the SERR. In such cases, coders assigned a well-care code from the HICDA, and it was notated in this variable.

VARIABLE	DE15524	HMO FILE 03
	1st associated diagnosis	
	CODES	
	Blank - Not applicable, missing	
	DE15524 indicates the associated diagnosis code when required by the diagnosis qualifier.	

DE15597	VALUE	FREQ	CUM FREQ	%	CUM %
	1	2320	1491	87.30	87.30
	2	217	1708	12.71	100.00

VARIABLE	DE15597	HMO FILE	03
	2nd diagnosis related?		
	CODES		
	1 - Yes		
	2 - No		
	DE15597 indicates whether the service rendered by the provider was medically related to the second diagnosis or problem.		

VARIABLE	DE15525	HMO FILE	03
	2nd diagnosis		
	CODES		
	Blank - Not applicable, missing		
	DE15525 indicates the code of the second condition diagnosed by the physician. Codes were assigned in the order in which the diagnoses appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."		

DEI5526	VALUE	FREQ	CUM FREQ	%	CUM %
	1	2320	1231	72.07	72.07
	3	1231	1367	7.96	80.04
	4	136	1700	19.50	99.53
	9	333	1708	0.47	100.00
		8			

VARIABLE	DEI5526	HMO FILE 03
2nd diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - Rule out		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by, secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DEI5526 indicates a diagnosis qualifier for the second diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible a diagnosis qualifier was used in the absence of a primary diagnosis.		

*NOTE: See note on DEI5523.

VARIABLE	DEI5527	HMO FILE 03
2nd associated diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5527 indicates the associated diagnosis code when required by the qualifier.		

VARIABLE	DEI5598	HMO FILE 03
	3rd diagnosis related?	
	CODES	
	1 - Yes	
	2 - No	
	DEI5598 indicates whether the service rendered by the provider was medically related to the third diagnosis/problem.	

DEI5598	VALUE	FREQ	CUM FREQ	%	CUM %
	1	3145	759	85.96	85.96
	2	124	883	14.04	100.00

VARIABLE	DEI5528	HMO FILE 03
	3rd diagnosis	
	CODES	
	Blank - Not applicable, missing	
	DEI5528 indicates the code of the third condition diagnosed by the physician. Codes were assigned in the order in which the diagnoses appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."	

DE15529	VALUE	FREQ	CUM FREQ	%	CUM %
	1	3145			
	3	613	613	69.42	69.42
	4	27	640	3.06	72.48
	5	226	866	25.60	98.08
		17	883	1.93	100.00

VARIABLE	DE15529	HMO FILE 03
3rd diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - Rule out		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by,		
secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DE15529 indicates a diagnosis qualifier for the third diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible a diagnosis qualifier was used in the absence of a primary diagnosis.		

*NOTE: See note on DE15523.

VARIABLE	DE15530	HMO FILE 03
3rd associated diagnosis		
CODES		
Blank - Not applicable, missing		
DE15530 indicates the associated diagnosis code when required by the qualifier.		

DE15599	VALUE	FREQ	CUM FREQ	%	CUM %
	1	3655	356	95.44	95.44
	2	17	373	4.56	100.00

VARIABLE DE15599 HMO FILE 03

4th diagnosis related?

CODES

1 - Not applicable, missing

2 - Yes

DE15599 indicates whether the service rendered by the provider was medically related to the fourth diagnosis/problem.

VARIABLE DE15531 HMO FILE 03

4th diagnosis

CODES

Blank - Not applicable, missing

DE15531 indicates the code of the fourth condition diagnosed by the physician. Codes were assigned in the order in which the diagnoses appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."

DEI5532	VALUE	FREQ	CUM FREQ	%	CUM %
	1	3655	279	74.80	74.80
	4	279	373	25.20	100.00
		94			

VARIABLE	DEI5532	HMO FILE 03
4th diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - No qualifier given		
3 - Rule out		
4 - Probable/possible/?/question of		
5 - With, associated with, complicated by,		
secondary to, due to		
6 - Not, turned out not to be, was not		
7 - Or, versus		
8 - Well-care code assigned*		
DEI5532 indicates a diagnosis qualifier for the fourth		
diagnosis. In some instances (i.e., codes 2, 3, 5),		
it is possible that a diagnosis qualifier could be		
used in the absence of a primary diagnosis.		

*NOTE: See note on DEI5523.

VARIABLE	DEI5533	HMO FILE 03
4th associated diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5533 indicates the associated diagnosis code		
when required by the qualifier.		

V. DRUGS PRESCRIBED BY PHYSICIANS, HMO FILE 04

INTRODUCTION

This codebook documents primary variables concerning outpatient drugs prescribed or suggested to GHC participants, according to reports of physicians. These reports indicate only that certain drugs were prescribed or suggested but do *not* indicate if the prescription was filled. For information concerning prescriptions that were filled, see File 15, Drugs Dispensed. Drugs furnished directly by physicians to HIE participants are found in File 08.

The bulk of data in this file involves drugs prescribed within GHC clinics by GHC physicians; however, data concerning HMO participants' use of FFS health services that were fully covered by GHC are included, with the charges imputed. HIE insurance for GHC experimental group participants covered all prescription-only drugs and, in certain cases, some over-the-counter drugs; for a listing of nonprescription drugs that were covered for certain conditions, see Appendix G.

Specific information provided in this codebook includes the drugs prescribed or suggested (identified by National Drug Code), the reasons/symptoms for the visit to the physician, the date of each symptom's appearance according to the participant, the referral physicians (if any), the diagnoses to which the prescription or suggestion is related, and the treatment history/status of each diagnosis. Other variables identify the generic and therapeutic code(s) for the prescribed or suggested drug. Also included are variables indicating whether the medication was a prescription or over-the-counter drug, and whether the visit was accident- or employment-related.

The units of observation in this file are line items representing drug prescriptions or suggestions.¹ For an explanation of common variables used in this codebook, see the final subsection of Sec. II. Below we provide explanations for specific variables in this file.

¹Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation to the unit of observation, *not* the number of visits of the participant.

NDC CODE

DEI5589 indicates the first seven digits of the National Drug Code identifier of the prescribed drug. (The last two digits of the national nine-digit code number represent trade package size and were not used by the HIE.) Codes were taken from the *National Drug Code Directory*, June 1972, whenever possible.² A number of supplementary codes were added by the HIE to identify drugs not listed in the 1972 NDC Directory. NDC and supplementary codes used in the claims files are defined in Sec. V of *Codes Used*. Code 9999997 indicates a drug prescribed within GHC to a GHC control participant who was not covered by the participant's GHC contract.

GENERIC CODES

DEI5590 - DEI5594 indicate codes that identify up to five generic components of the prescribed drug. This generic coding system was developed by the HIE; code definitions are found in Sec. VI of *Codes Used*.

DRUG THERAPEUTIC CODE

DEI5595 indicates a code identifying the therapeutic use category of the drug. Codes were taken from the American Medical Association's *AMA Drug Evaluations, 1973*,³ by using a code number that represents the chapter number of the drug's assigned therapeutic category. Therapeutic codes are defined in Sec. VII of *Codes Used*.

DIAGNOSIS RELATION TO DRUG

Four variables, DEI5596 - DEI5599, indicate if a prescribed or suggested drug is related to one or more of the four possible diagnoses.

²Public Health Service, U.S. Department of Health and Human Services, Washington, D.C.

³Second edition, Publishing Sciences Group, Inc., Acton, MA.

CODEBOOK FOR HMO FILE 04
DRUGS PRESCRIBED BY PHYSICIANS

DIRECTORY OF VARIABLES - HMO FILE 04
DRUGS PRESCRIBED BY PHYSICIANS

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	87	DEI5526	2nd diagnosis qualifier	100
PERSON	Person identifier	87	DEI5527	2nd associated diagnosis	100
SITE	Site	87	DEI5575	2nd problem/symptom date	101
INSTAT	Insurance status	88	DEI5577	Treatment history/status of the 2nd diagnosis	101
CONTR	Contract year	88	DEI5598	3rd diagnosis related?	102
DEI6300	SERR number	89	DEI5528	3rd diagnosis	102
DEI5502	Provider number	89	DEI5529	3rd diagnosis qualifier	103
DEI5503	1st reason/symptom for visit	89	DEI5530	3rd associated diagnosis	103
DEI5505	2nd reason/symptom for visit	90	DEI5578	3rd problem/symptom date	104
DEI5565	3rd reason/symptom for visit	90	DEI5580	Treatment history/status of the 3rd diagnosis	104
DEI5568	1st provider referred from	91	DEI5599	4th diagnosis related?	105
DEI6308	2nd provider referred from	91	DEI5531	4th diagnosis	105
DEI5570	First provider referral	92	DEI5532	4th diagnosis qualifier	106
DEI5571	Second provider referral	92	DEI5533	4th associated diagnosis	106
DEI5511	Accident-related	93	DEI5581	4th problem/symptom date	107
DEI5512	Employment-related	93	DEI5583	Treatment history/status of the 4th diagnosis	107
DEI5566	Date of injury	94	DEI5632	Were drugs prescribed	108
DEI6343	GHC location	95	DEI5666	Prescription status of drug	108
DEI5596	1st diagnosis related?	96	DEI5589	NDC code	109
DEI5522	1st diagnosis	96	DEI5590	1st generic code	109
DEI5523	1st diagnosis qualifier	97	DEI5591	2nd generic code	110
DEI5524	1st associated diagnosis	97	DEI5592	3rd generic code	110
DEI5572	1st problem/symptom date	98	DEI5593	4th generic code	111
DEI5574	Treatment history/status of the 1st diagnosis	98	DEI5594	5th generic code	111
DEI5597	2nd diagnosis related?	99	DEI5595	Drug therapeutic code	112
DEI5525	2nd diagnosis	99			

VARIABLE	FILENAME	HMO FILE 04
Name of file		
FILENAME is a 6-digit code that uniquely identifies the file. This file name is PE042A.		

VARIABLE	PERSON	HMO FILE 04
Person identifier		
PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.		

VARIABLE	SITE	HMO FILE 04
Site		
CODES		
2 - Seattle, Washington		
SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.		

FILENAME	VALUE	FREQ	CUM FREQ	%	CUM %
	PE042A	37939	37939	100.00	100.00

SITE	VALUE	FREQ	CUM FREQ	%	CUM %
	2	37939	37939	100.00	100.00

VARIABLE	INSTAT	HMO FILE 04
Insurance status		
CODES		
1 - Ever insured (includes HMO experimental group)		
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	21063	21063	55.52	55.52
	2	16876	37939	44.48	100.00

VARIABLE	CONTYR	HMO FILE 04
Contract year		
CODES		
01 - First year		
02 - Second year		
03 - Third year		
04 - Fourth year		
05 - Fifth year		
CONTYR identifies the participant's contract year of coverage in which the service was performed.		

CONTYR	VALUE	FREQ	CUM FREQ	%	CUM %
	01	10309	10309	27.17	27.17
	02	8657	18966	22.82	49.99
	03	8151	27117	21.48	71.48
	04	5654	32771	14.90	86.38
	05	5168	37939	13.62	100.00

1 88 1

VARIABLE DE16300	HMO FILE 04
SERR number	
DE16300 indicates an identifier number which is used to link the line items from a given SERR.	

VARIABLE DE15502	HMO FILE 04
Provider number	
DE15502 is an 8-character code which refers, in this file, to the physician who prescribed drugs to the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

NOTE: DE15502 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE DE15503	HMO FILE 04
1st reason/symptom for visit	
CODES	
Blank - Not applicable, missing	
DE15503 indicates the code for the first reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."	

NOTE: NAMCS codes were entered without decimal points.

VARIABLE	DEI5505	HMO FILE 04
2nd reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DEI5505 indicates the code for an additional reason the participant went to see the doctor. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."		

NOTE: See note on DEI5503.

VARIABLE	DEI5565	HMO FILE 04
3rd reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DEI5565 indicates the code for an additional reason the participant went to see the doctor. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."		

NOTE: See note on DEI5503.

VARIABLE	DE15568	HMO FILE 04
	First provider referred from	
	CODES	
	Blank - Not applicable, missing	
	DE15568 indicates the provider number of the first person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DE16308	HMO FILE 04
	Second provider referred from	
	CODES	
	Blank - Not applicable, missing	
	DE16308 indicates the provider number of the second person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DE15570	HMO FILE 04
	First provider referral	
	CODES	
	Blank - Not applicable, missing	
	DE15570 indicates the provider number of the first provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DE15571	HMO FILE 04
	Second provider referral	
	CODES	
	Blank - Not applicable, missing	
	DE15571 indicates the provider number of the second provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DEI5511	HMO FILE 04
Accident related		
CODES		
1 - Yes		
2 - No		
DEI5511 states whether the illness or injury was accident related.		

DEI5511	VALUE	FREQ	CUM FREQ	%	CUM %
1	4163	5	4163	10.97	10.97
2	33771	37934	37934	89.03	100.00

VARIABLE	DEI5512	HMO FILE 04
Employment related		
CODES		
1 - Yes		
2 - No		
DEI5512 states whether the illness or injury was employment related.		

DEI5512	VALUE	FREQ	CUM FREQ	%	CUM %
1	438	3	438	1.16	1.16
2	37498	37936	37936	98.85	100.00

VARIABLE	DE15566	HMO FILE 04
	Date of injury	
	CODES	
	19530101 to 19810829 - Not applicable, missing Range on this file (YYYYMMDD)	
	DE15566 indicates the date (if any) the participant was injured.	

DE16343	VALUE	FREQ	CUM FREQ	%	CUM %
	1	8050	8050	21.22	21.22
	2	2303	10353	6.07	27.29
	3	2524	12877	6.65	33.94
	4	3683	16560	9.71	43.65
	5	3237	19797	8.53	52.18
	7	4144	23941	10.92	63.10
	8	7075	31016	18.65	81.75
	9	109	31125	0.29	82.04
	10	3810	34935	10.04	92.08
	12	2	34937	0.01	92.09
	13	23	34960	0.06	92.15
	19	1186	36146	3.13	95.27
	20	1454	37600	3.83	99.11
	21	34	37634	0.09	99.20
	23	233	37867	0.61	99.81
	24	72	37939	0.19	100.00

VARIABLE DE16343 HMO FILE 04

GHC location

CODES

- 1 - Clinic 1
- 2 - Clinic 2
- 3 - Clinic 3
- 4 - Clinic 4
- 5 - Clinic 5
- 6 - Clinic 6
- 7 - Clinic 7
- 8 - Clinic 8
- 9 - Clinic 9
- 10 - Clinic 10
- 11 - Non-GHC extended care facility
- 12 - Hospital 1, inside Seattle
- 13 - Clinic 11
- 14 - Hospital 2, inside Seattle
- 15 - Hospital 3, outside Seattle
- 16 - Emergency room
- 17 - Clinic 12
- 18 - Clinic 13
- 19 - Clinic 14
- 20 - Specialty clinic
- 21 - Clinic 15
- 22 - GHC extended care facility
- 23 - Non-GHC, inside GHC area
- 24 - Non-GHC, outside GHC area
- 25 - Clinic 16

DE16343 identifies the GHC location where the supply was prescribed, or indicates that it was performed at a non-GHC (FFS) location.

DEI5596	VALUE	FREQ	CUM FREQ	%	CUM %
	1	18965	16373	86.29	86.29
	2	2601	18974	13.71	100.00

VARIABLE	DEI5596	HMO FILE 04
1st diagnosis related?		
CODES		
1 - Yes		
2 - No		
DEI5596 indicates whether the drug prescribed by the provider was medically related to the first diagnosis/problem.		

VARIABLE	DEI5522	HMO FILE 04
1st diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5522 indicates the code of the first condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."		

DEI5523	VALUE	FREQ	CUM FREQ	%	CUM %
	1	433	28802	76.79	76.79
	2	28802	29861	2.82	79.62
	3	1059	32844	7.95	87.57
	4	2983	36935	10.91	98.48
	5	4091	37116	0.48	98.96
	6	181	37498	1.02	99.98
	9	382	37506	0.02	100.00
		8			

VARIABLE	DEI5523	HMO FILE 04
1st diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - Rule out		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by,		
secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DEI5523 indicates a diagnosis qualifier for the first		
diagnosis. In some instances (i.e., codes 2, 3, 5), in		
it is possible for a diagnosis qualifier to be used in		
the absence of a primary diagnosis.		

*NOTE: Value #9 is not a true diagnosis qualifier. Occasionally, health maintenance procedures were performed by the provider which did not pertain to any of the diagnoses on the MER. In such cases, coders assigned a well-care code from the HICDA, and it was notated in this variable.

VARIABLE	DEI5524	HMO FILE 04
1st associated diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5524 indicates the associated diagnosis code		
when required by the diagnosis qualifier.		

VARIABLE DE15572 HMO FILE 04

1st problem/symptom date

CODES

19420317 to 19810829 - Not applicable, missing
19010101 - Symptom present most of life
19420317 to 19810829 - Range on this file (YYYYMMDD)

DE15572 indicates the date that the first problem or symptom appeared, as reported by the participant. The value 19010101 was used when the participant responded that the symptom had been present most or all of his/her life.

DE15574	VALUE	FREQ	CUM FREQ	%	CUM %
1	16258	429	16258	43.34	43.34
2	1369	1369	17627	3.65	46.99
3	6650	6650	24277	17.73	64.72
4	5175	5175	29452	13.80	78.52
5	1500	1500	30952	4.00	82.52
6	5633	5633	36585	15.02	97.53
7	898	898	37483	2.39	99.93
8	14	14	37497	0.04	99.97
9	13	13	37510	0.04	100.00

VARIABLE DE15574 HMO FILE 04

Treatment history/status of the 1st diagnosis

CODES

1 - Not applicable, missing
2 - Initial visit for acute condition
3 - Initial visit for chronic condition
4 - Repeat visit for acute condition
5 - Repeat visit for chronic condition (routine)
6 - Initial visit for flareup of a chronic condition
7 - Well care or pregnancy-related
8 - Repeat visit for flareup of a chronic condition
9 - Acute; not specified as initial or repeat
9 - Chronic; not specified as initial or repeat

DE15574 describes the patient's treatment history or status for the first diagnosis/problem.

VARIABLE	DE15597	HMO FILE 04
2nd diagnosis related?		
CODES		
1 - Not applicable, missing		
2 - Yes		
2 - No		
DE15597 indicates whether the drug prescribed by the provider was medically related to the second diagnosis/problem.		

VARIABLE	DE15525	HMO FILE 04
2nd diagnosis		
CODES		
Blank - Not applicable, missing		
DE15525 indicates the code of the second condition diagnosed by the physician. Codes were assigned in the order in which the diagnoses appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."		

DE15597	VALUE	FREQ	CUM FREQ	%	CUM %
1	1	31623	2923	46.28	46.28
2	2	2923	6316	53.72	100.00

DEI5526	VALUE	FREQ	CUM FREQ	%	CUM %
	1	27305	7857	73.89	73.89
	2	7857	8436	5.45	79.33
	3	579	9566	10.63	89.96
	4	1130	10486	8.65	98.61
	5	920	10516	0.28	98.89
	6	30	10603	0.82	99.71
	9	87	10634	0.29	100.00
		31			

VARIABLE	DEI5526	HMO FILE 04
2nd diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - Rule out		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by,		
secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DEI5526 indicates a diagnosis qualifier for the second diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.		

*NOTE: See note on DEI5523.

VARIABLE	DEI5527	HMO FILE 04
2nd associated diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5527 indicates the associated diagnosis code when required by the qualifier.		

VARIABLE	DEI5575	HMO FILE 04
2nd problem/symptom date		
CODES		
	19640709 to 19810822 - Not applicable, missing	
	19640709 to 19810822 - Range on this file (YYYYMMDD)	
	DEI5575 indicates the date that the second problem or symptom appeared, as reported by the participant.	

VARIABLE	DEI5577	HMO FILE 04
Treatment history/status of the 2nd diagnosis		
CODES		
	- Not applicable, missing	
	1 - Initial visit for acute condition	
	2 - Initial visit for chronic condition	
	3 - Repeat visit for acute condition	
	4 - Repeat visit for chronic condition (routine)	
	5 - Initial visit for flareup of a chronic condition	
	6 - Well care or pregnancy-related	
	7 - Repeat visit for flareup of a chronic condition	
	8 - Acute; not specified as initial or repeat	
	9 - Chronic; not specified as initial or repeat	
	DEI5577 describes the patient's treatment history or status for the second diagnosis/problem.	

DEI5577	VALUE	FREQ	CUM FREQ	%	CUM %
1	27316	27316	4069	38.30	38.30
2	4069	4069	4944	8.24	46.54
3	875	875	6297	12.74	59.28
4	1353	1353	8647	22.12	81.40
5	2350	2350	8990	3.23	84.63
6	343	1494	10484	14.06	98.69
7	96	96	10580	0.90	99.60
8	17	17	10597	0.16	99.76
9	26	26	10623	0.25	100.00

VARIABLE	DEI5598	HMO FILE 04
3rd diagnosis related?		
CODES		
1 - Yes		
2 - No		
DEI5598 indicates whether the drug prescribed by the provider was medically related to the third diagnosis/problem.		

DEI5598	VALUE	FREQ	CUM FREQ	%	CUM %
1	36122	542	542	29.83	29.83
2	1275	1817	1817	70.17	100.00

VARIABLE	DEI5528	HMO FILE 04
3rd diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5528 indicates the code of the third condition diagnosed by the physician. Codes were assigned in the order in which the diagnoses appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."		

VARIABLE	DEI5578	HMO FILE 04
3rd problem/symptom date		
CODES		
	19710101 to 19810721 - Not applicable, missing	
	DEI5578 indicates the date that the third problem or symptom appeared, as reported by the participant.	

VARIABLE	DEI5580	HMO FILE 04
Treatment history/status of the 3rd diagnosis		
CODES		
	1 - Not applicable, missing	
	2 - Initial visit for acute condition	
	3 - Repeat visit for acute condition	
	4 - Repeat visit for chronic condition (routine)	
	5 - Initial visit for flareup of a chronic condition	
	6 - Well care or pregnancy-related	
	7 - Repeat visit for flareup of a chronic condition	
	8 - Acute; not specified as initial or repeat	
	9 - Chronic; not specified as initial or repeat	
	DEI5580 describes the patient's treatment history or status for the third diagnosis/problem.	

DEI5580	VALUE	FREQ	CUM FREQ	%	CUM %
1	35149	843	843	30.22	30.22
2	316	1159	1159	11.33	41.54
3	275	1434	1434	9.86	51.40
4	754	2188	2188	27.03	78.42
5	59	2247	2247	2.12	80.54
6	527	2774	2774	18.89	99.43
7	14	2788	2788	0.50	99.93
8	1	2789	2789	0.04	99.96
9	1	2790	2790	0.04	100.00

VARIABLE	DEI5599	HMO FILE 04
	4th diagnosis related?	
	CODES	
	1 - Not applicable, missing	
	2 - Yes	
	3 - No	
	DEI5599 indicates whether the drug prescribed by the provider was medically related to the fourth diagnosis/problem.	

VARIABLE	DEI5531	HMO FILE 04
	4th diagnosis	
	CODES	
	Blank - Not applicable, missing	
	DEI5531 indicates the code of the fourth condition diagnosed by the physician. Codes were assigned in the order in which the diagnoses appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."	

DEI5599	VALUE	FREQ	CUM FREQ	%	CUM %
	1	37406	115	21.58	21.58
	2	418	533	78.42	100.00

DEI5532	VALUE	FREQ	CUM FREQ	%	CUM %
	1	37173	584	76.24	76.24
	2	584	630	6.01	82.25
	3	46	680	6.53	88.77
	4	50	730	9.14	97.91
	5	70	750	0.52	98.43
	6	4	754	0.13	98.56
	9	11	766	1.44	100.00

VARIABLE	DEI5532	HMO FILE 04
4th diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - Rule out		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by,		
secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DEI5532 indicates a diagnosis qualifier for the fourth		
diagnosis. In some instances (i.e., codes 2, 3, 5),		
it is possible for a diagnosis qualifier to be used		
in the absence of a primary diagnosis.		

*NOTE: See note on DEI5523.

VARIABLE	DEI5533	HMO FILE 04
4th associated diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5533 indicates the associated diagnosis code		
when required by the qualifier.		

VARIABLE	DEI5581	HMO FILE 04
4th problem/symptom date		
CODES		
	19751201 to 19810608 - Not applicable, missing	
	DEI5581 indicates the date that the fourth problem or symptom appeared, as reported by the participant.	

VARIABLE	DEI5583	HMO FILE 04
Treatment history/status of the 4th diagnosis		
CODES		
	1 - Not applicable, missing	
	2 - Initial visit for acute condition	
	3 - Repeat visit for acute condition	
	4 - Repeat visit for chronic condition (routine)	
	5 - Initial visit for flareup of a chronic condition	
	6 - Well care or pregnancy-related	
	7 - Repeat visit for flareup of a chronic condition	
	8 - Acute; not specified as initial or repeat	
	9 - Chronic; not specified as initial or repeat	
	DEI5583 describes the patient's treatment history or status for the fourth diagnosis/problem.	

DEI5583	VALUE	FREQ	CUM FREQ	%	CUM %
1	37172	147	147	19.17	19.17
2	52	199	199	6.78	25.95
3	48	247	247	6.26	32.20
4	222	469	469	28.94	61.15
5	17	486	486	2.22	63.36
6	279	765	765	36.38	99.74
7	2	767	767	0.26	100.00

VARIABLE	DEI5632	HMO FILE 04
Were drugs prescribed		
CODES		
1 - Yes		
2 - No		
DEI5632 indicates whether the provider prescribed any drugs for the symptom/problem.		

DEI5632	VALUE	FREQ	CUM FREQ	%	CUM %
1	19000	385	19000	50.59	50.59
2	18554	18554	37554	49.41	100.00

VARIABLE	DEI5666	HMO FILE 04
Prescription status of drug		
CODES		
1 - Not applicable, missing		
2 - Over the counter (legend)		
3 - Either (varies by state)		
4 - Unknown		
DEI5666 states whether the drug was a prescription or could be sold over the counter, or whether it required a prescription in some states but not in others, or whether the information about the status of the drug was unobtainable.		

DEI5666	VALUE	FREQ	CUM FREQ	%	CUM %
1	12987	18944	12987	68.37	68.37
2	4529	4529	17516	23.84	92.21
3	1268	1268	18784	6.68	98.89
4	211	211	18995	1.11	100.00

NOTE: Prescription status was determined by reference to the National Drug Code Directory. If the status was not found in the text, coders assigned it a value of "missing."

VARIABLE	DE1589	HMO FILE 04
	NDC code	
	CODES	
	Blank - Not applicable, missing	
	DE1589 indicates the first seven digits of the National Drug Code for the drug prescribed by the provider. A number of codes were added by the HIE to identify drugs not listed in the 1972 NDC Directory. All NDC and supplementary codes used in the claims line-item files can be found in Section V of "Codes Used."	

VARIABLE	DE1590	HMO FILE 04
	1st generic code	
	CODES	
	. - Not applicable, missing	
	DE1590 identifies a generic component of the drug specified by NDC code in DE1589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE DE15591	HMO FILE 04
2nd generic code	
CODES	
. - Not applicable, missing	
DE15591 identifies a generic component of the drug specified by NDC code in DE15589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE DE15592	HMO FILE 04
3rd generic code	
CODES	
. - Not applicable, missing	
DE15592 identifies a generic component of the drug specified by NDC code in DE15589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE DE15593	HMO FILE 04
4th generic code	
CODES	
. - Not applicable, missing	
DE15593 identifies a generic component of the drug specified by NDC code in DE15589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE DE15594	HMO FILE 04
5th generic code	
CODES	
. - Not applicable, missing	
DE15594 identifies a generic component of the drug specified by NDC code in DE15589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DE15595	HMO FILE 04
Drug therapeutic code		
CODES		
. - Not applicable, missing		
DE15595 indicates the code for the therapeutic use of the drug specified in DE15589. Codes were taken from the AMA Drug Evaluations, 1973, by assigning a code number which corresponds with the chapter number in which the drug's therapeutic uses are described. Therapeutic codes used in this file are listed and defined in Section VII of "Codes Used."		

VI. SUPPLIES PRESCRIBED BY PHYSICIANS HMO FILE 05

INTRODUCTION

This codebook documents primary variables concerning inpatient and outpatient supplies prescribed or suggested by physicians, according to medical record entries. These records indicate only that certain supplies were prescribed or suggested but do *not* indicate if the prescription was filled. For information concerning supply prescriptions that were filled, see File 18, Supplies Dispensed. Supplies furnished directly by physicians to HIE participants are found in File 09. The bulk of data in this file involves supplies prescribed by GHC physicians; however, some FFS data, representing HMO participants' use of FFS health services that were fully covered by GHC, are included here, with the charges imputed. FFS services not completely covered by GHC appear in the FFS claims line-item files.

Specific information provided in this file includes the type of supply prescribed or suggested by the provider (identified by supply code), the number of units of the supply, and the identifier of the prescriber. Other variables indicate the reasons/symptoms for the visit to the physician, the date of each symptom's appearance according to the participant, and whether the participant's visit was accident- or employment-related. Also included are variables that indicate the referral physicians (if any), the diagnoses to which the prescription or suggestion is related, and the treatment history/status of each diagnosis.

The units of observation in this file are line items representing supply prescriptions or suggestions.¹ For an explanation of common variables used in this codebook, see the final subsection of Sec. II. Below we provide explanations for specific variables in this file.

¹Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation to the unit of observation, *not* the number of visits of the participant.

SUPPLY CODE

The variable DEI5601 identifies the supply prescribed or suggested by the provider. Each supply was identified using a coding system developed by the HIE. Supply codes are listed in Sec. III of *Codes Used*. Code 9997 indicates a supply prescribed by a GHC physician to a GHC control participant who was not covered by the participant's GHC contract.

DIAGNOSIS RELATION TO SUPPLY

Four variables, DEI5596 - DEI5599, show whether the prescribed or suggested supply is related to one or more of the four possible diagnoses.

CODEBOOK FOR HMO FILE 05
SUPPLIES PRESCRIBED BY PHYSICIANS

DIRECTORY OF VARIABLES - HMO FILE 05
 SUPPLIES PRESCRIBED BY PHYSICIANS

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	117	DE15597	2nd diagnosis related?	129
PERSON	Person identifier	117	DE15525	2nd diagnosis	129
SITE	Site	117	DE15526	2nd diagnosis qualifier	130
INSTAT	Insurance status	118	DE15527	2nd associated diagnosis	130
CONTYR	Contract year	118	DE15575	2nd problem/symptom date	131
DE16300	SERR number	119	DE15577	Treatment history/status of the 2nd diagnosis	131
DE15502	Provider number	119			
DE15503	1st reason/symptom for visit	119	DE15598	3rd diagnosis related?	132
DE15505	2nd reason/symptom for visit	120	DE15528	3rd diagnosis	132
DE15565	3rd reason/symptom for visit	120	DE15529	3rd diagnosis qualifier	133
DE15568	1st provider referred from	121	DE15530	3rd associated diagnosis	133
DE16308	2nd provider referred from	121	DE15578	3rd problem/symptom date	134
DE15570	1st provider referral	122	DE15580	Treatment history/status of the 3rd diagnosis	134
DE15571	2nd provider referral	122			
DE15511	Accident-related	123	DE15599	4th diagnosis related?	135
DE15512	Employment-related	123	DE15531	4th diagnosis	135
DE15566	Date of injury	124	DE15532	4th diagnosis qualifier	136
DE16343	GHC location	125	DE15533	4th associated diagnosis	136
DE15596	1st diagnosis related?	126	DE15581	4th problem/symptom date	137
DE15522	1st diagnosis	126	DE15583	Treatment history/status of the 4th diagnosis	137
DE15523	1st diagnosis qualifier	127			
DE15524	1st associated diagnosis	127	DE15601	Supply code	138
DE15572	1st problem/symptom date	128	DE15654	Were supplies prescribed suggested	138
DE15574	Treatment history/status of the 1st diagnosis	128			

VARIABLE	FILENAME	HMO FILE 05
Name of file		
FILENAME is a 6-digit code that uniquely identifies the file. This file name is PE052A.		

VARIABLE	PERSON	HMO FILE 05
Person identifier		
PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.		

VARIABLE	SITE	HMO FILE 05
Site		
CODES		
2 - Seattle, Washington		
SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.		

FILENAME	VALUE	FREQ	CUM FREQ	%	CUM %
PE052A		2656	2656	100.00	100.00

SITE	VALUE	FREQ	CUM FREQ	%	CUM %
	2	2656	2656	100.00	100.00

VARIABLE INSTAT HMO FILE 05

Insurance status

CODES

1 - Ever insured (includes HMO experimental group)

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	1584	1584	59.64	59.64
2	1072	2656	40.36	100.00

VARIABLE CONTYR HMO FILE 05

Contract year

CODES

01 - First year

02 - Second year

03 - Third year

04 - Fourth year

05 - Fifth year

CONTYR identifies the participant's contract year of coverage in which the service was performed.

CONTYR VALUE	FREQ	CUM FREQ	%	CUM %
01	810	810	30.50	30.50
02	636	1446	23.95	54.44
03	559	2005	21.05	75.49
04	324	2329	12.20	87.69
05	327	2656	12.31	100.00

VARIABLE	DEI6300	HMO FILE 05
SERR	number	
DEI6300 indicates an identifier number which is used to link the line items from a given SERR.		

VARIABLE	DEI5502	HMO FILE 05
Provider	number	
DEI5502 is an 8-character code which refers, in this file, to the physician who prescribed or suggested the supplies. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

NOTE: DEI5502 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE	DEI5503	HMO FILE 05
1st reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DEI5503 indicates the code for the first reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."		

NOTE: NAMCS codes were entered without decimal points.

VARIABLE	DEI5505	HMO FILE 05
2nd reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DEI5505 indicates the code for an additional reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."		

NOTE: See note on DEI5503.

VARIABLE	DEI5565	HMO FILE 05
3rd reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DEI5565 indicates the code for an additional reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."		

NOTE: See note on DEI5503.

VARIABLE	DE15568	HMO FILE 05
1st provider referred from		
CODES		
Blank - Not applicable, missing		
DE15568 indicates the provider number of the first person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DE16308	HMO FILE 05
2nd provider referred from		
CODES		
Blank - Not applicable, missing		
DE16308 indicates the provider number of the second person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DEI5570	HMO FILE 05
1st provider referral		
CODES		
Blank - Not applicable, missing		
DEI5570 indicates the provider number of the first provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DEI5571	HMO FILE 05
2nd provider referral		
CODES		
Blank - Not applicable, missing		
DEI5571 indicates the provider number of the second provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DEI5511	HMO FILE 05
Accident related		
CODES		
1 - Yes		
2 - No		
DEI5511 states whether the illness or injury was accident related.		

DEI5511	VALUE	FREQ	CUM FREQ	%	CUM %
1	596	2060	596	22.44	22.44
2	2656		2656	77.56	100.00

VARIABLE	DEI5512	HMO FILE 05
Employment related		
CODES		
- Not applicable, missing		
1 - Yes		
2 - No		
DEI5512 states whether the illness or injury was employment related.		

DEI5512	VALUE	FREQ	CUM FREQ	%	CUM %
1	41	2614	41	1.54	1.54
2	2655		2655	98.46	100.00

VARIABLE	DEI5566	HMO FILE 05
	Date of injury	
	CODES	
	19620202 to 19810828	- Not applicable, missing
		- Range on this file (YYYYMMDD)
	DEI5566 indicates the date (if any) the participant was injured.	

DE16343	VALUE	FREQ	CUM FREQ	%	CUM %
	1	591	591	22.25	22.25
	2	95	686	3.58	25.83
	3	200	886	7.53	33.36
	4	249	1135	9.38	42.73
	5	237	1372	8.92	51.66
	7	304	1676	11.45	63.10
	8	485	2161	18.26	81.36
	9	6	2167	0.23	81.59
	10	325	2492	12.24	93.83
	12	1	2493	0.04	93.86
	13	1	2494	0.04	93.90
	19	117	2611	4.41	98.31
	20	39	2650	1.47	99.77
	21	3	2653	0.11	99.89
	23	2	2655	0.08	99.96
	24	1	2656	0.04	100.00

VARIABLE	DE16343	HMO FILE	05
GHC location			
1 - Clinic 1			
2 - Clinic 2			
3 - Clinic 3			
4 - Clinic 4			
5 - Clinic 5			
6 - Clinic 6			
7 - Clinic 7			
8 - Clinic 8			
9 - Clinic 9			
10 - Clinic 10			
11 - Non-GHC extended care facility			
12 - Hospital 1, inside Seattle			
13 - Clinic 11			
14 - Hospital 2, inside Seattle			
15 - Hospital 3, outside Seattle			
16 - Emergency room			
17 - Clinic 12			
18 - Clinic 13			
19 - Clinic 14			
20 - Specialty clinic			
21 - Clinic 15			
22 - GHC extended care facility			
23 - Non-GHC, inside GHC area			
24 - Non-GHC, outside GHC area			
25 - Clinic 16			
DE16343 identifies the GHC location where the supply was prescribed, or indicates that it was performed at a non-GHC (FFS) location.			

DEI5596	VALUE	FREQ	CUM FREQ	%	CUM %
	1	2472	2472	93.07	93.07
	2	184	2656	6.93	100.00

VARIABLE	DEI5596	HMO FILE	05
1st diagnosis related?			
CODES			
1 - Yes			
2 - No			
DEI5596 indicates whether the supply prescribed or suggested by the provider was medically related to the first diagnosis or problem.			

VARIABLE	DEI5522	HMO FILE	05
1st diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5522 indicates the code of the first condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."			

DE15523	VALUE	FREQ	CUM FREQ	%	CUM %
	1	1884	1884	70.96	70.96
	2	20	1904	0.75	71.71
	3	110	2014	4.14	75.86
	4	620	2634	23.35	99.21
	5	4	2638	0.15	99.36
	6	16	2654	0.60	99.96
	9	1	2655	0.04	100.00

VARIABLE	DE15523	HMO FILE	05
1st diagnosis qualifier			
CODES			
1 - Not applicable, missing			
2 - Rule out			
3 - Probable/possible/?/question of			
4 - With, associated with, complicated by, secondary to, due to			
5 - Not, turned out not to be, was not			
6 - Or, versus			
9 - Well-care code assigned*			
DE1523 indicates a diagnosis qualifier for the first diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.			

*NOTE: Value #9 is not a true diagnosis qualifier. Occasionally, health maintenance procedures were performed by the provider which did not pertain to any of the diagnoses on the MER. In such cases, coders assigned a well-care code from the HICDA, and it was notated in this variable.

VARIABLE	DE15524	HMO FILE	05
1st associated diagnosis			
CODES			
Blank - Not applicable, missing			
DE1524 indicates the associated diagnosis code when required by the diagnosis qualifier.			

VARIABLE	DE15572	HMO FILE 05
1st problem/symptom date		
CODES		
19710101 to 19810828 - Not applicable, missing		
DE15572 indicates the date that the first problem or symptom appeared, as reported by the participant.		

VARIABLE	DE15574	HMO FILE 05
Treatment history/status of the 1st diagnosis		
CODES		
1 - Not applicable, missing		
2 - Initial visit for acute condition		
3 - Repeat visit for chronic condition		
4 - Repeat visit for acute condition		
5 - Initial visit for flareup of a chronic condition		
6 - Well-care or pregnancy-related		
7 - Repeat visit for flareup of a chronic condition		
8 - Acute; not specified as initial or repeat		
9 - Chronic; not specified as initial or repeat		
DE15574 describes the patient's treatment history or status for the first diagnosis/problem.		

DE15574	VALUE	FREQ	CUM FREQ	%	CUM %
1	1	3	3	32.72	32.72
2	2	868	868	32.72	32.72
3	3	61	929	2.30	35.02
4	4	248	1177	9.35	44.37
5	5	166	1343	6.26	50.62
6	6	90	1433	3.39	54.01
7	7	1201	2634	45.27	99.28
		19	2653	0.72	100.00

VARIABLE	DE15597	HMO FILE 05
2nd diagnosis related?		
CODES		
1 - Yes		
2 - No		
DE15597 indicates whether the supply prescribed or suggested by the provider was medically related to the second diagnosis or problem.		

DE15597	VALUE	FREQ	CUM FREQ	%	CUM %
1	1952	412	412	58.52	58.52
2	412	292	704	41.48	100.00

VARIABLE	DE15525	HMO FILE 05
2nd diagnosis		
CODES		
Blank - Not applicable, missing		
DE15525 indicates the code of the second condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."		

DEI5526	VALUE	FREQ	CUM FREQ	%	CUM %
	1	1953	593	84.35	84.35
	2	593	616	3.27	87.62
	3	23	659	6.12	93.74
	4	43	698	5.55	99.29
	6	39	702	0.57	99.86
	9	4	703	0.14	100.00
		1			

VARIABLE	DEI5526	HMO FILE	05
2nd diagnosis qualifier			
CODES			
1 - Not applicable, missing			
2 - Rule out			
3 - Probable/possible/?/question of			
4 - With, associated with, complicated by,			
secondary to, due to			
5 - Not, turned out not to be, was not			
6 - Of, versus			
9 - Well-care code assigned*			
DEI5526 indicates a diagnosis qualifier for the second			
diagnosis. In some instances (i.e., codes 2, 3, 5),			
it is possible for a diagnosis qualifier to be used			
in the absence of a primary diagnosis.			

*NOTE: See note on DEI5523.

VARIABLE	DEI5527	HMO FILE	05
2nd associated diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5527 indicates the associated diagnosis code			
when required by the qualifier.			

VARIABLE DE15575 HMO FILE 05

2nd problem/symptom date

CODES

19710101 to 19810213 - Not applicable, missing
 DE15575 indicates the date that the second problem or
 symptom appeared, as reported by the participant.

VARIABLE DE15577 HMO FILE 05

Treatment history/status of the 2nd diagnosis

CODES

1 - Not applicable, missing
 2 - Initial visit for acute condition
 3 - Initial visit for chronic condition
 4 - Repeat visit for acute condition
 5 - Repeat visit for chronic condition (routine)
 6 - Initial visit for flareup of a chronic condition
 7 - Well-care or pregnancy-related
 8 - Repeat visit for flareup of a chronic condition
 9 - Acute; not specified as initial or repeat
 DE15577 describes the patient's treatment history of
 status for the second diagnosis/problem.

DE15577	VALUE	FREQ	CUM FREQ	%	CUM %
1	1952	145	145	20.60	20.60
2	145	47	192	6.68	27.27
3	51	243	243	7.24	34.52
4	105	348	348	14.92	49.43
5	17	365	365	2.42	51.85
6	328	693	693	46.59	98.44
7	3	696	696	0.43	98.86
9	8	704	704	1.14	100.00

VARIABLE	DEI5598	HMO FILE 05
3rd diagnosis related?		
CODES		
1 - Yes		
2 - No		
DEI5598 indicates whether the supply prescribed or suggested by the provider was medically related to the third diagnosis/problem.		

DEI5598	VALUE	FREQ	CUM FREQ	%	CUM %
	1	2509	67	45.58	45.58
	2	80	147	54.42	100.00

VARIABLE	DEI5528	HMO FILE 05
3rd diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5528 indicates the code of the third condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."		

VARIABLE		DEI5529	HMO FILE 05	
3rd diagnosis qualifier				
CODES				
1 - Not applicable, missing				
2 - Rule out				
3 - Probable/possible/?/question of				
4 - With, associated with, complicated by, secondary to, due to				
5 - Not, turned out not to be, was not				
6 - Or, versus				
9 - Well-care code assigned*				
DEI5529 indicates a diagnosis qualifier for the third diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.				
*NOTE: See note on DEI5523.				
VARIABLE		DEI5530	HMO FILE 05	
3rd associated diagnosis				
CODES				
Blank - Not applicable, missing				
DEI5530 indicates the associated diagnosis code when required by the qualifier.				

DEI5529	VALUE	FREQ	CUM FREQ	%	CUM %
1	2509	123	123	83.67	83.67
2	6	129	129	4.08	87.76
3	7	136	136	4.76	92.52
4	10	146	146	6.80	99.32
9	1	147	147	0.68	100.00

VARIABLE	DEI5578	HMO FILE 05
	3rd problem/symptom date	
	CODES	
	19750610 to 19810508 - Not applicable, missing	
	DEI5578 indicates the date that the third problem or symptom appeared, as reported by the participant.	

DEI5580	VALUE	FREQ	CUM FREQ	%	CUM %
1	2509	26	26	17.69	17.69
2	15	41	41	10.20	27.89
3	7	48	48	4.76	32.65
4	29	77	77	19.73	52.38
5	4	81	81	2.72	55.10
6	65	146	146	44.22	99.32
7	1	147	147	0.68	100.00

VARIABLE	DEI5580	HMO FILE 05
	Treatment history/status of the 3rd diagnosis	
	CODES	
	1 - Not applicable, missing	
	2 - Initial visit for acute condition	
	3 - Repeat visit for chronic condition	
	4 - Repeat visit for acute condition	
	5 - Initial visit for chronic condition (routine)	
	6 - Well-care or pregnancy-related	
	7 - Repeat visit for flareup of a chronic condition	
	8 - Acute; not specified as initial or repeat	
	9 - Chronic; not specified as initial or repeat	
	DEI5580 describes the patient's treatment history or status for the third diagnosis/problem.	

DE15599				
VALUE	FREQ	CUM FREQ	%	CUM %
1	2623	10	30.30	30.30
2	10	33	69.70	100.00
	23			

VARIABLE	DE15599	HMO FILE 05
4th diagnosis related?		
CODES		
1 - Yes		
2 - No		
DE15599 indicates whether the supply prescribed or suggested by the provider was medically related to the fourth diagnosis/problem.		

VARIABLE	DE15531	HMO FILE 05
4th diagnosis		
CODES		
Blank - Not applicable, missing		
DE15531 indicates the code of the fourth condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."		

DEI5532	VALUE	FREQ	CUM FREQ	%	CUM %
	1	2623	25	75.76	75.76
	2	25	28	9.09	84.85
	3	1	29	3.03	87.88
	4	3	32	9.09	96.97
	9	1	33	3.03	100.00

VARIABLE	DEI5532	HMO FILE 05
4th diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - Yes		
3 - No qualifier given		
4 - Rule out		
5 - Probable/possible/?/question of		
6 - With, associated with, complicated by,		
7 - secondary to, due to		
8 - Not, turned out not to be, was not		
9 - Or, versus		
0 - Well-care code assigned*		
DEI5532 indicates a diagnosis qualifier for the fourth diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.		

*NOTE: See note on DEI5523.

VARIABLE	DEI5533	HMO FILE 05
4th associated diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5533 indicates the associated diagnosis code when required by the qualifier.		

VARIABLE DE15581 HMO FILE 05

4th problem/symptom date

CODES

19760617 to 19780108 - Not applicable, missing
 DE15581 indicates the date that the fourth problem or
 symptom appeared, as reported by the participant.

DE15583 VALUE	FREQ	CUM FREQ	%	CUM %
1	2623	6	18.18	18.18
2	6	9	9.09	27.27
3	3	14	15.15	42.42
4	11	25	33.33	75.76
5	1	26	3.03	78.79
6	7	33	21.21	100.00

VARIABLE DE15583 HMO FILE 05

Treatment history/status of the 4th diagnosis

CODES

1 - Not applicable, missing
 2 - Initial visit for acute condition
 3 - Repeat visit for acute condition
 4 - Repeat visit for chronic condition (routine)
 5 - Initial visit for flareup of a chronic condition
 6 - Well-care or pregnancy-related
 7 - Repeat visit for flareup of a chronic condition
 8 - Acute; not specified as initial or repeat
 9 - Chronic; not specified as initial or repeat

DE15583 describes the patient's treatment history or
 status for the fourth diagnosis/problem.

VARIABLE	DE15601	HMO FILE 05
	Supply code	
	DE15601 identifies the supply prescribed or suggested by the provider. Each supply was identified using a coding system developed by the Health Insurance Experiment. Supply codes used in the claims files are listed in Section III of "Codes Used."	

VARIABLE	DE15654	HMO FILE 05
	Were supplies prescribed or suggested	
	CODES	
	1 - Not applicable, missing	
	2 - Yes	
	3 - No	
	DE15654 states whether supplies were prescribed or suggested by the provider.	

DE15654					
VALUE	1	2656	CUM FREQ	2656	CUM %
				100.00	100.00

VII. OUTPATIENT SERVICES RENDERED BY PHYSICIANS, HMO FILE 06

INTRODUCTION

This codebook documents primary variables concerning outpatient procedures and services rendered by physicians to HIE participants. The bulk of data in this file involves services rendered by GHC physicians; however, some FFS data, representing HMO participants' use of FFS health services that were fully covered by GHC, are included here with the charges imputed. FFS services not completely covered by GHC appear in the FFS claims line-item files.

A few FFS *inpatient* physician service records that belong in File 03 were accidentally placed with the outpatient physician service records in this file. They can be identified using the variable DEI5584 (Place of Service) and DEI6343 (GHC Location). If DEI5584 = 4, the service took place in a hospital inpatient setting, and if DEI6343 = 23 or 24, the service was FFS-provided. Researchers may wish to drop such cases from this file, or transfer them to File 03.

Specific information provided in this codebook includes the service or procedure performed or ordered by the physician (defined by CRVS code), the reasons/symptoms for the visit to the physician, the date of each symptom's first appearance, the imputed charge for the service, the date and place of the service, and variables indicating whether the participant's visit was accident- or employment-related. Also included are variables that indicate the referral physicians (if any), the diagnoses to which the service is related, and the treatment history/status of each diagnosis.

The units of observation in this file are line items representing physician services.¹ For an explanation of common variables used in this codebook, see the final subsection of Sec. II. Below we provide explanations for specific variables in this file.

¹Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation to the unit of observation, *not* the number of visits of the participant.

CRVS CODE

The variable DEI5606, CRVS Code, indicates the CRVS code for the service rendered by a physician or health professional. A small number of supplementary codes were added under the direction of a Rand HIE physician to describe services not adequately reflected by the existing codes. The standard and supplementary CRVS codes used in these files can be found in Sec. II of *Codes Used*. Code 99997 indicates a CRVS service rendered by a GHC provider to a GHC control participant that was not covered by the participant's GHC contract. The imputed charge for such services is zero.

CRVSUNIT

The variable CRVSUNIT indicates the unit value of the procedure or service listed in DEI5606, CRVS code. Unit values were provided in the CRVS manual cited above; they reflect the differing complexity and time requirements for different physician services. For CRVS codes lacking printed unit values, a Rand HIE physician assigned a unit value to the procedure or service.

CRVS MODIFIERS

The variables DEI5607 and DEI5608, first and second CRVS modifiers, indicate codes for up to two special circumstances that may have been involved in the CRVS procedure shown in DEI5606, CRVS Code. These modifier codes are usually dependent upon the type of CRVS procedure; modifier code definitions can be found in the CRVS code manual cited above. The most frequently used modifiers were 80 (assistant surgeon for the procedure), 58 (office visit included with surgical procedure), 52 (incidental surgical procedure with reduced value), 30-49 (related to anesthesia), and 26, 27 (related to pathology and radiology interpretations).

GHC CODE

The variable DEI6303, GHC Code, indicates codes created by GHC to summarize the nature of physician services and visits to HIE participants. GHC codes and definitions are listed in Appendix F.

GHCUNITS

The variable GHCUNITS indicates the unit value assigned by Group Health Cooperative to the GHC-coded service found in DEI6303, GHC Code. GHC units were created to give analysts the option of analyzing the relative value of physician/health professional services from the GHC point of view. They are therefore not necessarily equal to the CRVS unit values for corresponding CRVS services and were not used by the HIE for imputing charges.

DIAGNOSIS RELATION TO SERVICE

Four variables, DEI5596 - DEI5599, indicate whether a specific service is related to one or more of the four possible diagnoses.

CODEBOOK FOR HMO FILE 06
OUTPATIENT SERVICES RENDERED BY PHYSICIANS

DIRECTORY OF VARIABLES - HMO FILE 06
OUTPATIENT SERVICES RENDERED BY PHYSICIANS

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	145	DE15522	1st diagnosis	158
PERSON	Person identifier	145	DE15523	1st diagnosis qualifier	159
SITE	Site	145	DE15524	1st associated diagnosis	159
INSTAT	Insurance status	146	DE15572	1st problem/symptom date	160
CONLYR	Contract year	146	DE15574	Treatment history/status of the 1st diagnosis	160
DE16300	SERR number	147	DE15597	2nd diagnosis related?	161
DE15502	Provider number	147	DE15525	2nd diagnosis	161
DE15555	Date of service	147	DE15526	2nd diagnosis qualifier	162
DE15584	Place of service	148	DE15527	2nd associated diagnosis	162
DE15503	1st reason/symptom for visit	148	DE15575	2nd problem/symptom date	163
DE15505	2nd reason/symptom for visit	149	DE15577	Treatment history/status of the 2nd diagnosis	163
DE15565	3rd reason/symptom for visit	149	DE15598	3rd diagnosis related?	164
DE15568	1st provider referred from	150	DE15528	3rd diagnosis	164
DE16308	2nd provider referred from	150	DE15529	3rd diagnosis qualifier	165
DE15570	1st provider referral	151	DE15530	3rd associated diagnosis	165
DE15571	2nd provider referral	151	DE15578	3rd problem/symptom date	166
DE15511	Accident-related	152	DE15580	Treatment history/status of the 3rd diagnosis	166
DE15512	Employment-related	152	DE15599	4th diagnosis related?	167
DE15566	Date of injury	153	DE15531	4th diagnosis	167
DE15606	CRVS code	153	DE15532	4th diagnosis qualifier	168
DE15607	1st CRVS modifier	154	DE15533	4th associated diagnosis	168
CRVSUNIT	CRVS units	154	DE15581	4th problem/symptom date	169
IMPCHRG	Imputed line-item charge	154	DE15583	Treatment history/status of the 4th diagnosis	169
DE16303	GHC code	154			
GHCUNITS	GHC units	156			
DE16343	GHC location	157			
DE15596	1st diagnosis related?	158			

VARIABLE	FILENAME	HMO FILE 06
	Name of file	
	FILENAME is a 6-digit code that uniquely identifies the file. This file name is PE062A.	

VARIABLE	PERSON	HMO FILE 06
	Person identifier	
	PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.	

VARIABLE	SITE	HMO FILE 06
	Site	
	CODES	
	2 - Seattle, Washington	
	SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.	

FILENAME	VALUE	FREQ	CUM FREQ	%	CUM %
	PE062A	68532	68532	100.00	100.00

SITE	VALUE	FREQ	CUM FREQ	%	CUM %
	2	68532	68532	100.00	100.00

VARIABLE	INSTAT	HMO FILE 06
Insurance status		
CODES		
1 - Ever insured (includes HMO experimental group)		
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	38322	38322	55.92	55.92
2	30210	68532	44.08	100.00

VARIABLE	CONTYR	HMO FILE 06
Contract year		
CODES		
01 - First year		
02 - Second year		
03 - Third year		
04 - Fourth year		
05 - Fifth year		
CONTYR identifies the participant's contract year of coverage for which the service was performed.		

CONTYR VALUE	FREQ	CUM FREQ	%	CUM %
01	17867	17867	26.07	26.07
02	15538	33405	22.67	48.74
03	15153	48558	22.11	70.85
04	10516	59074	15.35	86.20
05	9458	68532	13.80	100.00

VARIABLE	DE16300	HMO FILE 06
SERR	number	
DE16300 indicates an identifier number which is used to link the line items from a given SERR.		

VARIABLE	DE15502	HMO FILE 06
Provider	number	
DE15502 is an 8-character code which refers, in this file, to the physician who provided services for the participant. For further information on the provider, this number can be linked to the information in the provider file of the HIE reference series.		

NOTE: DE15502 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE	DE15555	HMO FILE 06
Date of service		
CODES		
19760401 to 19810831 - Range on this file (YYYYMMDD)		
DE15555 indicates the date on which the service was rendered. If a service was rendered over multiple dates, this variable is the initial date of service.		

DEI5584	VALUE	FREQ	CUM FREQ	%	CUM %
	1	63641	63641	92.86	92.86
	2	208	63849	0.30	93.17
	3	50	63899	0.07	93.24
	4	216	64115	0.32	93.56
	6	3916	68031	5.71	99.27
	7	131	68162	0.19	99.46
	8	213	68375	0.31	99.77
	9	157	68532	0.23	100.00

VARIABLE	DEI5584	HMO FILE 06
Place of service		
CODES		
1 - Doctor's office		
2 - Independent laboratory		
3 - Patient's home		
4 - Hospital		
5 - Nursing home		
6 - Emergency room		
7 - Outpatient surgery		
8 - Other outpatient hospital, including hospital clinic		
9 - Other locations, including non-hospital clinics		
DEI5584 indicates where the physician rendered medical services.		

VARIABLE	DEI5503	HMO FILE 06
1st reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DEI5503 indicates the code for the first reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."		

NOTE: NAMCS codes were entered without decimal points.

VARIABLE DE15505	HMO FILE 06
2nd reason/symptom for visit	
CODES	
Blank - Not applicable, missing	
DE15505 indicates the code for an additional reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."	

NOTE: See note on DE15503.

VARIABLE DE15565	HMO FILE 06
3rd reason/symptom for visit	
CODES	
Blank - Not applicable, missing	
DE15565 indicates the code for an additional reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."	

NOTE: See note on DE15503.

VARIABLE	DEI5568	HMO FILE 06
	First provider referred from	
	CODES	
	Blank - Not applicable, missing	
	DEI5568 indicates the provider number of the first person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DEI6308	HMO FILE 06
	Second provider referred from	
	CODES	
	Blank - Not applicable, missing	
	DEI6308 indicates the provider number of the second person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DE15570	HMO FILE 06
	First provider referral	
	CODES	
	Blank - Not applicable, missing	
	DE15570 indicates the provider number of the first provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DE15571	HMO FILE 06
	Second provider referral	
	CODES	
	Blank - Not applicable, missing	
	DE15571 indicates the provider number of the second provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DEI5511	HMO FILE 06
Accident related		
CODES		
1 - Yes		
2 - No		
DEI5511 states whether the illness or injury was accident related.		

DEI5511	VALUE	FREQ	CUM FREQ	%	CUM %
1	6980	7	6980	10.19	10.19
2	61545		68525	89.81	100.00

VARIABLE	DEI5512	HMO FILE 06
Employment related		
CODES		
1 - Yes		
2 - No		
DEI5512 states whether the illness or injury was employment related.		

DEI5512	VALUE	FREQ	CUM FREQ	%	CUM %
1	642	2	642	0.94	0.94
2	67888		68530	99.06	100.00

VARIABLE	DEI5566	HMO FILE 06
Date of injury		
CODES		
	19530101 to 19810829 - Not applicable, missing Range on this file (YYYYMMDD)	
	DEI5566 indicates the date (if any) the participant was injured.	

VARIABLE	DEI5606	HMO FILE 06
CRVS code		
	DEI5606 indicates a five-digit California Relative Value Studies (CRVS) code identifying the completed service provided or ordered by the physician. CRVS codes used in these files are defined in Section 11 of "Codes Used." A small number of codes were added under the direction of a Rand HIE physician to describe services not adequately reflected by existing CRVS codes.	

NOTE: A CRVS code of 99997 indicates a service rendered
by a GHC provider to a GHC control participant that
was not covered by the participant's GHC contract.
The imputed charge for such services is zero.

VARIABLE	DEI5607	HMO FILE 06
First CRVS modifier		
CODES		
. - Not applicable, missing		
DEI5607 indicates the code for a special circumstance involved in the CRVS procedure shown in DEI5606, CRVS Code. CRVS modifier code definitions are discussed in the introduction to this section.		

VARIABLE	CRVSUNIT	HMO FILE 06
CRVS units		
CRVSUNIT assigns a unit value to the CRVS procedure defined in DEI5606, CRVS Code. CRVS units are discussed in the introduction to this section.		

NOTE: To enable comparability with FFS services, certain GHC prenatal and pre- and post-operative procedures were given zero unit values by the HIE. Such procedures are considered part of lump sum billings in the FFS system, and are comparably treated in these HMO files by eliminating them from computations.

DEI5607	VALUE	FREQ	CUM FREQ	%	CUM %
	.	67704	1	0.12	0.12
	0	1	68	8.09	8.21
	1	67	121	6.40	14.61
	26	53	127	0.73	15.34
	27	6	129	0.24	15.58
	29	2	166	4.47	20.05
	30	37	167	0.12	20.17
	50	1	173	0.73	20.89
	51	6	175	0.24	21.14
	54	2	179	0.48	21.62
	55	4	812	76.45	98.07
	58	633	828	1.93	100.00
	80	16			

CRVSUNIT	NUMBER OF OBSERVATIONS
	68470
NUMBER OF MISSING	62
MEAN	7.47
MEDIAN	6.00
MINIMUM VALUE	0.00
MAXIMUM VALUE	850.22
STANDARD DEVIATION	7.62
COEFFICIENT OF VARIATION	102.01
SKEWNESS	24.63
KURTOSIS	2309.76

IMPCRGR	68532
NUMBER OF OBSERVATIONS	0
NUMBER OF MISSING	20.45
MEAN	15.60
MEDIAN	0.00
MINIMUM VALUE	2403.20
MAXIMUM VALUE	27.60
STANDARD DEVIATION	135.00
COEFFICIENT OF VARIATION	28.99
SKEWNESS	1850.76
KURTOSIS	

VARIABLE	IMPCRGR	HMO FILE 06
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Imputed line-item charge

CODES

. - Not applicable, missing

IMPCRGR indicates the imputed charge calculated by HIE analysts for the CRVS procedure defined in DE1506, CRVS Code. The imputed charge was based on the date of service, the computed CRVS units for the service (CRVSUNIT), and a dollar-amount-per-CRVS-unit taken from conversion tables. Imputed charges are expressed in dollars for the year services were rendered, unadjusted for inflation.

VARIABLE	DE16303	HMO FILE 06
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GHC code

blank - Not applicable, missing

DE16303 indicates a code developed by GHC to summarize the types of physician services and visits to HIE participants. The GHC codes used in this file are listed in Appendix F.

NOTE: To enable comparability with FFS services, certain GHC prenatal and pre- and post-operative procedures were given zero unit values by the HIE. Such procedures are considered part of lump sum billings in the FFS system, and are comparably treated in these HMO files by eliminating them from computations.

VARIABLE	GHCUNITS	HMO FILE 06	
GHC units			
GHCUNITS assigns a unit value to the physician service defined in DE16303, GHC Code. GHC unit values were created by the Group Health Cooperative to reflect their own assessment of the time requirements and complexity of different GHC physician services.			
NOTE: To enable comparability with FFS services, certain GHC prenatal and pre- and post-operative procedures were given zero unit values by the HIE. Such procedures are considered part of lump sum billings in the FFS system, and are comparably treated in these HMO files by eliminating them from computations.			
GHCUNITS			31287
NUMBER OF OBSERVATIONS			37245
MEAN			6.50
MEDIAN			5.90
MINIMUM VALUE			0.00
MAXIMUM VALUE			22.00
STANDARD DEVIATION			3.22
COEFFICIENT OF VARIATION			49.45
SKEWNESS			1.48
KURTOSIS			4.98

VARIABLE	DE16343	HMO FILE 06
GHC location		
1 - Clinic 1	208	
2 - Clinic 2	15517	
3 - Clinic 3	4399	
4 - Clinic 4	4393	
5 - Clinic 5	6047	
6 - Clinic 6	5629	
7 - Clinic 7	6434	
8 - Clinic 8	12265	
9 - Clinic 9	183	
10 - Clinic 10	6481	
11 - Non-GHC extended care facility	2	
12 - Hospital 1, inside Seattle	55	
13 - Clinic 11	2286	
14 - Hospital 2, inside Seattle	3754	
15 - Hospital 3, outside Seattle	108	
16 - Emergency room	542	
17 - Clinic 12	229	
18 - Clinic 13		
19 - Clinic 14		
20 - Specialty clinic		
21 - Clinic 15		
22 - GHC extended care facility		
23 - Non-GHC, inside GHC area		
24 - Non-GHC, outside GHC area		
25 - Clinic 16		
DE16343 identifies the GHC location where the service was performed, or indicates that it was performed at a non-GHC (FFS) location.		

DE16343	VALUE	FREQ	CUM FREQ	%	CUM %
1	15517	208	15517	22.71	22.71
2	4399	15517	19916	6.44	29.15
3	4393	19916	24309	6.43	35.58
4	6047	24309	30356	8.85	44.43
5	5629	30356	35985	8.24	52.67
6	6434	35985	42419	9.42	62.09
7	12265	42419	54684	17.95	80.04
8	183	54684	54867	0.27	80.30
9	6481	54867	61348	9.49	89.79
10	2	61348	61350	0.00	89.79
11	55	61350	61405	0.08	89.87
12	2286	61405	63691	3.35	93.22
13	3754	63691	67445	5.49	98.71
14	108	67445	67553	0.16	98.87
15	542	67553	68095	0.79	99.67
16	229	68095	68324	0.34	100.00

VARIABLE	DEI5596	HMO FILE 06
1st diagnosis related?		
CODES		
1 - Not applicable, missing		
2 - Yes		
3 - No		
DEI5596 indicates whether the service rendered by the provider was medically related to the first diagnosis or problem.		

DEI5596	VALUE	FREQ	CUM FREQ	%	CUM %
	1	62279	62279	90.88	90.88
	2	6248	68527	9.12	100.00

VARIABLE	DEI5522	HMO FILE 06
1st diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5522 indicates the code of the first condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."		

DE15523	VALUE	FREQ	CUM FREQ	%	CUM %
	1	973	51850	76.75	76.75
	2	51850	54049	3.26	80.00
	3	2199	59946	8.73	88.73
	4	5897	66535	9.75	98.48
	5	6589	66847	0.46	98.95
	6	312	67545	1.03	99.98
	9	698	67559	0.02	100.00
		14			

VARIABLE	DE15523	HMO FILE 06
1st diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - No qualifier given		
3 - Rule out		
4 - Probable/possible/?/question of		
5 - With, associated with, complicated by,		
6 - secondary to, due to		
7 - Not, turned out not to be, was not		
8 - Or, versus		
9 - Well-care code assigned*		
DE15523 indicates a diagnosis qualifier for the first diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.		

*NOTE: Value #9 is not a true diagnosis qualifier. Occasionally, health maintenance procedures were performed by the provider which did not pertain to any of the diagnoses on the SERR. In such cases, coders assigned a well-care code from the HICDA, and it was notated in this variable.

VARIABLE	DE15524	HMO FILE 06
1st associated diagnosis		
CODES		
Blank - Not applicable, missing		
DE15524 indicates the associated diagnosis code when required by the diagnosis qualifier.		

VARIABLE	DE15572	HMO FILE 06
1st problem/symptom date		
CODES		
	<p>- Not applicable, missing 19010101 - Symptom present, most of life 19420317 to 19810829 - Range on this file (YYMMDD)</p> <p>DE15572 indicates the date that the first problem or symptom appeared, as reported by the participant. The value 19010101 was used when the participant responded that the symptom had been present most or all of his/her life.</p>	

NOTE: Dates were not edited for accuracy beyond the data collection form itself, and there may be logical discrepancies in some dates.

DE15574	VALUE	FREQ	CUM FREQ	%	CUM %
1	910	23677	23677	35.01	35.01
2	2679	26356	26356	3.96	38.98
3	11898	38254	38254	17.60	56.57
4	10278	48532	48532	15.20	71.77
5	2093	50625	50625	3.10	74.87
6	15473	66098	66098	22.88	97.75
7	1478	67576	67576	2.19	99.93
8	17	67593	67593	0.03	99.96
9	29	67622	67622	0.04	100.00

VARIABLE	DE15574	HMO FILE 06
Treatment history/status of the 1st diagnosis		
CODES		
	<p>- Not applicable, missing 1 - Initial visit for acute condition 2 - Initial visit for chronic condition 3 - Repeat visit for acute condition 4 - Repeat visit for chronic condition (routine) 5 - Initial visit for flareup of a chronic condition 6 - Well care or pregnancy-related 7 - Repeat visit for flareup of a chronic condition 8 - Acute; not specified as initial or repeat 9 - Chronic; not specified as initial or repeat</p> <p>DE15574 describes the patient's treatment status for the first diagnosis/problem.</p>	

DEI5597	VALUE	FREQ	CUM FREQ	%	CUM %
	1	44368	14359	59.42	59.42
	2	14359	24164	40.58	100.00
		9805			

VARIABLE	DEI5597	HMO FILE	06
2nd diagnosis related?			
CODES			
1 - Yes			
2 - No			
DEI5597 indicates whether the service rendered by the provider was medically related to the second diagnosis or problem.			

VARIABLE	DEI5525	HMO FILE	06
2nd diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5525 indicates the code of the second condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."			

DEI5526	VALUE	FREQ	CUM FREQ	%	CUM %
	1	44367	17069	70.64	70.64
	2	17069	18941	7.75	78.38
	3	1872	21625	11.11	89.49
	4	2684	23851	9.21	98.70
	5	2226	23912	0.25	98.95
	6	61	24080	0.70	99.65
	9	168	24165	0.35	100.00
		85			

VARIABLE	DEI5526	HMO FILE	06
2nd diagnosis qualifier			
CODES			
1 - Not applicable, missing			
2 - No qualifier given			
3 - Probable/possible/?/question of			
4 - With, associated with, complicated by,			
secondary to, due to			
5 - Not, turned out not to be, was not			
6 - Or, versus			
9 - Well-care code assigned*			
DEI5526 indicates a diagnosis qualifier for the second			
diagnosis. In some instances (i.e., codes 2, 3, 5),			
it is possible for a diagnosis qualifier to be used			
in the absence of a primary diagnosis.			

*NOTE: See note on DEI5523.

VARIABLE	DEI5527	HMO FILE	06
2nd associated diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5527 indicates the associated diagnosis code			
when required by the qualifier.			

VARIABLE DE15575

HMO FILE 06

2nd problem/symptom date

CODES

19640709 to 19810822 - Not applicable, missing

DE15575 indicates the date that the second problem or symptom appeared, as reported by the participant.

VARIABLE DE15577

HMO FILE 06

Treatment history/status of the 2nd diagnosis

CODES

1 - Not applicable, missing

2 - Initial visit for acute condition

3 - Initial visit for chronic condition

4 - Repeat visit for acute condition

5 - Initial visit for chronic condition (routine)

6 - Well care or pregnancy-related

7 - Repeat visit for flareup of a chronic condition

8 - Acute; not specified as initial or repeat

9 - Chronic; not specified as initial or repeat

DE15577 describes the patient's treatment status for the second diagnosis/problem.

DE15577	VALUE	FREQ	CUM FREQ	%	CUM %
1	44416	7904	7904	32.78	32.78
2	2369	10273	10273	9.82	42.60
3	2998	13271	13271	12.43	55.03
4	5866	19137	19137	24.32	79.35
5	531	19668	19668	2.20	81.56
6	4164	23832	23832	17.27	98.82
7	191	24023	24023	0.79	99.61
8	25	24048	24048	0.10	99.72
9	68	24116	24116	0.28	100.00

VARIABLE	DEI5598	HMO FILE 06
	3rd diagnosis related?	
	CODES	
	1 - Not applicable, missing	
	2 - Yes	
	DEI5598 indicates whether the service rendered by the provider was medically related to the third diagnosis/problem.	

VARIABLE	DEI5528	HMO FILE 06
	3rd diagnosis	
	CODES	
	Blank - Not applicable, missing	
	DEI5528 indicates the code of the third condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HLE claims files are listed in Section I of "Codes Used."	

DEI5598	VALUE	FREQ	CUM FREQ	%	CUM %
	1	60522	4166	52.01	52.01
	2	4166	8010	47.99	100.00
		3844			

DEI5529	VALUE	FREQ	CUM FREQ	%	CUM %
	1	60533	5621	70.27	70.27
	2	5621	6247	7.83	78.10
	3	626	7156	11.36	89.46
	4	909	7823	8.34	97.80
	5	667	7859	0.45	98.25
	6	36	7943	1.05	99.30
	9	84	7999	0.70	100.00
		56			

VARIABLE DEI5529 HMO FILE 06

3rd diagnosis qualifier

CODES

- 1 - Not applicable, missing
- 2 - No qualifier
- 3 - Rule out
- 4 - Probable/possible/?/question of secondary to, due to, complicated by,
- 5 - With, associated with, complicated by,
- 6 - Not, turned out not to be, was not
- 9 - Or, versus
- 9 - Well-care code assigned*

DEI5529 indicates a diagnosis qualifier for the third diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.

*NOTE: See note on DEI5523.

VARIABLE DEI5530 HMO FILE 06

3rd associated diagnosis

CODES

Blank - Not applicable, missing

DEI5530 indicates the associated diagnosis code when required by the qualifier.

VARIABLE	DE15578	HMO FILE 06
	3rd problem/symptom date	
	CODES	
	19710101 to 19810721 - Not applicable, missing	
	DE15578 indicates the date that the third problem or symptom appeared, as reported by the participant.	

DE15580	VALUE	FREQ	CUM FREQ	%	CUM %
1	60530	2202	2202	27.52	27.52
2	2202	940	3142	11.75	39.27
3	707	3849	3849	8.84	48.10
4	2077	5926	5926	25.96	74.06
5	121	6047	6047	1.51	75.57
6	1929	7976	7976	24.11	99.68
7	21	7997	7997	0.26	99.94
8	1	7998	7998	0.01	99.95
9	4	8002	8002	0.05	100.00

VARIABLE	DE15580	HMO FILE 06
	Treatment history/status of the 3rd diagnosis	
	CODES	
	1 - Not applicable, missing	
	2 - Initial visit for acute condition	
	3 - Repeat visit for acute condition	
	4 - Repeat visit for chronic condition (routine)	
	5 - Initial visit for flareup of a chronic condition	
	6 - Well care or pregnancy-related	
	7 - Repeat visit for flareup of a chronic condition	
	8 - Acute; not specified as initial or repeat	
	9 - Chronic; not specified as initial or repeat	
	DE15580 describes the patient's treatment status for the third diagnosis/problem.	

VARIABLE DE15599		HMO FILE 06		DE15599			
4th diagnosis related?				VALUE	FREQ	CUM FREQ	CUM %
CODES							
1 - Not applicable, missing				1	65958	1411	54.82
2 - Yes				2	1411	2574	45.18
2 - No					1163		100.00
DE15599 indicates whether the service rendered by the provider was medically related to the fourth diagnosis/problem.							
VARIABLE DE15531		HMO FILE 06					
4th diagnosis							
CODES							
Blank - Not applicable, missing							
DE15531 indicates the code of the fourth condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HLE claims files are listed in Section 1 of "Codes Used."							

DEI5532	VALUE	FREQ	CUM FREQ	%	CUM %
1	65961	1953	1953	75.96	75.96
2	209	2162	2162	8.13	84.09
3	143	2305	2305	5.56	89.65
4	212	2517	2517	8.25	97.90
5	6	2523	2523	0.23	98.13
6	11	2534	2534	0.43	98.56
9	37	2571	2571	1.44	100.00

VARIABLE	DEI5532	HMO FILE	06
4th diagnosis qualifier			
CODES			
1 - Not applicable, missing			
2 - Rule out			
3 - Probable/possible/?/question of			
4 - With, associated with, complicated by, secondary to, due to			
5 - Not, turned out not to be, was not			
6 - Or, versus			
9 - Well-care code assigned*			
DEI5532 indicates a diagnosis qualifier for the fourth diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.			

*NOTE: See note on DEI5523.

VARIABLE	DEI5533	HMO FILE	06
4th associated diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5533 indicates the associated diagnosis code when required by the qualifier.			

VARIABLE	DEI5581	HMO FILE 06
4th problem/symptom date		
CODES		
1751201 to 19810608 - Not applicable, missing		
DEI5581 indicates the date that the fourth problem or symptom appeared, as reported by the participant.		

DEI5583	VALUE	FREQ	CUM FREQ	%	CUM %
1	65961	487	487	18.94	18.94
2	156	643	643	6.07	25.01
3	159	802	802	6.18	31.19
4	594	1396	1396	23.10	54.30
5	23	1419	1419	0.90	55.19
6	1148	2567	2567	44.65	99.84
7	4	2571	2571	0.16	100.00

VARIABLE	DEI5583	HMO FILE 06
Treatment history/status of the 4th diagnosis		
CODES		
1 - Not applicable, missing		
2 - Initial visit for acute condition		
3 - Repeat visit for chronic condition		
4 - Repeat visit for chronic condition (routine)		
5 - Initial visit for flareup of a chronic condition		
6 - Well care or pregnancy-related		
7 - Repeat visit for flareup of a chronic condition		
8 - Acute; not specified as initial or repeat		
9 - Chronic; not specified as initial or repeat		
DEI5583 describes the patient's treatment status for the fourth diagnosis/problem.		

VIII. DRUGS PROVIDED BY PHYSICIANS, HMO FILE 08

INTRODUCTION

This codebook documents primary variables concerning drugs provided by GHC physicians directly to HIE participants. Drugs *prescribed* by GHC physicians are found in File 04. Drugs provided by GHC as part of inpatient or outpatient hospital care can be found under the categories "pharmacy" and "take-home drugs" in the variable Category of Service (DEI5557) in File 01 (Hospital Inpatient Services) and File 11 (Outpatient Services Provided by Institutions).¹ Drugs obtained by GHC participants at GHC pharmacies appear in File 15 (Drugs Dispensed). Data concerning drugs prescribed or sold to GHC participants by *FFS* providers are *not* included in this file; these records can be found in the FFS claims line-item files.

The specific information found in this codebook includes each provided drug (identified by National Drug Code), the provider number of the physician who provided the drug, the strength and quantity of the provided drug, the dosage instructions, and the generic and therapeutic codes for the drug. Also included are variables indicating the reasons/symptoms for the visit to the physician, the date of each symptom's first appearance, the date and place of service, the referral physicians (if any), and whether the visit was accident- or employment-related. Other variables indicate the diagnoses to which the provided drug is related, the treatment status/history of each diagnosis, and whether the provided drug was a prescription or over-the-counter drug.

Because no standard values were available for calculating the costs of drugs or supplies, researchers were unable to impute charges for drugs provided within the HMO system. Thus, no imputed charges are provided in this file.

¹However, such drugs could not be specifically identified, and no quantities could be provided.

The units of observation in this file are line items representing drugs provided by a physician.² For an explanation of common variables used in this codebook, see the final subsection of Sec. II. Below we provide explanations for variables specific to this file.

PRESCRIPTION VARIABLES

Prescriptions contain a variety of specific data. To reconstruct a prescription, the user must consider several variables:

- The quantity of the drug indicated in variable DEI5589 (NDC Code) is found in variable DEI5588, Amount Sold (e.g., 30).
- The variable DEI5667, Dosage Instructions-Quantity, indicates the prescribed or suggested numerical quantity of each dosage (e.g., one).
- Both of these variables must be linked with DEI5668, Dosage Instructions-Form, to know in what form the quantity given is measured (e.g., tablet, ounce).
- The prescribed or suggested frequency for administering the drug (e.g., twice daily) is given in DEI5669, and these instructions are modified if necessary in DEI5670.
- The numerical dosage strength (e.g., 250) of the drug is given in DEI5586, and this number must be linked to its appropriate unit of measure (e.g., milligrams), given in DEI5587, Dosage Strength Unit.

The above information was filled in voluntarily by physicians. If a drug had a common form and dosage, the physician may have felt it unnecessary to fill in any of the prescription elements when the drug name itself seemed sufficient. Consequently, missing data can exist in the above prescription element variables.

²Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation to the unit of observation and does *not* represent the number of visits of the participant.

NDC CODE

DEI5589 indicates the first seven digits of the National Drug Code that identifies the drug provided by the physician. (The last two digits of the national nine-digit code number represent trade package size and were not used by the HIE.) Codes were taken from the *National Drug Code Directory*, June 1972, whenever possible.³ A number of supplementary codes were added by the HIE to identify drugs not listed in the 1972 NDC Directory. Supplementary code definitions are included with the National Drug Code definitions provided in Sec. V of *Codes Used*. Code 9999997 indicates a drug prescribed by a GHC physician to a GHC control participant that was not covered by the participant's GHC contract.

GENERIC CODES

DEI5590 - DEI5594 indicate codes that identify up to five generic components of the provided drug. This generic coding system was developed by the HIE; code definitions are listed in Sec. VI of *Codes Used*.

DRUG THERAPEUTIC CODE

DEI5595 indicates a code that identifies the therapeutic use category of the provided drug. Codes were taken from the American Medical Association's *AMA Drug Evaluations, 1973*,⁴ by using a code number that represents the chapter number of the drug's assigned therapeutic category. Therapeutic code definitions are listed in Sec. VII of *Codes Used*.

DIAGNOSIS RELATION TO DRUG

Each drug that was provided by a physician and recorded in the line items is related to one or more of the four possible diagnoses as indicated by "diagnosis relation" variables DEI5596 - DEI5599.

³Public Health Service, U.S. Department of Health and Human Services, Washington, D.C.

⁴Second edition, Publishing Sciences Group, Inc., Acton, MA.

CODEBOOK FOR HMO FILE 08
DRUGS PROVIDED BY PHYSICIANS

DIIRECTORY OF VARIABLES - HMO FILE 08
DRUGS PROVIDED BY PHYSICIANS

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	177	DEI5528	3rd diagnosis	191
PERSON	Person identifier	177	DEI5529	3rd diagnosis qualifier	192
SITE	Site	177	DEI5530	3rd associated diagnosis	192
INSTAT	Insurance status	178	DEI5578	3rd problem/symptom date	193
CONTYR	Contract year	178	DEI5580	Treatment history/status of the 3rd diagnosis	193
DEI6300	SERR number	179	DEI5599	4th diagnosis related?	194
DEI5502	Provider number	179	DEI5531	4th diagnosis	194
DEI5555	Date of service	179	DEI5532	4th diagnosis qualifier	195
DEI5584	Place of service	180	DEI5533	4th associated diagnosis	195
DEI5503	1st reason/symptom for visit	180	DEI5581	4th problem/symptom date	196
DEI5505	2nd reason/symptom for visit	181	DEI5583	Treatment history/status of the 4th diagnosis	196
DEI5568	1st provider referred from	181	DEI5666	Prescription status of drug	197
DEI5570	1st provider referral	182	DEI5589	NDC code	197
DEI5511	Accident-related	182	DEI5590	1st generic code	198
DEI5512	Employment-related	183	DEI5591	2nd generic code	198
DEI5566	Date of injury	183	DEI5592	3rd generic code	199
DEI6343	GHC location	184	DEI5593	4th generic code	199
DEI5596	1st diagnosis related?	185	DEI5594	5th generic code	200
DEI5522	1st diagnosis	185	DEI5595	Drug therapeutic code	200
DEI5523	1st diagnosis qualifier	186	DEI5588	Amount provided	201
DEI5524	1st associated diagnosis	186	DEI5667	Dosage instructions -- quantity	202
DEI5572	1st problem/symptom date	187	DEI5668	Dosage instructions -- form	203
DEI5574	Treatment history/status of the 1st diagnosis	187	DEI5669	Dosage instructions -- frequency	204
DEI5597	2nd diagnosis related?	188	DEI5670	Dosage instructions -- flexibility	205
DEI5525	2nd diagnosis	188	DEI5586	Dosage strength	205
DEI5526	2nd diagnosis qualifier	189	DEI5587	Dosage strength unit	206
DEI5527	2nd associated diagnosis	189			
DEI5575	2nd problem/symptom date	190			
DEI5577	Treatment history/status of the 2nd diagnosis	190			
DEI5598	3rd diagnosis related?	191			

VARIABLE FILENAME		HMO FILE 08	
Name of file			
FILENAME is a 6-digit code that uniquely identifies the file. This file name is PE082A.			
VARIABLE PERSON		HMO FILE 08	
Person identifier			
PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.			
VARIABLE SITE		HMO FILE 08	
Site			
CODES			
2 - Seattle, Washington			
SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.			
FILENAME	VALUE	FREQ	CUM FREQ
VALUE	PE082A	214	214
			CUM %
			100.00
			100.00
SITE	VALUE	FREQ	CUM FREQ
VALUE	2	214	214
			CUM %
			100.00
			100.00

INSTAT					
VALUE	FREQ	CUM FREQ	%	CUM %	
1	117	117	54.67	54.67	
2	97	214	45.33	100.00	

CONTYR					
VALUE	FREQ	CUM FREQ	%	CUM %	
01	49	49	22.90	22.90	
02	64	113	29.91	52.80	
03	59	172	27.57	80.37	
04	30	202	14.02	94.39	
05	12	214	5.61	100.00	

VARIABLE INSTAT HMO FILE 08

Insurance status

CODES

1 - Ever insured (includes HMO experimental group)

2 - Ever assigned to HMO control group

3 - Never insured

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

VARIABLE CONTYR HMO FILE 08

Contract year

CODES

01 - First year

02 - Second year

03 - Third year

04 - Fourth year

05 - Fifth year

CONTYR identifies the participant's contract year of coverage in which the service was performed.

VARIABLE DE16300	HMO FILE 08
SERR number	
DE16300 indicates an identifier number which is used to link the line items from a given SERR.	

VARIABLE DE15502	HMO FILE 08
Provider number	
DE15502 is an 8-character code which refers, in this file, to the physician who provided drugs for the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

NOTE: DE15502 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE DE15555	HMO FILE 08
Date of service	
CODES	
19760512 to 19810512 - Range on this file (YYYYMMDD)	
DE15555 indicates the date on which the service was rendered. If a service was rendered over multiple dates, this variable is the initial date of service.	

VARIABLE DE15584		HMO FILE 08		DE15584			
Place of service				VALUE	FREQ	CUM FREQ	CUM %
CODES							
1 - Doctor's office				1	117	117	54.67
2 - Independent laboratory				6	96	213	44.86
3 - Patient's home				7	1	214	0.47
4 - Hospital							
5 - Nursing home							
6 - Emergency room (when not admitting)							
7 - Outpatient surgery							
8 - Other outpatient hospital, including hospital clinic							
9 - Other locations, including non-hospital clinics							
DE15584 indicates the place the participant received medical services.							

VARIABLE DE15503		HMO FILE 08	
1st reason/symptom for visit			
CODES			
Blank - Not applicable, missing			
DE15503 indicates the code for the first reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."			

NOTE: NAMCS codes were entered without decimal points.

VARIABLE DE15505	HMO FILE 08
2nd reason/symptom for visit	
CODES	
Blank - Not applicable, missing	
DE15505 indicates the code for an additional reason the participant went to see a physician. All reason-for-visit codes used in the Claims line-item files are listed in Section IV of "Codes Used."	

NOTE: See note on DE15503.

VARIABLE DE15568	HMO FILE 08
First provider referred from	
CODES	
Blank - Not applicable, missing	
DE15568 indicates the provider number of the first person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DEI5570	HMO FILE 08
	First provider referral	
	CODES	
	Blank - Not applicable, missing	
	DEI5570 indicates the provider number of the first provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file . of the HIE reference series.	

VARIABLE	DEI5511	HMO FILE 08
	Accident related	
	CODES	
	1 - Yes	
	2 - No	
	DEI5511 states whether the illness or injury was accident related.	

DEI5511	VALUE	FREQ	CUM FREQ	%	CUM %
1	19	19	19	8.88	8.88
2	195	214	214	91.12	100.00

DEI5512	VALUE	FREQ	CUM FREQ	%	CUM %
	1	3	3	1.40	1.40
	2	211	214	98.60	100.00

VARIABLE DEI5512 HMO FILE 08

Employment related

CODES

1 - Yes

2 - No

DEI5512 states whether the illness or injury was employment related.

VARIABLE DEI5566 HMO FILE 08

Date of injury

CODES

19760721 to 19800317 - Not applicable, missing

DEI5566 indicates the date (if any) the participant was injured.

DE16343	VALUE	FREQ	CUM FREQ	%	CUM %
1	1	90	90	42.06	42.06
2	2	7	97	3.27	45.33
3	3	3	100	1.40	46.73
4	4	7	107	3.27	50.00
5	5	9	116	4.21	54.21
7	7	9	125	4.21	58.41
8	8	52	177	24.30	82.71
10	10	9	186	4.21	86.92
19	19	19	205	8.88	95.79
20	20	6	211	2.80	98.60
23	23	1	212	0.47	99.07
24	24	2	214	0.94	100.00

VARIABLE	DE16343	HMO FILE 08
GHC location		
1 - Clinic 1		
2 - Clinic 2		
3 - Clinic 3		
4 - Clinic 4		
5 - Clinic 5		
6 - Clinic 6		
7 - Clinic 7		
8 - Clinic 8		
9 - Clinic 9		
10 - Clinic 10		
11 - Non-GHC extended care facility		
12 - Hospital 1, inside Seattle		
13 - Clinic 11		
14 - Hospital 2, inside Seattle		
15 - Hospital 3, outside Seattle		
16 - Emergency room		
17 - Clinic 12		
18 - Clinic 13		
19 - Clinic 14		
20 - Specialty clinic		
21 - Clinic 15		
22 - GHC extended care facility		
23 - Non-GHC, inside GHC area		
24 - Non-GHC, outside GHC area		
25 - Clinic 16		
DE16343 identifies the GHC location where the service was performed, or indicates that it was performed at a non-GHC (FFS) location.		

VARIABLE	DE15596	HMO FILE 08
	1st diagnosis related?	
	CODES	
	1 - Yes	
	2 - No	
	DE15596 indicates whether the drug provided by the physician was medically related to the first diagnosis/problem.	

VARIABLE	DE15522	HMO FILE 08
	1st diagnosis	
	CODES	
	Blank - Not applicable, missing	
	DE1522 indicates the code of the first condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HLE claims files are listed in Section 1 of "Codes Used."	

DE15596	VALUE	FREQ	CUM FREQ	%	CUM %
	1	198	198	92.52	92.52
	2	16	214	7.48	100.00

DEI5523	VALUE	FREQ	CUM FREQ	%	CUM %
	1	161	161	75.23	75.23
	2	6	167	2.80	78.04
	3	20	187	9.35	87.38
	4	26	213	12.15	99.53
	6	1	214	0.47	100.00

VARIABLE	DEI5523	HMO FILE 08
1st diagnosis qualifier		
CODES		
1	- Not applicable, missing	
2	- No qualifier given	
3	- Rule out	
4	- Probable/possible/?/question of	
5	- With, associated with, complicated by,	
6	secondary to, due to	
7	- Not, turned out not to be, was not	
8	- Or, versus	
9	- Well-care code assigned*	
DEI5523 indicates a diagnosis qualifier for the first diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.		

*NOTE: Value #9 is not a true diagnosis qualifier. Occasionally, health maintenance procedures were performed by the provider which did not pertain to any of the diagnoses on the MER. In such cases, coders assigned a well-care code from the HICDA, and it was notated in this variable.

VARIABLE	DEI5524	HMO FILE 08
1st associated diagnosis		
CODES		
Blank	- Not applicable, missing	
DEI5524 indicates the associated diagnosis code when required by the diagnosis qualifier.		

VARIABLE	DEI5572	HMO FILE 08
	1st problem/symptom date	
	CODES	
	19730406 to 19810104 - Not applicable, missing	
	DEI5572 indicates the date that the first problem or symptom appeared, as reported by the participant.	

DEI5574	VALUE	FREQ	CUM FREQ	%	CUM %
	1	108	108	50.47	50.47
	3	44	152	20.56	71.03
	4	13	165	6.08	77.10
	5	26	191	12.15	89.25
	6	8	199	3.74	92.99
	7	15	214	7.01	100.00

VARIABLE	DEI5574	HMO FILE 08
	Treatment history/status of the 1st diagnosis	
	CODES	
	1 - Initial visit for acute condition	
	2 - Initial visit for chronic condition	
	3 - Repeat visit for acute condition	
	4 - Repeat visit for chronic condition (routine)	
	5 - Initial visit for flareup of a chronic condition	
	6 - Well-care or pregnancy-related	
	7 - Repeat visit for flareup of a chronic condition	
	8 - Acute; not specified as initial or repeat	
	9 - Chronic; not specified as initial or repeat	
	DEI5574 describes the patient's treatment history or status for the first diagnosis/problem.	

VARIABLE	DE15597	HMO FILE 08
2nd diagnosis related?		
CODES		
	: - Not applicable, missing	
	1 - Yes	
	2 - No	
	DE15597 indicates whether the drug provided by the physician was medically related to the second diagnosis/problem.	

DE15597	VALUE	FREQ	CUM FREQ	%	CUM %
	1	151			
	2	31	31	49.21	49.21
		32	63	50.79	100.00

VARIABLE	DE15525	HMO FILE 08
2nd diagnosis		
CODES		
	Blank - Not applicable, missing	
	DE15525 indicates the code of the second condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."	

DEI5526	VALUE	FREQ	CUM FREQ	%	CUM %
	1	151	151	68.25	68.25
	2	43	194	6.35	74.60
	3	4	198	9.52	84.13
	4	6	204	7.94	92.06
	6	5	209	7.94	100.00

VARIABLE DEI5526 HMO FILE 08

2nd diagnosis qualifier

CODES

- 1 - Not applicable, missing
- 2 - Rule out
- 3 - Probable/possible/?/question of
- 4 - With, associated with, complicated by, secondary to, due to
- 5 - Not, turned out not to be, was not
- 6 - Or, versus
- 9 - Well-care code assigned*

DEI5526 indicates a diagnosis qualifier for the second diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.

*NOTE: See note on DEI5523.

VARIABLE DEI5527 HMO FILE 08

2nd associated diagnosis

CODES

Blank - Not applicable, missing

DEI5527 indicates the associated diagnosis code when required by the qualifier.

VARIABLE	DEI5575	HMO FILE 08
2nd problem/symptom date		
CODES		
19761201 to 19810118 - Not applicable, missing		
DEI5575 indicates the date that the second problem or symptom appeared, as reported by the participant.		

VARIABLE	DEI5577	HMO FILE 08
Treatment history/status of the 2nd diagnosis		
CODES		
1 - Not applicable, missing		
2 - Initial visit for acute condition		
3 - Repeat visit for acute condition		
4 - Repeat visit for chronic condition (routine)		
5 - Initial visit for flareup of a chronic condition		
6 - Well-care or pregnancy-related		
7 - Repeat visit for flareup of a chronic condition		
8 - Acute; not specified as initial or repeat		
9 - Chronic; not specified as initial or repeat		
DEI5577 describes the patient's treatment history or status for the second diagnosis/problem.		

DEI5577	VALUE	FREQ	CUM FREQ	%	CUM %
1	151	35	35	55.56	55.56
2	35	4	39	6.35	61.91
3	14	6	53	22.22	84.13
4	6	2	59	9.52	93.65
5	2	1	61	3.18	96.83
6	1	62	1.59	98.41	98.41
7	1	63	1.59	100.00	100.00

DE15598	VALUE	FREQ	CUM FREQ	%	CUM %
	1	204	3	30.00	30.00
	2	3	10	70.00	100.00

VARIABLE	DE15598	HMO FILE 08
3rd diagnosis related?		
CODES		
1 - Yes		
2 - No		
DE15598 indicates whether the drug provided by the physician was medically related to the third diagnosis/problem.		

VARIABLE	DE15528	HMO FILE 08
3rd diagnosis		
CODES		
Blank - Not applicable, missing		
DE15528 indicates the code of the third condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."		

DEI5529	VALUE	FREQ	CUM FREQ	%	CUM %
	1	204	5	50.00	50.00
	2	5	6	10.00	60.00
	3	4	10	40.00	100.00

VARIABLE	DEI5529	HMO FILE 08
	3rd diagnosis qualifier	
	CODES	
	1 - Not applicable, missing	
	2 - Rule out	
	3 - Probable/possible/?/question of	
	4 - With, associated with, complicated by, secondary to, due to	
	5 - Not, turned out not to be, was not	
	6 - Or, versus	
	9 - Well-care code assigned*	
	DEI5529 indicates a diagnosis qualifier for the third diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.	

*NOTE: See note on DEI5523.

VARIABLE	DEI5530	HMO FILE 08
	3rd associated diagnosis	
	CODES	
	Blank - Not applicable, missing	
	DEI5530 indicates the associated diagnosis code when required by the qualifier.	

VARIABLE DE15578 HMO FILE 08

3rd problem/symptom date

CODES

19761201 to 19800317 - Not applicable, missing
DE15578 indicates the date that the third problem or
symptom appeared, as reported by the participant.

VARIABLE DE15580 HMO FILE 08

Treatment history/status of the 3rd diagnosis

CODES

1 - Not applicable, missing
2 - Initial visit for acute condition
3 - Initial visit for chronic condition
4 - Repeat visit for acute condition
5 - Repeat visit for chronic condition (routine)
6 - Initial visit for flareup of a chronic condition
7 - Well-care or pregnancy-related
8 - Repeat visit for flareup of a chronic condition
9 - Acute; not specified as initial or repeat
9 - Chronic; not specified as initial or repeat

DE15580 describes the patient's treatment history or
status for the third diagnosis/problem.

DE15580 VALUE	FREQ	CUM FREQ	%	CUM %
1	204	5	50.00	50.00
3	5	8	30.00	80.00
4	3	10	20.00	100.00

DEI5599	VALUE	FREQ	CUM FREQ	%	CUM %
	2	213	1	100.00	100.00
		1			

VARIABLE	DEI5599	HMO FILE	08
4th diagnosis related?			
CODES			
1 - Not applicable, missing			
2 - Yes			
2 - No			
DEI5599 indicates whether the drug provided by the physician was medically related to the fourth diagnosis/problem.			

VARIABLE	DEI5531	HMO FILE	08
4th diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5531 indicates the code of the fourth condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."			

DEI5532	VALUE	FREQ	CUM FREQ	%	CUM %
	1	213	1	100.00	100.00
		1			

VARIABLE	DEI5532	HMO FILE 08
4th diagnosis qualifier		
CODES		
1	- Not applicable, missing	
2	- No qualifier given	
3	- Rule out	
4	- Probable/possible/?/question of	
5	- With, associated with, complicated by, secondary to, due to	
6	- Not, turned out not to be, was not	
9	- Or, versus	
	- Well-care code assigned*	
	DEI5532 indicates a diagnosis qualifier for the fourth diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.	

*NOTE: See note on DEI5523.

VARIABLE	DEI5533	HMO FILE 08
4th associated diagnosis		
CODES		
	Blank - Not applicable, missing	
	DEI5533 indicates the associated diagnosis code when required by the qualifier.	

VARIABLE	DEI5581	HMO FILE 08
4th problem/symptom date		
CODES		
	19741210 to 19790702 - Not applicable, missing	
	DEI5581 indicates the date that the fourth problem or symptom appeared, as reported by the participant.	

DEI5583	VALUE	FREQ	CUM FREQ	%	CUM %
	6	213	1	100.00	100.00

VARIABLE	DEI5583	HMO FILE 08
Treatment history/status of the 4th diagnosis		
CODES		
	1 - Not applicable, missing	
	2 - Initial visit for acute condition	
	3 - Initial visit for chronic condition	
	4 - Repeat visit for acute condition	
	5 - Repeat visit for chronic condition (routine)	
	6 - Initial visit for flareup of a chronic condition	
	7 - Well care or pregnancy-related	
	8 - Repeat visit for flareup of a chronic condition	
	9 - Acute; not specified as initial or repeat	
	DEI5583 describes the patient's treatment history or status for the fourth diagnosis/problem.	

DEI5666	VALUE	FREQ	CUM FREQ	%	CUM %
	1	119	119	55.61	55.61
	2	79	198	36.92	92.52
	3	14	212	6.54	99.07
	4	2	214	0.94	100.00

VARIABLE	DEI5666	HMO FILE 08
	Prescription status of drug	
	CODES	
	1 - Not applicable, missing	
	2 - Prescription (legend)	
	3 - Over the counter (non-legend)	
	4 - Either (varies by state)	
	4 - Unknown	
	DEI5666 states whether the drug was a prescription or could be sold over the counter; or whether it required a prescription in some states but not in others; or whether the information about the status of the drug was unobtainable.	

*NOTE: Prescription status was determined by reference to the National Drug Code Directory. If the status was not found in the text, coders assigned it a value of "missing".

VARIABLE	DEI5589	HMO FILE 08
	NDC code	
	CODES	
	blank - Not applicable, missing	
	DEI5589 indicates the first seven digits of the National Drug Code for the drug provided by the physician. A number of codes were added by the HIE to identify drugs not listed in the 1972 NDC Directory. All NDC and supplementary codes used in the claims line-item files can be found in Section V of "Codes Used."	

VARIABLE	DE15590	HMO FILE 08
	1st generic code	
	CODES	
	. - Not applicable, missing	
	DE15590 identifies a generic component of the drug specified by NDC code in DE15589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DE15591	HMO FILE 08
	2nd generic code	
	CODES	
	. - Not applicable, missing	
	DE15591 identifies a generic component of the drug specified by NDC code in DE15589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DE15592	HMO FILE 08
	3rd generic code	
	CODES	
	. - Not applicable, missing	
	DE15592 identifies a generic component of the drug specified by NDC code in DE15589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DE15593	HMO FILE 08
	4th generic code	
	CODES	
	. - Not applicable, missing	
	DE1593 identifies a generic component of the drug specified by NDC code in DE15589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5594	HMO FILE 08
5th generic code		
CODES		
. - Not applicable, missing		
DEI5594 identifies a generic component of the drug specified by NDC code in DEI5589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."		

DEI5595	VALUE	FREQ	CUM FREQ	%	CUM %
8	1	1	1	0.47	0.47
11	1	1	2	0.47	0.94
12	3	3	5	1.40	2.34
14	1	1	6	0.47	2.80
16	2	2	8	0.94	3.74
20	2	2	10	0.94	4.67
21	4	4	14	1.87	6.54
22	37	37	51	17.29	23.83
25	7	7	58	3.27	27.10
26	1	1	59	0.47	27.57
27	3	3	62	1.40	28.97
28	6	6	68	2.80	31.78
29	1	1	69	0.47	32.24
30	2	2	71	0.94	33.18
31	4	4	75	1.87	35.05
32	1	1	76	0.47	35.51
35	2	2	78	0.94	36.45
36	1	1	79	0.47	36.92
41	20	20	99	9.35	46.26
43	1	1	100	0.47	46.73
44	2	2	102	0.94	47.66
45	5	5	107	2.34	50.00
46	3	3	110	1.40	51.40
				(cont.)	

VARIABLE	DEI5595	HMO FILE 08
Drug therapeutic code		
CODES		
. - Not applicable, missing		
DEI5595 indicates the code for the therapeutic use of the drug specified in DEI5589. Codes were taken from the AMA Drug Evaluations, 1973, by assigning a code number which corresponds with the chapter number in which the drug's therapeutic uses are described. Therapeutic codes used in this file are listed and defined in Section VII of "Codes Used."		

VARIABLE DE15595 (cont.)

VALUE	FREQ	CUM FREQ	%	CUM %
48	10	120	4.67	56.08
52	2	122	0.94	57.01
53	3	125	1.40	58.41
57	3	128	1.40	59.81
60	2	130	0.94	60.75
68	35	165	16.36	77.10
69	1	166	0.47	77.57
70	4	170	1.87	79.44
71	3	173	1.40	80.84
72	9	182	4.21	85.05
73	1	183	0.47	85.51
78	1	184	0.47	85.98
79	9	193	4.21	90.19
80	1	194	0.47	90.65
81	3	197	1.40	92.06
83	1	198	0.47	92.52
84	7	205	3.27	95.79
85	2	207	0.94	96.73
87	1	208	0.47	97.20
92	4	212	1.87	99.07
93	2	214	0.94	100.00

DE15588

VALUE	FREQ	CUM FREQ	%	CUM %
.	141	.	53.43	53.43
1	39	47	10.96	64.38
2	8	52	6.85	71.23
3	5	56	5.48	76.71
4	4	58	2.74	79.45
7	2	59	1.37	80.82
8	1	60	1.37	82.19
9	1	62	2.74	84.93
10	2	65	4.11	89.04
15	3	66	1.37	90.41
20	1	67	1.37	91.78
30	4	70	5.48	95.89
45	1	71	1.37	97.26
100	1	72	1.37	98.63
120	1	73	1.37	100.00

VARIABLE DE15588 HMO FILE 08

Amount provided

CODES

. - Not applicable, missing

DE15588 indicates a number that identifies the amount of the drug provided. Refer to DE15668, dosage form, for an indication of the appropriate unit.

DEI5667	VALUE	FREQ	CUM FREQ	%	CUM %
	1	105	105	25.69	25.69
	2	28	133	9.17	34.86
	3	10	143	1.84	36.70
	4	2	145	0.92	37.62
	7	1	146	1.84	39.45
	9	4	150	3.67	43.12
	11	1	151	0.92	44.04
	14	1	152	0.92	44.95
	15	1	153	1.84	46.79
	28	30	183	27.52	74.31
	30	2	185	1.84	76.15
	99	26	211	23.85	100.00

VARIABLE	DEI5667	HMO FILE	08
Dosage instructions - quantity			
CODES			
. - Not applicable, missing 0 - One quarter 1 - One, 1/2 to one 2 - Two 3 - Three 4 - Four 5 - Five 6 - Six 7 - Varies 8 - Eight 9 - Half (use 1/2 only) 10 - Ten 11 - 1 1/2, 1 - 1 1/2, 1/2 - 1 1/2 12 - Three-quarters 13 - One-third 14 - Two-thirds 15 - Fifteen 20 - Twenty 21 - One or two 22 - Two or three 23 - Three or four 24 - Four or five 25 - Five or six 26 - Sparingly 27 - Liberally 28 - To, into, on, apply, (e.g. cream) 29+ - Values over 28 indicate actual dosage quantity 99 - As directed (only instruction)			
DEI5667 indicates the dosage amount for each use of the drug specified in DEI5589, NDC Code. This quantity refers to the form of the drug, which is given in DEI5668.			

VARIABLE	DEI5668	HMO FILE 08
Dosage instructions - form		
CODES		
0 - Not applicable, missing 1 - Capsule, tablet, suppository 2 - Teaspoonful(s) 3 - Teaspoonful(s) 4 - Drop(s) 5 - Milliliter (ml) or cubic centimeter (cc) 6 - Applicator full 7 - Affected area, e.g. cream 8 - Units		
DEI5668 states the dosage form for each use of the drug specified in DEI5589, NDC Code.		

DEI5668	VALUE	FREQ	CUM FREQ	%	CUM %
1	105	51	51	46.79	46.79
3	6	57	57	5.51	52.29
4	7	64	64	6.42	58.72
5	19	83	83	17.43	76.15
7	26	109	109	23.85	100.00

VARIABLE	DEI5669	HMO FILE	08
Dosage instructions - frequency			
CODES			
0	- Not applicable, missing		
1	- Every half hour		
2	- Every 2 hours, 2-3 hours, or 12 times/day		
3	- Every 3 hours, 3-4 hours, or 8 times/day		
4	- Every 4 hours, 4-6 hours, or six times/day		
6	- Every six hours, 4 times/day, 3-4 times/day, after meals and at bedtime		
8	- Every 8 hours, 3 times/day, 2-3 times/day, after meals		
9	- Once a day, at bedtime		
12	- Every 12 hours, 2 times/day		
17	- 3 times/week (or 2 weeks/month)		
18	- Once a week		
19	- Twice a week (or 2 weeks/month)		
20	- Once a month		
21	- Twice a month		
22	- Every other day (QOD)		
23	- 20 or 21 days a month, 5 days a week, 3 weeks a month		
24	- As directed (UD)		
25	- 25 days each month		
26	- As needed, PRN		
27	- Every 3 weeks		
28	- STAT (immediately)		
98	- No instructions as to time		
99	- As directed (only instructions)		
DEI5669 states the prescribed frequency of use for the drug specified in DEI5589, NDC Code.			

DEI5669	VALUE	FREQ	CUM FREQ	%	CUM %
.	2	105	1	.	0.92
9	9	1	1	0.92	0.92
24	24	3	4	2.75	3.67
28	28	3	7	2.75	6.42
98	98	88	95	80.73	87.16
99	99	1	96	0.92	88.07
		13	109	11.93	100.00

VARIABLE	DE15670	HMO FILE 08
	Dosage instructions - flexibility	
	CODES	
.	- Not applicable, missing	
0	- No additional instructions	
1	- As needed (PRN)	
2	- May repeat if necessary (SOS)	
3	- Averaged (dosage tapered to 0)	
	DE15670 modifies the prescribed dosage frequency given in DE15669.	

DE15670	VALUE	FREQ	CUM FREQ	%	CUM %
.	.	105	.	.	.
0	0	108	108	99.08	99.08
1	1	1	109	0.92	100.00

VARIABLE	DE1586	HMO FILE 08
Dosage strength		
CODES		
.	- Not applicable, missing	
99999	- Standard fixed combination drug	
DE1586 indicates a number that identifies the dosage strength of the drug, as measured in the dosage units given in DE1587.		

DE15586	VALUE	FREQ	CUM FREQ	%	CUM %
.	.	76	.	.	.
1	1	5	5	3.62	3.62
5	5	6	11	4.35	7.97
10	10	3	14	2.17	10.15
15	15	2	16	1.45	11.59
20	20	12	28	8.70	20.29
24	24	2	30	1.45	21.74
25	25	4	34	2.90	24.64
30	30	6	40	4.35	28.99
33	33	2	42	1.45	30.44
50	50	9	51	6.52	36.96
60	60	1	52	0.73	37.68
75	75	1	53	0.73	38.41
100	100	2	55	1.45	39.86
120	120	1	56	0.73	40.58
125	125	1	57	0.73	41.30
200	200	2	59	1.45	42.75
325	325	1	60	0.73	43.48
375	375	1	61	0.73	44.20
400	400	1	62	0.73	44.93
500	500	7	69	5.07	50.00
650	650	1	70	0.73	50.73
6670	6670	3	73	2.17	52.90
7500	7500	1	74	0.73	53.62
99999	99999	64	138	46.38	100.00

VARIABLE	DEI5587	HMO FILE 08
Dosage strength unit		
CODES		
1 - Not applicable, missing		
2 - milligrams (mg)		
3 - grams (gm)		
4 - milligrams/cubic centimeter (mg/cc), or milligrams/milliliter (mg/ml)		
5 - units/cubic centimeter (u/cc), or units/milliliter (u/ml)		
6 - milligram/vial (mg/vial)		
7 - grams/vial (gm/vial)		
8 - percent (%)		
9 - grains (gr)		
10 - units (u)		
11 - micrograms (mcg)		
12 - 100ths or percent (.00 or %)		
13 - micrograms/cubic centimeter (mcg/cc)		
14 - units/gram (u/gm)		
99 - milligrams/gram (mg/gm)		
Standard fixed dosage (SF); no specified strength unit		
DEI5587 identifies the unit in which the strength of the drug is measured.		

DEI5587	VALUE	FREQ	CUM FREQ	%	CUM %
1	1	76	41	29.71	29.71
2	2	41	43	1.45	31.16
3	3	4	47	2.90	34.06
7	7	15	62	10.87	44.93
8	8	4	66	2.90	47.83
9	9	1	67	0.73	48.55
10	10	2	69	1.45	50.00
11	11	2	71	1.45	51.45
12	12	3	74	2.17	53.62
99	99	64	138	46.38	100.00

IX. SUPPLIES PROVIDED BY PHYSICIANS, HMO FILE 09

INTRODUCTION

This codebook documents primary variables concerning supplies, including eyewear, provided directly by physicians (or other health professionals) to HIE participants. The bulk of data in this file involves supplies provided by GHC physicians; however, some FFS data, representing HMO participants' use of FFS services that were fully covered by GHC, are included here, with the charges imputed. FFS services not completely covered by GHC appear in the FFS claims line-item files.

Supplies prescribed by physicians are found in File 05. Supplies (mainly eyewear) dispensed by GHC opticians and pharmacies are found in File 18. Supplies provided by GHC hospitals or clinics can be found under "miscellaneous hospital supplies" in the variable DEI5557 (Category of Service) in File 01 for inpatient services and in File 11 for outpatient services.¹

Variables provided in this file indicate the type and amount of supply provided, the identifier of the physician or health professional who provided the supply, the date and place of service, the diagnoses to which the supply is related, and the treatment history/status of each diagnosis. Also included are the reasons/symptoms for the visit to the physician, the date of each symptom's appearance, referral physicians (if any), and whether the visit was accident- or employment-related.

Because no standard values were available for calculating the costs of supplies, researchers were unable to impute charges for supplies provided within the HMO system. Thus, no imputed charges are provided in this file. The units of observation in this file are line items representing supplies provided by physicians.² For an explanation of

¹However, such supplies could not be specifically identified, and no quantities could be given.

²Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation with the unit of observation, *not* the number of a participant's visits.

common variables used in this codebook, see the final subsection of Sec. II. Below we provide explanations for specific variables in this file.

SUPPLY CODE

DEI5601 identifies the supply provided by the physician. Each supply was identified using a coding system developed by the HIE. Supply codes are listed and defined in Sec. III of *Codes Used*. Code 9997 indicates a supply provided by a GHC physician to a GHC control participant that was not covered by the participant's GHC contract.

DIAGNOSIS RELATION TO SUPPLY

Four variables, DEI5596 - DEI5599, indicate whether the provided supply is related to one or more of the four possible diagnoses.

CODEBOOK FOR HMO FILE 09
SUPPLIES PROVIDED BY PHYSICIANS

DIIRECTORY OF VARIABLES - HMO FILE 09
SUPPLIES PROVIDED BY PHYSICIANS

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	211	DEI5597	2nd diagnosis related?	222
PERSON	Person identifier	211	DEI5525	2nd diagnosis	222
SITE	Site	211	DEI5526	2nd diagnosis qualifier	223
INSTAT	Insurance status	212	DEI5527	2nd associated diagnosis	223
CONTR	Contract year	212	DEI5575	2nd problem/symptom date	224
DEI6300	SERR number	213	DEI5577	Treatment history/status of the 2nd diagnosis	224
DEI5502	Provider number	213			
DEI5555	Date of service	213	DEI5598	3rd diagnosis related?	225
DEI5584	Place of service	214	DEI5528	3rd diagnosis	225
DEI5503	1st reason/symptom for visit	214	DEI5529	3rd diagnosis qualifier	226
DEI5505	2nd reason/symptom for visit	215	DEI5530	3rd associated diagnosis	226
DEI5568	1st provider referred from	215	DEI5578	3rd problem/symptom date	227
DEI5570	1st provider referral	216	DEI5580	Treatment history/status of the 3rd diagnosis	227
DEI5511	Accident-related	216			
DEI5512	Employment-related	217	DEI5599	4th diagnosis related?	228
DEI5566	Date of injury	217	DEI5531	4th diagnosis	228
DEI6343	GHC location	218	DEI5532	4th diagnosis qualifier	229
DEI5596	1st diagnosis related?	219	DEI5533	4th associated diagnosis	229
DEI5522	1st diagnosis	219	DEI5581	4th problem/symptom date	230
DEI5523	1st diagnosis qualifier	220	DEI5583	Treatment history/status of the 4th diagnosis	230
DEI5524	1st associated diagnosis	220			
DEI5572	1st problem/symptom date	221	DEI5601	Supply code	231
DEI5574	Treatment history/status of the 1st diagnosis	221	DEI5602	Amount provided	231

VARIABLE	FILENAME	HMO FILE 09
	Name of file	
	FILENAME is a 6-digit code that uniquely identifies the file. This file name is PE092A.	

VARIABLE	PERSON	HMO FILE 09
	Person identifier	
	PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.	

VARIABLE	SITE	HMO FILE 09
	Site	
	CODES	
	2 - Seattle, Washington	
	SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.	

FILENAME	VALUE	FREQ	CUM FREQ	%	CUM %
	PE092A	200	200	100.00	100.00

SITE	VALUE	FREQ	CUM FREQ	%	CUM %
	2	200	200	100.00	100.00

VARIABLE	INSTAT	HMO FILE 09
Insurance status		
CODES		
1 - Ever insured (includes HMO experimental group)		
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	104	104	52.00	52.00
2	96	200	48.00	100.00

VARIABLE	CONTYR	HMO FILE 09
Contract year		
CODES		
01 - First year		
02 - Second year		
03 - Third year		
04 - Fourth year		
05 - Fifth year		
CONTYR identifies the participant's contract year of coverage in which the service was performed.		

CONTYR VALUE	FREQ	CUM FREQ	%	CUM %
01	34	34	17.00	17.00
02	49	83	24.50	41.50
03	39	122	19.50	61.00
04	31	153	15.50	76.50
05	47	200	23.50	100.00

VARIABLE	DE16300	HMO FILE 09
SERR	number	
DE16300 indicates an identifier number which is used to link the line items from a given SERR.		

VARIABLE	DE15502	HMO FILE 09
Provider	number	
DE15502 is an 8-character code which refers, in this file, to the physician who provided supplies to the participant. For further information on the provider, this number can be linked to information in the provider files of the HIE reference series.		

NOTE: DE15502 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE	DE15555	HMO FILE 09
Date of service		
CODES		
19760519 to 19810731 - Range on this file (YYYYMMDD)		
DE15555 indicates the date on which the service was rendered. If a service was rendered over multiple dates, this variable is the initial date of service.		

DE15584	VALUE	FREQ	CUM FREQ	%	CUM %
	1	147	147	73.50	73.50
	3	23	170	11.50	85.00
	6	29	199	14.50	99.50
	9	1	200	0.50	100.00

VARIABLE	DE15584	HMO FILE 09
Place of service		
CODES		
1 - Doctor's office		
2 - Independent laboratory		
3 - Patient's home		
4 - Hospital		
5 - Nursing home		
6 - Emergency room		
7 - Outpatient surgery		
8 - Other outpatient hospital, including hospital clinic		
9 - Other locations, including non-hospital clinics		
DE15584 indicates where the physician rendered medical services.		

VARIABLE	DE15503	HMO FILE 09
1st reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DE15503 indicates the code for the first reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."		

NOTE: NAMCS codes were entered without decimal points.

VARIABLE	DEI5505	HMO FILE 09
2nd reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DEI5505 indicates the code for an additional reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."		

NOTE: See note on DEI5503.

VARIABLE	DEI5568	HMO FILE 09
1st provider referred from		
CODES		
Blank - Not applicable, missing		
DEI5568 indicates the provider number of the first person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DEI5570	HMO FILE 09
	1st provider referral	
	CODES	
	Blank - Not applicable, missing	
	DEI5570 indicates the provider number of the first provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DEI5511	HMO FILE 09
	Accident related	
	CODES	
	1 - Yes	
	2 - No	
	DEI5511 states whether the illness or injury was accident related.	

DEI5511	VALUE	FREQ	CUM FREQ	%	CUM %
	1	55	55	27.50	27.50
	2	145	200	72.50	100.00

DEI5512	VALUE	FREQ	CUM FREQ	%	CUM %
	1	2	2	1.00	1.00
	2	198	200	99.00	100.00

VARIABLE	DEI5512	HMO FILE 09
Employment related		
CODES		
1 - Yes		
2 - No		
DEI5512 states whether the illness or injury was employment related.		

VARIABLE	DEI5566	HMO FILE 09
Date of injury		
CODES		
19760626 to 19810510 - Not applicable, missing		
DEI5566 indicates the date (if any) the participant was injured.		

DEI6343	VALUE	FREQ	CUM FREQ	%	CUM %
	1	83	83	41.50	41.50
	2	3	86	1.50	43.00
	3	10	96	5.00	48.00
	4	8	104	4.00	52.00
	5	12	116	6.00	58.00
	7	9	125	4.50	62.50
	8	41	166	20.50	83.00
	10	7	173	3.50	86.50
	19	1	174	0.50	87.00
	20	2	176	1.00	88.00
	23	24	200	12.00	100.00

VARIABLE	DEI6343	HMO FILE	09
GHC location			
1	- Clinic 1		
2	- Clinic 2		
3	- Clinic 3		
4	- Clinic 4		
5	- Clinic 5		
6	- Clinic 6		
7	- Clinic 7		
8	- Clinic 8		
9	- Clinic 9		
10	- Clinic 10		
11	- Non-GHC extended care facility		
12	- Hospital 1, inside Seattle		
13	- Clinic 11		
14	- Hospital 2, inside Seattle		
15	- Hospital 3, outside Seattle		
16	- Emergency room		
17	- Clinic 12		
18	- Clinic 13		
19	- Clinic 14		
20	- Specialty clinic		
21	- Clinic 15		
22	- GHC extended care facility		
23	- Non-GHC, inside GHC area		
24	- Non-GHC, outside GHC area		
25	- Clinic 16		
DEI6343 identifies the GHC location where the service was performed, or indicates that it was performed at a non-GHC (FFS) location.			

DEI5596	VALUE	FREQ	CUM FREQ	%	CUM %
	1	189	189	94.50	94.50
	2	11	200	5.50	100.00

VARIABLE	DEI5596	HMO FILE	09
	1st diagnosis related?		
	CODES		
	1 - Yes		
	2 - No		
	DEI5596 indicates whether the supply provided by the provider was medically related to the first diagnosis or problem.		

VARIABLE	DEI5522	HMO FILE	09
	1st diagnosis		
	CODES		
	Blank - Not applicable, missing		
	DEI5522 indicates the code of the first condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."		

DEI5523					
VALUE	FREQ	CUM FREQ	%	CUM %	
1	6	6	73.20	73.20	
2	142	142	0.52	73.71	
3	5	148	2.58	76.29	
4	46	194	23.71	100.00	

VARIABLE DEI5523 HMO FILE 09

1st diagnosis qualifier

CODES

- 1 - Not applicable, missing
- 2 - No qualifier given
- 3 - Rule out
- 4 - Probable/possible/?/question of
- 5 - With, associated with, complicated by,
- 6 - Secondary to, due to
- 7 - Not, turned out not to be, was not
- 8 - Or, versus
- 9 - Well-care code assigned*

DEI5523 indicates a diagnosis qualifier for the first diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.

*NOTE: Value #9 is not a true diagnosis qualifier. Occasionally, health maintenance procedures were performed by the provider which did not pertain to any of the diagnoses on the MER. In such cases, coders assigned a well-care code from the HICDA, and it was notated in this variable.

VARIABLE DEI5524 HMO FILE 09

1st associated diagnosis

CODES

Blank - Not applicable, missing

DEI5524 indicates the associated diagnosis code when required by the diagnosis qualifier.

VARIABLE	DEI5572	HMO FILE 09
	1st problem/symptom date	
	CODES	
	19760626 to 19810510 - Not applicable, missing	
	DEI5572 indicates the date that the first problem or symptom appeared, as reported by the participant.	

DEI5574	VALUE	FREQ	CUM FREQ	%	CUM %
1	6	54	54	27.84	27.84
2	1	55	109	0.52	28.35
3	19	74	183	9.79	38.14
4	47	121	304	24.23	62.37
5	3	124	326	1.55	63.92
6	70	194	520	36.08	100.00

VARIABLE	DEI5574	HMO FILE 09
	Treatment history/status of the 1st diagnosis	
	CODES	
	1 - Not applicable, missing	
	2 - Initial visit for acute condition	
	3 - Repeat visit for chronic condition	
	4 - Initial visit for flareup of a chronic condition	
	5 - Well-care or pregnancy-related	
	6 - Repeat visit for flareup of a chronic condition	
	7 - Acute; not specified as initial or repeat	
	8 - Chronic; not specified as initial or repeat	
	DEI5574 describes the patient's treatment history or status for the first diagnosis/problem.	

DEI5597					
VALUE	FREQ	CUM FREQ	%	CUM %	
1	171	9	31.03	31.03	
2	20	29	68.97	100.00	

VARIABLE	DEI5597	HMO FILE 09
2nd diagnosis related?		
CODES		
1 - Yes		
2 - No		
DEI5597 indicates whether the supply provided by the provider was medically related to the second diagnosis or problem.		

VARIABLE	DEI5525	HMO FILE 09
2nd diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5525 indicates the code of the second condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."		

DE15526	VALUE	FREQ	CUM FREQ	%	CUM %
	1	171	17	58.62	58.62
	3	17	19	6.90	65.52
	4	2	28	31.03	96.55
	5	9	29	3.45	100.00
		1			

VARIABLE	DE15526	HMO FILE	09
2nd diagnosis qualifier			
CODES			
1 - Not applicable, missing			
2 - Rule out			
3 - Probable/possible/?/question of			
4 - With, associated with, complicated by,			
secondary to, due to			
5 - Not, turned out not to be, was not			
6 - Or, versus			
9 - Well-care code assigned*			
DE15526 indicates a diagnosis qualifier for the second			
diagnosis. In some instances (i.e., codes 2, 3, 5),			
it is possible for a diagnosis qualifier to be used			
in the absence of a primary diagnosis.			

*NOTE: See note on DE15523.

VARIABLE	DE15527	HMO FILE	09
2nd associated diagnosis			
CODES			
Blank - Not applicable, missing			
DE15527 indicates the associated diagnosis code			
when required by the qualifier.			

VARIABLE	DEI5575	HMO FILE 09
2nd problem/symptom date		
CODES		
19760626 to 19800301	- Not applicable, missing	
DEI5575	indicates the date that the second problem or symptom appeared, as reported by the participant.	

VARIABLE	DEI5577	HMO FILE 09
Treatment history/status of the 2nd diagnosis		
CODES		
1	- Not applicable, missing	
2	- Initial visit for acute condition	
3	- Repeat visit for chronic condition	
4	- Repeat visit for acute condition	
5	- Initial visit for chronic condition (routine)	
6	- Well-care or pregnancy-related	
7	- Repeat visit for flareup of a chronic condition	
8	- Acute; not specified as initial or repeat	
9	- Chronic; not specified as initial or repeat	
DEI5577	describes the patient's treatment history of status for the second diagnosis/problem.	

DEI5577	VALUE	FREQ	CUM FREQ	%	CUM %
1	171	10	10	34.48	34.48
2	10	11	11	3.45	37.93
3	10	21	21	34.48	72.41
4	4	25	25	13.79	86.21
6	4	29	29	13.79	100.00

DE15598					
VALUE	FREQ	CUM FREQ	%	CUM %	
1	186	6	42.86	42.86	
2	6	14	57.14	100.00	

VARIABLE	DE15598	HMO FILE 09
3rd diagnosis related?		
CODES		
1 - Yes		
2 - No		
DE15598 indicates whether the supply provided by the provider was medically related to the third diagnosis/problem.		

VARIABLE	DE15528	HMO FILE 09
3rd diagnosis		
CODES		
Blank - Not applicable, missing		
DE15528 indicates the code of the third condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."		

DEI5529					
VALUE	FREQ	CUM FREQ	%	CUM %	
1	186	1			
3	11	11	78.57	78.57	
4	2	13	14.29	92.86	
	1	14	7.14	100.00	

VARIABLE DEI5529 HMO FILE 09

3rd diagnosis qualifier

CODES

- 1 - Not applicable, missing
- 2 - Rule out
- 3 - Probable/possible/?/question of
- 4 - With, associated with, complicated by, secondary to, due to
- 5 - Not, turned out not to be, was not
- 6 - Or, versus
- 9 - Well-care code assigned*

DEI5529 indicates a diagnosis qualifier for the third diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.

*NOTE: See note on DEI5523.

VARIABLE DEI5530 HMO FILE 09

3rd associated diagnosis

CODES

Blank - Not applicable, missing

DEI5530 indicates the associated diagnosis code when required by the qualifier.

VARIABLE	DE15578	HMO FILE 09
	3rd problem/symptom date	
	CODES	
	19760626 to 19790315 : - Not applicable, missing	
	19790315 - Range on this file (YYYYMMDD)	
	DE15578 indicates the date that the third problem or symptom appeared, as reported by the participant.	

VARIABLE	DE15580	HMO FILE 09
	Treatment history/status of the 3rd diagnosis	
	CODES	
	: - Not applicable, missing	
	1 - Initial visit for acute condition	
	2 - Initial visit for chronic condition	
	3 - Repeat visit for acute condition	
	4 - Repeat visit for chronic condition (routine)	
	5 - Initial visit for flareup of a chronic condition	
	6 - Well-care or pregnancy-related	
	7 - Repeat visit for flareup of a chronic condition	
	8 - Acute; not specified as initial or repeat	
	9 - Chronic; not specified as initial or repeat	
	DE15580 describes the patient's treatment history or status for the third diagnosis/problem.	

DE15580	VALUE	FREQ	CUM FREQ	%	CUM %
1	186	8	8	57.14	57.14
3	2	2	10	14.29	71.43
4	2	2	12	14.29	85.71
6	2	2	14	14.29	100.00

DEI5599	VALUE	FREQ	CUM FREQ	%	CUM %
	1	196	1	25.00	25.00
	2	1	4	75.00	100.00

VARIABLE	DEI5599	HMO FILE	09
	4th diagnosis related?		
	CODES		
	1 - Yes		
	2 - No		
	DEI5599 indicates whether the supply provided by the provider was medically related to the fourth diagnosis/problem.		

VARIABLE	DEI5531	HMO FILE	09
	4th diagnosis		
	CODES		
	Blank - Not applicable, missing		
	DEI5531 indicates the code of the fourth condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."		

DEI5532	VALUE	FREQ	CUM FREQ	%	CUM %
	1	196	1	25.00	25.00
	2	1	2	25.00	50.00
	3	1	3	25.00	75.00
	4	1	4	25.00	100.00

VARIABLE	DEI5532	HMO FILE	09
4th diagnosis qualifier			
CODES			
1 - Not applicable, missing			
2 - Yes			
3 - No qualifier given			
4 - Rule out			
5 - Probable/possible/?/question of			
6 - With, associated with, complicated by,			
7 - secondary to, due to			
8 - Not, turned out not to be, was not			
9 - Or, versus			
0 - Well-care code assigned*			
DEI5532 indicates a diagnosis qualifier for the fourth diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.			

*NOTE: See note on DEI5523.

VARIABLE	DEI5533	HMO FILE	09
4th associated diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5533 indicates the associated diagnosis code when required by the qualifier.			

VARIABLE DE15581 HMO FILE 09

4th problem/symptom date

CODES

19760626 to 19790315 - Not applicable, missing
 - Range on this file (YYYYMMDD)

DE15581 indicates the date that the fourth problem or
 symptom appeared, as reported by the participant.

VARIABLE DE15583 HMO FILE 09

Treatment history/status of the 4th diagnosis

CODES

- Not applicable, missing
- 1 - Initial visit for acute condition
- 2 - Initial visit for chronic condition
- 3 - Repeat visit for acute condition
- 4 - Repeat visit for chronic condition (routine)
- 5 - Initial visit for flareup of a chronic condition
- 6 - Well-care or pregnancy-related
- 7 - Repeat visit for flareup of a chronic condition
- 8 - Acute; not specified as initial or repeat
- 9 - Chronic; not specified as initial or repeat

DE15583 describes the patient's treatment history or
 status for the fourth diagnosis/problem.

DE15583	VALUE	FREQ	CUM FREQ	%	CUM %
	1	196	3	75.00	75.00
	4	3	4	25.00	100.00
		1			

VARIABLE	DEI5601	HMO FILE 09
Supply code		
CODES		
.	- Not applicable, missing	
DEI5601	identifies the supply provided by the physician. Each supply is identified using a coding system developed by the Health Insurance Experiment. Supply codes used in the claims files are listed in Section III of "Codes Used."	

VARIABLE	DEI5602	HMO FILE 09
Amount provided		
CODES		
.	- Not applicable, missing	
DEI5602	indicates a number that identifies the amount of the supplies provided (e.g., 30 syringes, 2 crutches, etc.). This quantity refers to the type of supply given in DEI5601.	

DEI5602	VALUE	FREQ	CUM FREQ	%	CUM %
1	3	145	145	73.60	73.60
2	52	197	197	26.40	100.00

X. INJECTIONS ADMINISTERED BY PHYSICIANS HMO FILE 10

INTRODUCTION

This codebook documents primary variables concerning injections administered by physicians to HIE participants.¹ The bulk of data in this file involves services rendered by GHC physicians; however, some FFS data, representing HMO participants' use of FFS health services that were fully covered by GHC, are included here, with the charges imputed. FFS services not completely covered by GHC appear in the FFS claims line-item files.²

Specific information provided in this file includes the drug(s) injected by the physician (identified by National Drug Code) and the imputed charge for each injection or group of injections. (Some injections, such as allergy shots or steroid injections, were sometimes given in groups during the same visit and thus were listed as one service.) Also included are variables indicating the identifier of the physician who injected the drug, the reasons/symptoms for the visit to the physician, whether the visit was accident- or employment-related, the date and place of service, and the referral physicians (if any). Other variables indicate the diagnoses to which the injection is related and the treatment history/status of each diagnosis.

The units of observation in this file are line items representing injections by physicians.³ For an explanation of common variables used in this codebook, see the final subsection of Sec. II. Below we provide explanations for specific variables in this file.

¹Some injections are recorded in File 06, Physician Services, as a CRVS physician procedure (e.g., 90030, "Minimal physician service") because they appeared in the HMO records in that manner.

²GHC-covered FFS services are treated as GHC services, and their charges are imputed.

³Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation to the unit of observation, *not* the number of participant visits.

NDC CODE

DEI5589 indicates the first seven digits of the National Drug Code identifier of the injected drug. (The last two digits of the national nine-digit code number represent trade package size and were not used by the HIE.) Occasionally, two drugs were contained in the same injection or two different injections were part of a single service. A second set of drug variables is provided in this file that identify and classify a second injected drug, if necessary. DEI5613 contains the NDC code of the second drug.

Codes were taken from the *National Drug Code Directory*, June 1972, whenever possible.⁴ A number of supplementary codes were added by the HIE to identify drugs not listed in the 1972 NDC Directory. NDC and supplementary codes used in the claims files are defined in Sec. V of *Codes Used*.

NUMBER OF INJECTIONS

DEI5602, Number of Injections, indicates the number of injections of the same or closely related drug injected during one visit and recorded as one service. Two situations account for nearly all cases of multiple units of service: (1) The injection was a series of multiple allergens, (e.g., dust, mold, weed) or (2) a steroid injected into several body points. Although units of service higher than five are possible, any such entries connected to allergies most likely represent diagnostic allergy tests incorrectly recorded as injections; such entries may also be similarly miscoded in File 06, Physician Services, as allergy shots.

DIAGNOSIS RELATION TO INJECTION

Each drug injection recorded in the line items is related to one or more of the four possible diagnoses as indicated by "diagnosis relation" variables DEI5596 - DEI5599.

⁴Public Health Service, U.S. Department of Health and Human Services, Washington, D.C.

CRVS CODE

The variable DEI5606, CRVS Code, indicates the CRVS code for the physician service rendered. A small number of supplementary codes were added under the direction of a Rand HIE physician to describe services not adequately reflected by any existing CRVS code. Standard CRVS codes and HIE-created CRVS supplementary codes used in these files can be found in Sec. II of *Codes Used*. Code 99997 indicates a CRVS service rendered by a GHC provider to a GHC control participant that was not covered by the participant's GHC contract. The imputed charge for such services is zero.

CRVSUNIT

The variable CRVSUNIT indicates the unit value of the procedure or service listed in DEI5606, CRVS Code, as given in the CRVS manual cited above. CRVS units reflect the differing complexity and time requirements for different physician services. For CRVS codes lacking printed unit values, a Rand HIE physician assigned a unit value to the procedure or service.

CRVS MODIFIERS

The variables DEI5607 and DEI5608, first and second CRVS modifiers, indicate codes for up to two special circumstances that may have been involved in the CRVS procedure shown in DEI5606, CRVS Code. These modifier codes are usually dependent upon the type of CRVS procedure; modifier code definitions can be found in the CRVS code manual cited above. The most frequently used modifiers were 80 (assistant surgeon for the procedure), 58 (office visit included with surgical procedure), 52 (incidental surgical procedure with reduced value), 30-49 (related to anesthesia), and 26, 27 (related to pathology and radiology interpretations).

GHC CODE

The variable DEI6303, GHC Code, indicates codes created by GHC to summarize the nature of physician services and visits to HIE participants. GHC codes are listed and defined in Appendix F.

GHCUNITS

The variable GHCUNITS indicates the unit value assigned by GHC to the service found in the variable DEI6303, GHC Code. GHC units were created to give analysts the option of analyzing the relative value of physician/health professional services from the GHC point of view. They are therefore not necessarily equal to the CRVS unit values for corresponding CRVS services and were not used by the HIE for imputing charges.

CODEBOOK FOR HMO FILE 10
INJECTIONS ADMINISTERED BY PHYSICIANS

DIRECTORY OF VARIABLES - HMO FILE 10
INJECTIONS ADMINISTERED BY PHYSICIANS

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	239	DE15527	2nd associated diagnosis	256
PERSON	Person identifier	239	DE15575	2nd problem/symptom date	257
SITE	Site	239	DE15577	Treatment history/status of the 2nd diagnosis	257
INSTAT	Insurance status	240	DE15598	3rd diagnosis related?	258
CONTYR	Contract year	240	DE15528	3rd diagnosis	258
DE16300	SERR number	241	DE15529	3rd diagnosis qualifier	259
DE15502	Provider number	241	DE15530	3rd associated diagnosis	259
DE15555	Date of service	241	DE15578	3rd problem/symptom date	260
DE15584	Place of service	242	DE15580	Treatment history/status of the 3rd diagnosis	260
DE15503	1st reason/symptom for visit	242	DE15599	4th diagnosis related?	261
DE15505	2nd reason/symptom for visit	243	DE15531	4th diagnosis	261
DE15565	3rd reason/symptom for visit	244	DE15532	4th diagnosis qualifier	262
DE15568	1st provider referred from	244	DE15533	4th associated diagnosis	262
DE16308	2nd provider referred from	245	DE15581	4th problem/symptom date	263
DE15570	1st provider referral	245	DE15583	Treatment history/status of the 4th diagnosis	263
DE15571	2nd provider referral	246	DE15666	Prescription status of 1st drug	264
DE15511	Accident-related	246	DE15589	NDC code of 1st drug	264
DE15512	Employment-related	247	DE15590	1st generic code of 1st drug	265
DE15566	Date of injury	247	DE15591	2nd generic code of 1st drug	265
DE15606	CRVS code	248	DE15592	3rd generic code of 1st drug	266
DE15607	1st CRVS modifier	248	DE15593	4th generic code of 1st drug	266
CRVSUNIT	CRVS units	248	DE15594	5th generic code of 1st drug	267
IMPCHRG	Imputed line-item charge	249	DE15595	Drug therapeutic code of 1st drug	267
DE16303	GHC code	249	DE15665	Prescription status of 2nd drug	268
GHCUNITS	GHC units	250	DE15613	NDC code of 2nd drug	268
DE16343	GHC location	251	DE15614	1st generic code of 2nd drug	269
DE15596	1st diagnosis related?	252	DE15615	2nd generic code of 2nd drug	269
DE15522	1st diagnosis	252	DE15616	3rd generic code of 2nd drug	270
DE15523	1st diagnosis qualifier	253	DE15619	Drug therapeutic code of 2nd drug	270
DE15524	1st associated diagnosis	253	DE15602	Number of injections	271
DE15572	1st problem/symptom date	254			
DE15574	Treatment history/status of the 1st diagnosis	254			
DE15597	2nd diagnosis related?	255			
DE15525	2nd diagnosis	255			
DE15526	2nd diagnosis qualifier	256			

FILENAME	VALUE	FREQ	CUM FREQ	%	CUM %
	PE102A	4643	4643	100.00	100.00

SITE	VALUE	FREQ	CUM FREQ	%	CUM %
	2	4643	4643	100.00	100.00

VARIABLE	FILENAME	HMO FILE 10
Name of file		
FILENAME is a 6-digit code that uniquely identifies the file. This file name is PE102A.		

VARIABLE	PERSON	HMO FILE 10
Person identifier		
PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.		

VARIABLE	SITE	HMO FILE 10
Site		
CODES		
2 - Seattle, Washington		
SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.		

VARIABLE	INSTAT	HMO FILE 10
Insurance status		
CODES		
1 - Ever insured (includes HMO experimental group)		
2 - Ever assigned to HMO control group		
3 - Never insured		
INSTAT describes the participant's insurance status in the Health Insurance Experiment.		

INSTAT	FREQ	CUM FREQ	%	CUM %
1	2624	2624	56.52	56.52
2	2019	4643	43.49	100.00

VARIABLE	CONTYR	HMO FILE 10
Contract year		
CODES		
01 - First year		
02 - Second year		
03 - Third year		
04 - Fourth year		
05 - Fifth year		
CONTYR identifies the participant's contract year of coverage in which the service was performed.		

CONTYR	FREQ	CUM FREQ	%	CUM %
01	1271	1271	27.38	27.38
02	1104	2375	23.78	51.15
03	1051	3426	22.64	73.79
04	696	4122	14.99	88.78
05	521	4643	11.22	100.00

VARIABLE	DE16300	HMO FILE 10
	SERR number	
	DE16300 indicates an identifier number which is used to link the line items from a given SERR.	

VARIABLE	DE15502	HMO FILE 10
	Provider number	
	DE15502 is an 8-character code which refers, in this file, to the physician who injected the participant. The majority of cases involve GHC physicians. For further information concerning the provider, this number can be linked to information in the provider file of the HIE reference series.	

NOTE: DE15502 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE	DE15555	HMO FILE 10
	Date of service	
	CODES	
	19760409 to 19810827 - Range on this file (YYYYMMDD)	
	DE15555 indicates the date on which the service was rendered. If a service was rendered over multiple dates, this variable is the initial date of service.	

DEI5584	VALUE	FREQ	CUM FREQ	%	CUM %
	1	4245	4245	91.43	91.43
	3	2	4247	0.04	91.47
	4	4	4251	0.09	91.56
	6	364	4615	7.84	99.40
	7	5	4620	0.11	99.51
	8	22	4642	0.47	99.98
	9	1	4643	0.02	100.00

VARIABLE	DEI5584	HMO FILE 10
Place of service		
CODES		
1 - Doctor's office		
2 - Independent laboratory		
3 - Patient's home		
4 - Hospital		
5 - Nursing home		
6 - Emergency room (when not admitted)		
7 - Outpatient surgery		
8 - Other outpatient hospital, including hospital clinic		
9 - Other locations, including non-hospital clinics		
DEI5584 indicates the place where the participant received medical services.		

VARIABLE	DEI5503	HMO FILE 10
1st reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DEI5503 indicates the code for the first reason the participant went to see a physician. All reason-for-visit codes used in the claims line item-files are listed in Section IV of "Codes Used."		

NOTE: NAMCS codes were entered without decimal points.

VARIABLE	DE15505	HMO FILE 10
2nd reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DE15505 indicates the code for an additional reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."		

NOTE: See note on DE15503.

VARIABLE	DE15565	HMO FILE 10
3rd reason/symptom for visit		
CODES		
Blank - Not applicable, missing		
DE15565 indicates the code for an additional reason the participant went to see a physician. All reason-for-visit codes used in the claims line item files are listed in Section IV of "Codes Used."		

NOTE: See note on DE15503.

VARIABLE	DEI5568	HMO FILE 10
	1st provider referred from	
	CODES	
	Blank - Not applicable, missing	
	DEI5568 indicates the provider number of the first person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DEI6308	HMO FILE 10
	Second provider referred from	
	CODES	
	Blank - Not applicable, missing	
	DEI6308 indicates the provider number of the second person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DE15570	HMO FILE 10
First provider referral		
CODES		
Blank - Not applicable, missing		
DE15570 indicates the provider number of the first provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DE15571	HMO FILE 10
Second provider referral		
CODES		
Blank - Not applicable, missing		
DE15571 indicates the provider number of the second provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DEI5511	HMO FILE	10
Accident-related			
CODES			
1 - Yes			
2 - No			
DEI5511 states whether the illness or injury was accident-related.			

DEI5511	VALUE	FREQ	CUM FREQ	%	CUM %
	1	308	308	6.63	6.63
	2	4335	4643	93.37	100.00

VARIABLE	DEI5512	HMO FILE	10
Employment-related			
CODES			
1 - Yes			
2 - No			
DEI5512 states whether the illness or injury was employment-related.			

DEI5512	VALUE	FREQ	CUM FREQ	%	CUM %
	1	41	41	0.88	0.88
	2	4602	4643	99.12	100.00

VARIABLE	DEI5566	HMO FILE 10
Date of injury		
CODES		
	19720101 to 19810604 - Not applicable, missing	
	DEI5566 indicates the date (if any) the participant was injured.	

VARIABLE	DEI5606	HMO FILE 10
CRVS code		
	DEI5606 indicates a five-digit California Relative Value Studies (CRVS) code identifying the completed service provided or ordered by the physician. CRVS codes used in these files are defined in Section II of "Codes Used."	
	A small number of codes were added under the direction of a Rand HIE physician to describe services not adequately reflected by existing CRVS codes.	

NOTE: A CRVS code of 99997 indicates a service rendered by a GHC provider to a GHC control participant that was not covered by the participant's GHC contract. The imputed charge for such services is zero.

VARIABLE	DEI5607	HMO FILE 10
First CRVS modifier		
CODES		
. - Not applicable, missing		
DEI5607 indicates the code for a special circumstance involved in the CRVS procedure shown in DEI5606, CRVS Code. CRVS modifier code definitions are discussed in the introduction to this section.		

VARIABLE	CRVSUNIT	HMO FILE 10
CRVS units		
CRVSUNIT assigns a unit value to the CRVS procedure defined in DEI5606, CRVS Code. CRVS units are discussed in the introduction to this section.		

NOTE: To enable comparability with FFS services, certain GHC prenatal and pre- and post-operative procedures were given zero unit values by the HIE. Such procedures are considered part of lump sum billings in the FFS system, and are comparably treated in these HMO files by eliminating them from computations.

DEI5607	VALUE	FREQ	CUM FREQ	%	CUM %
	58	4620	23	100.00	100.00
		23			

CRVSUNIT	4643				
NUMBER OF OBSERVATIONS	0				
NUMBER OF MISSING	894.90				
MEAN	907.20				
MEDIAN	119.00				
MINIMUM VALUE	972.60				
MAXIMUM VALUE	86.74				
STANDARD DEVIATION	9.69				
COEFFICIENT OF VARIATION	-7.58				
SKEWNESS	56.93				
KURTOSIS					

VARIABLE	IMPCHRG	HMO FILE 10
Imputed line-item charge		
CODES		
. - Not applicable, missing		
IMPCHRG indicates the imputed charge calculated by HIE analysts for the CRVS procedure defined in DE15606, CRVS Code. The imputed charge was based on the date of service, the computed CRVS units for the service (CRVSUNIT), and a dollar-amount-per-CRVS-unit taken from conversion tables. Imputed charges are expressed in dollars for the year services were rendered, unadjusted for inflation.		

VARIABLE	DE16303	HMO FILE 10
GHC code		
CODES		
blank - Not applicable, missing		
DE16303 indicates a code developed by GHC to summarize the types of physician services and visits to HIE participants. GHC codes are listed and defined in Appendix F.		

IMPCHRG	23
NUMBER OF OBSERVATIONS	4620
NUMBER OF MISSING	0.58
MEAN	0.58
MEDIAN	0.58
MINIMUM VALUE	0.00
MAXIMUM VALUE	0.00
STANDARD DEVIATION	0.00
COEFFICIENT OF VARIATION	.
SKEWNESS	.
KURTOSIS	.

GHCUNITS	4643
NUMBER OF OBSERVATIONS	0
NUMBER OF MISSING	9.35
MEAN	8.36
MEDIAN	0.03
MINIMUM VALUE	4.38
STANDARD DEVIATION	46.90
COEFFICIENT OF VARIATION	8.39
SKEWNESS	137.96
KURTOSIS	

VARIABLE	GHCUNITS	HMO FILE 10
GHC Units		
GHCUNITS assigns a unit value to the physician service defined in DE16303, GHC Code. GHC unit values were created by the Group Health Cooperative to reflect their own assessment of the time requirements and complexity of different GHC physician services.		

NOTE: To enable comparability with FFS services, certain GHC prenatal and pre- and post-operative procedures were given zero unit values by the HIE. Such procedures are considered part of lump sum billings in the FFS system, and are comparably treated in these HMO files by eliminating them from computations.

DEI6343	VALUE	FREQ	CUM FREQ	%	CUM %
1	1	611	611	13.18	13.18
2	2	308	919	6.64	19.82
3	3	562	1481	12.12	31.95
4	4	509	1990	10.98	42.93
5	5	425	2415	9.17	52.09
7	7	534	2949	11.52	63.61
8	8	828	3777	17.86	81.47
9	9	10	3787	0.22	81.69
10	10	576	4363	12.43	94.11
13	13	1	4364	0.02	94.13
19	19	125	4489	2.70	96.83
20	20	113	4602	2.44	99.27
23	23	30	4632	0.65	99.91
24	24	4	4636	0.09	100.00

VARIABLE	DEI6343	HMO FILE	10
GHC location			
1	- Clinic 1		
2	- Clinic 2		
3	- Clinic 3		
4	- Clinic 4		
5	- Clinic 5		
6	- Clinic 6		
7	- Clinic 7		
8	- Clinic 8		
9	- Clinic 9		
10	- Clinic 10		
11	- Non-GHC extended care facility		
12	- Hospital 1, inside Seattle		
13	- Clinic 11		
14	- Hospital 2, inside Seattle		
15	- Hospital 3, outside Seattle		
16	- Emergency room		
17	- Clinic 12		
18	- Clinic 13		
19	- Clinic 14		
20	- Specialty clinic		
21	- Clinic 15		
22	- GHC extended care facility		
23	- Non-GHC, inside GHC area		
24	- Non-GHC, outside GHC area		
25	- Clinic 16		
DEI6343 identifies the GHC location where the service was performed, or indicates that it was performed at a non-GHC (FFS) location.			

DEI5596	VALUE	FREQ	CUM FREQ	%	CUM %
	1	4176	4176	89.96	89.96
	2	466	4642	10.04	100.00

VARIABLE	DEI5596	HMO FILE 10
1st diagnosis related?		
CODES		
1 - Yes		
2 - No		
DEI5596 indicates whether the drug injected by the provider was medically related to the first diagnosis/ problem.		

VARIABLE	DEI5522	HMO FILE 10
1st diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5522 indicates the code of the first condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."		

DEI5523	VALUE	FREQ	CUM FREQ	%	CUM %
	1	113	4127	91.10	91.10
	2	4127	4156	0.64	91.74
	3	29	4271	2.54	94.28
	4	115	4512	5.32	99.60
	5	241	4518	0.13	99.74
	6	12	4530	0.27	100.00

VARIABLE	DEI5523	HMO FILE 10
1st diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - No qualifier given		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by,		
secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DEI5523 indicates a diagnosis qualifier for the first diagnosis. In some instances (i.e., codes 2, 3, 5), in it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.		

*NOTE: Value #9 is not a true diagnosis qualifier. Occasionally, health maintenance procedures were performed by the provider which did not pertain to any of the diagnoses on the MER. In such cases, coders assigned a well-care code from the HICDA, and it was notated in this variable.

VARIABLE	DEI5524	HMO FILE 10
1st associated diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5524 indicates the associated diagnosis code when required by the diagnosis qualifier.		

VARIABLE DE15572 HMO FILE 10

1st problem/symptom date

CODES

19750711 to 19810714 - Not applicable, missing
 DE15572 indicates the date that the first problem or
 symptom appeared, as reported by the participant.

VARIABLE DE15574 HMO FILE 10

Treatment history/status of the 1st diagnosis

CODES

1 - Not applicable, missing
 2 - Initial visit for acute condition
 3 - Repeat visit for acute condition
 4 - Repeat visit for chronic condition (routine)
 5 - Initial visit for flareup of a chronic condition
 6 - Well-care or pregnancy-related
 7 - Repeat visit for flareup of a chronic condition
 8 - Acute; not specified as initial or repeat
 9 - Chronic; not specified as initial or repeat

DE15574 describes the patient's treatment history or
 status for the first diagnosis/problem.

DE15574	VALUE	FREQ	CUM FREQ	%	CUM %
.	.	109	605	13.34	13.34
1	1	605	677	1.59	14.93
2	2	72	889	4.68	19.61
3	3	212	2627	38.33	57.94
4	4	1738	2805	3.93	61.87
5	5	178	4408	35.36	97.22
6	6	1603	4534	2.78	100.00
7	7	126			

DEI5597	VALUE	FREQ	CUM FREQ	%	CUM %
	1	3238	578	41.14	41.14
	2	578	1405	58.86	100.00
		827			

VARIABLE	DEI5597	HMO FILE 10
2nd diagnosis related?		
CODES		
1 - Not applicable, missing		
2 - Yes		
2 - No		
DEI5597 indicates whether the drug injected by the provider was medically related to the second diagnosis/problem.		

VARIABLE	DEI5525	HMO FILE 10
2nd diagnosis		
CODES		
Blank - Not applicable, missing		
DEI5525 indicates the code of the second condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."		

DEI5526	VALUE	FREQ	CUM FREQ	%	CUM %
	1	3238	1150	81.85	81.85
	2	1150	1171	1.50	83.35
	3	21	119	8.47	91.82
	4	95	1385	6.76	98.58
	5	2	1387	0.14	98.72
	6	6	1393	0.43	99.15
	9	12	1405	0.85	100.00

VARIABLE	DEI5526	HMO FILE	10
2nd diagnosis qualifier			
CODES			
1 - Not applicable, missing			
2 - No qualifier given			
3 - Rule out			
4 - Probable/possible/?/question of			
5 - With, associated with, complicated by,			
secondary to, due to			
6 - Not, turned out not to be, was not			
7 - Or, versus			
9 - Well-care code assigned*			
DEI5526 indicates a diagnosis qualifier for the second			
diagnosis. In some instances (i.e., codes 2, 3, 5),			
it is possible for a diagnosis qualifier to be used			
in the absence of a primary diagnosis.			

*NOTE: See note on DEI5523.

VARIABLE	DEI5527	HMO FILE	10
2nd associated diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5527 indicates the associated diagnosis code			
when required by the qualifier.			

VARIABLE	DE15575	HMO FILE 10
2nd problem/symptom date		
CODES		
19740101 to 19810604 - Not applicable, missing		
DE15575 indicates the date that the second problem or symptom appeared, as reported by the participant.		

DE15577	VALUE	FREQ	CUM FREQ	%	CUM %
1	3239	317	317	22.58	22.58
2	116	116	433	8.26	30.84
3	71	71	504	5.06	35.90
4	453	453	957	32.27	68.16
5	30	30	987	2.14	70.30
6	406	406	1393	28.92	99.22
7	7	7	1400	0.50	99.72
8	4	4	1404	0.29	100.00

VARIABLE	DE15577	HMO FILE 10
Treatment history/status of the 2nd diagnosis		
CODES		
1 - Not applicable, missing		
2 - Initial visit for acute condition		
3 - Initial visit for chronic condition		
4 - Repeat visit for acute condition		
5 - Repeat visit for chronic condition (routine)		
6 - Initial visit for flareup of a chronic condition		
7 - Well-care or pregnancy-related		
8 - Repeat visit for flareup of a chronic condition		
9 - Acute; not specified as initial or repeat		
DE15577 describes the patient's treatment history or status for the second diagnosis/problem.		

DEI5598	VALUE	FREQ	CUM FREQ	%	CUM %
	1	4234	126	30.81	30.81
	2	283	409	69.19	100.00

VARIABLE DEI5598 HMO FILE 10

3rd diagnosis related?

CODES

1 - Not applicable, missing

2 - Yes

DEI5598 indicates whether the drug injected by the provider was medically related to the third diagnosis/problem.

VARIABLE DEI5528 HMO FILE 10

3rd diagnosis

CODES

Blank - Not applicable, missing

DEI5528 indicates the code of the third condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."

VARIABLE DE1529		HMO FILE 10	
3rd diagnosis qualifier			
CODES			
1 - Not applicable, missing			
2 - Rule out			
3 - Probable/possible/?/question of			
4 - With, associated with, complicated by, secondary to, due to			
5 - Not, turned out not to be, was not			
6 - Or, versus			
9 - Well-care code assigned*			
DE1529 indicates a diagnosis qualifier for the third diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.			
*NOTE: See note on DE1523.			
VARIABLE DE1530		HMO FILE 10	
3rd associated diagnosis			
CODES			
Blank - Not applicable, missing			
DE1530 indicates the associated diagnosis code when required by the qualifier.			

DE1529		HMO FILE 10	
VALUE			
1			
2			
3			
4			
9			
FREQ	4233		
	328		
	13		
	27		
	39		
	3		
CUM FREQ	328		
	341		
	368		
	407		
	410		
%	80.00		
	3.17		
	6.59		
	9.51		
	0.73		
CUM %	80.00		
	83.17		
	89.76		
	99.27		
	100.00		

VARIABLE DE15578 HMO FILE 10

3rd problem/symptom date

CODES

19750801 to 19810604 - Not applicable, missing

DE15578 indicates the date that the third problem or symptom appeared, as reported by the participant.

DE15580 VALUE	FREQ	CUM FREQ	%	CUM %
1	4233	86	20.98	20.98
2	86	132	11.22	32.20
3	46	148	3.90	36.10
4	16	230	20.00	56.10
5	82	231	0.24	56.34
6	1	405	42.44	98.78
7	174	408	0.73	99.51
9	3	410	0.49	100.00
	2			

VARIABLE DE15580 HMO FILE 10

Treatment history/status of the 3rd diagnosis

CODES

1 - Not applicable, missing

2 - Initial visit for acute condition

3 - Initial visit for chronic condition

4 - Repeat visit for acute condition

5 - Repeat visit for chronic condition (routine)

6 - Initial visit for flareup of a chronic condition

7 - Well-care or pregnancy-related

8 - Repeat visit for flareup of a chronic condition

9 - Acute; not specified as initial or repeat

9 - Chronic; not specified as initial or repeat

DE15580 describes the patient's treatment history or status for the third diagnosis/problem.

VARIABLE	DEI5599	HMO FILE 10
	4th diagnosis related?	
	CODES	
	1 - Yes	
	2 - No	
	DEI5599 indicates whether the drug injected by the provider was medically related to the fourth diagnosis/problem.	

DEI5599	VALUE	FREQ	CUM FREQ	%	CUM %
	1	4513	60	46.15	46.15
	2	70	130	53.85	100.00

VARIABLE	DEI5531	HMO FILE 10
	4th diagnosis	
	CODES	
	Blank - Not applicable, missing	
	DEI5531 indicates the code of the fourth condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."	

DEI5532	VALUE	FREQ	CUM FREQ	%	CUM %
	1	4512	113	86.26	86.26
	2	113	115	1.53	87.79
	3	2	117	1.53	89.31
	4	9	126	6.87	96.18
	9	5	131	3.82	100.00

VARIABLE DEI5532 HMO FILE 10

4th diagnosis qualifier

CODES

- 1 - Not applicable, missing
- 2 - Rule out
- 3 - Probable/possible/?/question of
- 4 - With, associated with, complicated by, secondary to, due to
- 5 - Not, turned out not to be, was not
- 6 - Or, versus
- 9 - Well-care code assigned*

DEI5532 indicates a diagnosis qualifier for the fourth diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.

*NOTE: See note on DEI5523.

VARIABLE DEI5533 HMO FILE 10

4th associated diagnosis

CODES

Blank - Not applicable, missing

DEI5533 indicates the associated diagnosis code when required by the qualifier.

VARIABLE DE15581 HMO FILE 10

4th problem/symptom date

CODES

19760626 to 19800624 - Not applicable, missing

DE15581 indicates the date that the fourth problem or symptom appeared, as reported by the participant.

DE15583	VALUE	FREQ	CUM FREQ	%	CUM %
1	4514	13	13	10.08	10.08
2	13	5	18	3.88	13.95
3	2	20	40	1.55	15.50
4	21	41	81	16.28	31.78
6	88	129	210	68.22	100.00

VARIABLE DE15583 HMO FILE 10

Treatment history/status of the 4th diagnosis

CODES

1 - Not applicable, missing

2 - Initial visit for acute condition

3 - Repeat visit for chronic condition

4 - Repeat visit for chronic condition (routine)

5 - Initial visit for flareup of a chronic condition

6 - Well care or pregnancy-related

7 - Repeat visit for flareup of a chronic condition

8 - Acute; not specified as initial or repeat

9 - Chronic; not specified as initial or repeat

DE15583 describes the patient's treatment history or status for the fourth diagnosis/problem.

DEI5666	VALUE	FREQ	CUM FREQ	%	CUM %
	1	29			
	2	4326	4326	93.76	93.76
	3	17	4343	0.37	94.13
		271	4614	5.87	100.00

VARIABLE	DEI5666	HMO FILE	10
Prescription status of first drug			
CODES			
1 - Not applicable, missing			
2 - Prescription (legend)			
3 - Over the counter (non-legend)			
4 - Either (varies by state)			
4 - Unknown			
DEI5666 states whether the drug listed in DEI589 was a prescription or could be sold over the counter, or whether it required a prescription in some states but not in others, or whether the information about the status of the drug was unobtainable.			

*NOTE: Prescription status was determined by reference to the National Drug Code Directory. If the status was not found in the text, coders assigned it a value of "missing".

VARIABLE	DEI589	HMO FILE	10
NDC code of first drug			
CODES			
Blank - Not applicable, missing			
DEI589 indicates the first seven digits of the National Drug Code for the drug injected by the provider. A number of codes were added by the HIE to identify drugs not listed in the 1972 NDC Directory. All NDC and supplementary codes used in the claims line-item files can be found in Section V of "Codes Used."			

VARIABLE	DEI5590	HMO FILE 10
	1st generic code of first drug	
	CODES	
	. - Not applicable, missing	
	DEI5590 identifies a generic component of the drug specified by NDC code in DEI5589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5591	HMO FILE 10
	2nd generic code of first drug	
	CODES	
	. - Not applicable, missing	
	DEI5591 identifies a generic component of the drug specified by NDC code in DEI5589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5592	HMO FILE 10
	3rd generic code of first drug	
	CODES	
	. - Not applicable, missing	
	DEI5592 identifies a generic component of the drug specified by NDC code in DEI5589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5593	HMO FILE 10
	4th generic code of first drug	
	CODES	
	. - Not applicable, missing	
	DEI5593 identifies a generic component of the drug specified by NDC code in DEI5589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5594	HMO FILE 10
	5th generic code of first drug	
	CODES	
	. - Not applicable, missing	
	DEI5591 identifies a generic component of the drug specified by NDC code in DEI5589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5595	HMO FILE 10
	Drug therapeutic code of first drug	
	CODES	
	. - Not applicable, missing	
	DEI5595 indicates the code for the therapeutic use of the drug specified in DEI5589. Codes were taken from the AMA Drug Evaluations, 1973, by assigning a code number which corresponds with the chapter number in which the drug's therapeutic uses are described. Therapeutic codes used in this file are listed and defined in Section VII of "Codes Used."	

DEI5665	VALUE	FREQ	CUM FREQ	%	CUM %
	1	4344	296	99.00	99.00
	2	296	299	1.00	100.00
		3			

VARIABLE DEI5665 HMO FILE 10

Prescription status of second drug

CODES

- 1 - Not applicable, missing
- 2 - Prescription (legend)
- 3 - Over the counter (non-legend)
- 4 - Either (varies by state)
- 5 - Unknown

DEI5665 states whether the drug listed in DEI5613 was prescription or could be sold over the counter, whether it required a prescription in some states but not in others, or whether information on the status of the drug was unobtainable.

*NOTE: Prescription status was determined by reference to the National Drug Code Directory. If the status was not found in the text, coders assigned it a value of "missing".

VARIABLE DEI5613 HMO FILE 10

NDC code of second drug

CODES

Blank - Not applicable, missing

DEI5613 indicates the first seven digits of the National Drug Code for (a) a second drug injected separately but on the same occasion as the drug in DEI5589, or (b) a second drug contained in the same injection. A number of codes were added by the HIE to identify drugs not listed in the 1972 NDC Directory. All NDC and supplementary codes used here are defined in Section V of "Codes Used."

VARIABLE	DE15614	HMO FILE 10
1st generic code of second drug		
CODES		
.	- Not applicable, missing	
DE15614	identifies a generic component of the drug specified by NDC code in DE15613. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DE15615	HMO FILE 10
2nd generic code of second drug		
CODES		
.	- Not applicable, missing	
DE15615	identifies a generic component of the drug specified by NDC code in DE15613. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5616	HMO FILE 10
	3rd generic code of second drug	
	CODES	
	. - Not applicable, missing	
	DEI5616 identifies a generic component of the drug specified by NDC code in DEI5613. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5619	HMO FILE 10
	Drug therapeutic code of second drug	
	CODES	
	. - Not applicable, missing	
	DEI5619 indicates the code for the therapeutic use of the drug specified in DEI5613. Therapeutic codes in this file are defined in Section VII of "Codes Used."	

DEI5602	VALUE	FREQ	CUM FREQ	%	CUM %
	1	4533	4533	97.63	97.63
	2	98	4631	2.11	99.74
	3	7	4638	0.15	99.89
	4	4	4642	0.09	99.98
	6	1	4643	0.02	100.00

VARIABLE	DEI5602	HMO FILE 10
Number of injections		
CODES		
.	Not applicable, missing	
DEI5602	indicates the number of injections given for the imputed charge listed in IMPCHRG.	

NOTE: Two situations account for nearly all cases of multiple units of service: (1) injection of a series of multiple allergens (e.g., dust, mold, weed) or (2) a steroid injected into several body points.

XI. OUTPATIENT SERVICES PROVIDED BY INSTITUTIONS HMO FILE 11

INTRODUCTION

This codebook documents primary variables concerning outpatient hospital and clinic services provided to HIE participants. The bulk of data in this file involves services rendered by GHC hospitals and clinics; however, some FFS data, representing HMO participants' use of FFS health services that were fully covered by GHC, are included in this file.¹ FFS services not completely covered by GHC appear in the FFS claims line-item files. *Inpatient* GHC hospital services are found in File 01. Inpatient physician services are reported in File 03, and outpatient physician services are in File 06.

Specific information provided in this file includes the type of outpatient hospital service rendered, the date and place of service, and variables indicating the diagnoses to which the service is related, as well as the treatment history/status of each diagnosis. Also included are the reasons/symptoms for the visit to the hospital or clinic, the referral physicians (if any), and whether the visit was accident- or employment-related.

The units of observation in this file are line items representing outpatient services provided by hospitals or clinics.² For an explanation of common variables used in this codebook, see the final subsection of Sec. II. Below we provide explanations for specific variables in this file.

¹No standard values exist for computing outpatient services; thus, no imputed charges appear on this file.

²Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation with the unit of observation, *not* the number of participant visits.

CATEGORY OF HOSPITAL SERVICE

The variable Category of Hospital Service (DEI5557) identifies the type of outpatient hospital service the participant received. This includes outpatient surgery and emergency room services when there was no subsequent admission. The most commonly used categories of service were pharmacy, X-ray, laboratory, supply, emergency room, and "hospital-based professional" services; other categories include more specialized services. This variable was designed for use in both inpatient and outpatient files, as well as in the FFS claims files; thus, the inpatient categories listed are not appropriate to this file, and references to "charges" are not applicable here.

Category 97 indicates services rendered to GHC control group participants by GHC that were *not* covered by the participant's GHC contract.

PROVIDER NUMBER

In this file, the variable DEI5502, Provider Number, refers to the hospital or clinic facility in which the participant was an outpatient. The overwhelming majority of cases involve GHC clinics. There were two Group Health hospital/clinic centers, the Central and Eastside units, but the Eastside unit was not operational until halfway through the study; utilization data will reflect this. A few FFS hospitals, where GHC participants received GHC-covered services, are also shown as providers on this file. The first character of DEI5502 identifies whether the provider is a GHC or FFS facility: a "C" indicates GHC facilities, and an "E" indicates FFS facilities.

CODEBOOK FOR HMO FILE 11

OUTPATIENT SERVICES PROVIDED BY INSTITUTIONS

DIRECTORY OF VARIABLES - HMO FILE 11
OUTPATIENT SERVICES PROVIDED BY INSTITUTIONS

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	277	DE15524	1st associated diagnosis	288
PERSON	Person identifier	277	DE15572	1st problem/symptom date	288
SITE	Site	277	DE15574	Treatment history/status of the 1st diagnosis	289
INSTAT	Insurance status	278	DE15525	2nd diagnosis	289
CONTR	Contract year	278	DE15526	2nd diagnosis qualifier	290
DE16300	SERR number	279	DE15527	2nd associated diagnosis	290
DE15502	Provider number	279	DE15575	2nd problem/symptom date	291
DE15555	Date of service	279	DE15577	Treatment history/status of the 2nd diagnosis	291
DE15584	Place of service	280	DE15528	3rd diagnosis	292
DE15503	1st reason/symptom for visit	280	DE15529	3rd diagnosis qualifier	292
DE15505	2nd reason/symptom for visit	281	DE15530	3rd associated diagnosis	293
DE15565	3rd reason/symptom for visit	281	DE15578	3rd problem/symptom date	293
DE15568	1st provider referred from	282	DE15580	Treatment history/status of the 3rd diagnosis	294
DE16308	2nd provider referred from	282	DE15531	4th diagnosis	294
DE15570	1st provider referral	283	DE15532	4th diagnosis qualifier	295
DE15571	2nd provider referral	283	DE15533	4th associated diagnosis	295
DE15511	Accident-related	284	DE15581	4th problem/symptom date	296
DE15512	Employment-related	284	DE15583	Treatment history/status of the 4th diagnosis	296
DE15566	Date of injury	285	DE15557	Category of hospital service	297
DE16343	GHC location	286			
DE15522	1st diagnosis	287			
DE15523	1st diagnosis qualifier	287			

FILENAME			
VALUE	FREQ	CUM FREQ	CUM %
PE112A	4782	4782	100.00
SITE			
VALUE	FREQ	CUM FREQ	CUM %
2	4782	4782	100.00

VARIABLE FILENAME HMO FILE 11

Name of file

FILENAME is a 6-digit code that uniquely identifies the file. This file name is PE112A.

VARIABLE PERSON HMO FILE 11

Person identifier

PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.

VARIABLE SITE HMO FILE 11

Site

CODES

2 - Seattle, Washington

SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.

VARIABLE	DEI6300	HMO FILE 11
SERR	number	
DEI6300 indicates an identifier number which is used to link the line items from a given SERR.		

VARIABLE	DEI5502	HMO FILE 11
Provider	number	
DEI5502 is an 8-character code which refers, in this file, to the hospital, nursing facility, or any other health care facility which provided outpatient service for the participant. For further information concerning the provider, this number can be linked to information in the provider file of the HIE reference series.		

NOTE: DEI5502 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE	DEI5555	HMO FILE 11
Date of service		
CODES		
19760401 to 19810829 - Range on this file (YYMMDD)		
DEI5555 indicates the date on which the service was rendered. If a service was rendered over multiple dates, this variable is the initial date of service.		

VARIABLE DE15584		HMO FILE 11	
Place of service			
CODES			
1 - Not applicable, missing			
2 - Doctor's office			
3 - Independent laboratory			
4 - Patient's home			
5 - Hospital			
6 - Nursing home			
7 - Emergency room			
8 - Outpatient surgery			
9 - Other outpatient hospital, including hospital clinic			
DE15584 indicates the type of location where the participant received outpatient services. For actual location, see DE16343.			

DE15584	VALUE	FREQ	CUM FREQ	%	CUM %
	1	8	8	0.17	0.17
	4	1	9	0.02	0.19
	6	4676	4685	97.78	97.97
	7	37	4722	0.77	98.75
	8	56	4778	1.17	99.92
	9	4	4782	0.08	100.00

VARIABLE DE15503		HMO FILE 11	
1st reason/symptom for visit			
CODES			
Blank - Not applicable, missing			
DE15503 indicates the code for the first reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."			

NOTE: NAMCS codes were entered without decimal points.

VARIABLE	DEI5505	HMO FILE 11
	2nd reason/symptom for visit	
	CODES	
	Blank - Not applicable, missing	
	DEI5505 indicates the code for an additional reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."	

NOTE: See note on DEI5503.

VARIABLE	DEI5565	HMO FILE 11
	3rd reason/symptom for visit	
	CODES	
	Blank - Not applicable, missing	
	DEI5565 indicates the code for an additional reason the participant went to see a physician. All reason-for-visit codes used in the claims line-item files are listed in Section IV of "Codes Used."	

NOTE: See note on DEI5503.

VARIABLE	DE15568	HMO FILE 11
	1st provider referred from	
	CODES	
	Blank - Not applicable, missing	
	DE15568 indicates the provider number of the first person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DE16308	HMO FILE 11
	Second provider referred from	
	CODES	
	Blank - Not applicable, missing	
	DE16308 indicates the provider number of the second person or institution (if any) who referred the participant. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

VARIABLE	DE15570	HMO FILE 11
First provider referral		
CODES		
Blank - Not applicable, missing		
DE15570 indicates the provider number of the first provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DE15571	HMO FILE 11
Second provider referral		
CODES		
Blank - Not applicable, missing		
DE15571 indicates the provider number of the second provider (if any) to whom the participant was referred. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

VARIABLE	DEI5511	HMO FILE 11
Accident related		
CODES		
1 - Yes		
2 - No		
DEI5511 states whether the illness or injury was accident related.		

DEI5511	VALUE	FREQ	CUM FREQ	%	CUM %
1	1	1770	1770	37.03	37.03
2	2	3010	4780	62.97	100.00

VARIABLE	DEI5512	HMO FILE 11
Employment related		
CODES		
1 - Yes		
2 - No		
DEI5512 states whether the illness or injury was employment related.		

DEI5512	VALUE	FREQ	CUM FREQ	%	CUM %
1	1	114	114	2.39	2.39
2	2	4666	4780	97.62	100.00

VARIABLE	DEI5566	HMO FILE 11
	Date of injury	
	CODES	
	19620101 to 19810829	- Not applicable, missing
		- Range on this file (YYYYMMDD)
	DEI5566 indicates the date (if any) the participant was injured.	

DE16343	VALUE	FREQ	CUM FREQ	%	CUM %
	1	57	57	69.93	69.93
	2	3304	3304	0.17	70.10
	4	8	3312	0.04	70.14
	5	2	3314	0.04	70.18
	7	3	3316	0.06	70.24
	8	1234	3319	26.12	96.36
	9	5	4553	0.11	96.47
	10	3	4558	0.06	96.53
	12	4	4561	0.09	96.61
	19	4	4565	0.09	96.70
	20	14	4569	0.30	97.00
	23	97	4583	2.05	99.05
	24	45	4680	0.95	100.00

VARIABLE	DE16343	HMO FILE	11
GHC location			
1	- Clinic 1		
2	- Clinic 2		
3	- Clinic 3		
4	- Clinic 4		
5	- Clinic 5		
6	- Clinic 6		
7	- Clinic 7		
8	- Clinic 8		
9	- Clinic 9		
10	- Clinic 10		
11	- Non-GHC extended care facility		
12	- Hospital 1, inside Seattle		
13	- Clinic 11		
14	- Hospital 2, inside Seattle		
15	- Hospital 3, outside Seattle		
16	- Emergency room		
17	- Clinic 12		
18	- Clinic 13		
19	- Clinic 14		
20	- Specialty clinic		
21	- Clinic 15		
22	- GHC extended care facility		
23	- Non-GHC, inside GHC area		
24	- Non-GHC, outside GHC area		
25	- Clinic 16		
DE16343 identifies the GHC location where the supply was prescribed, or indicates that it was performed at a non-GHC (FFS) location.			

VARIABLE	DE15522	HMO FILE 11
1st diagnosis		
CODES		
Blank - Not applicable, missing		
DE15522 indicates the code of the first condition diagnosed by the physician. Codes were assigned in the order in which the diagnosis appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."		

VARIABLE	DE15523	HMO FILE 11
1st diagnosis qualifier		
CODES		
1 - Not applicable, missing		
2 - Rule out		
3 - Probable/possible/?/question of		
4 - With, associated with, complicated by, secondary to, due to		
5 - Not, turned out not to be, was not		
6 - Or, versus		
9 - Well-care code assigned*		
DE15523 indicates a diagnosis qualifier for the first diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.		

*NOTE: Value #9 is not a true diagnosis qualifier. Occasionally, health maintenance procedures were performed by the provider which did not pertain to any of the diagnoses on the MER. In such cases, coders assigned a well-care code (cont.)

DE15523	VALUE	FREQ	CUM FREQ	%	CUM %
1	68	3566	3566	75.65	75.65
2	105	3671	3671	2.23	77.87
3	450	4121	4121	9.55	87.42
4	511	4632	4632	10.84	98.26
5	24	4656	4656	0.51	98.77
6	58	4714	4714	1.23	100.00

VARIABLE DE15523 (cont.)

from the HICDA, and it was notated in this variable.

VARIABLE	DE15524	HMO FILE 11
1st associated diagnosis		
CODES		
Blank - Not applicable, missing		
DE15524 indicates the associated diagnosis code when required by the diagnosis qualifier.		

VARIABLE	DE15572	HMO FILE 11
1st problem/symptom date		
CODES		
19730101 to 19810829 - Symptom present most of life		
DE15572 indicates the date that the first problem or symptom appeared, as reported by the participant. The value 19010101 was used when the participant responded that the symptom had been present most or all of his/her life.		

DE15574	VALUE	FREQ	CUM FREQ	%	CUM %
	1	70			
	2	3787	3787	80.37	80.37
	3	20	3807	0.42	80.79
	4	476	4283	10.10	90.90
	5	63	4346	1.34	92.23
	6	273	4619	5.79	98.03
	7	12	4631	0.26	98.28
		81	4712	1.72	100.00

VARIABLE DE15574 HMO FILE 11

Treatment history/status of the 1st diagnosis

CODES

- 1 - Not applicable, missing
- 2 - Initial visit for acute condition
- 3 - Initial visit for chronic condition
- 4 - Repeat visit for acute condition
- 5 - Initial visit for chronic condition (routine)
- 6 - Well-care or pregnancy-related
- 7 - Repeat visit for flareup of a chronic condition
- 8 - Acute; not specified as initial or repeat
- 9 - Chronic; not specified as initial or repeat

DE15574 describes the patient's treatment history or status for the first diagnosis/problem.

VARIABLE DE15525 HMO FILE 11

2nd diagnosis

CODES

Blank - Not applicable, missing

DE15525 indicates the code of the second condition diagnosed by the physician. Codes were assigned in the order in which the diagnoses appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."

DEI5526	VALUE	FREQ	CUM FREQ	%	CUM %
	1	3891	555	62.29	62.29
	2	555	654	11.11	73.40
	3	99	765	12.46	85.86
	4	111	873	12.12	97.98
	5	108	876	0.34	98.32
	6	3	891	1.68	100.00

VARIABLE	DEI5526	HMO FILE	11
2nd diagnosis qualifier			
CODES			
1 - Not applicable, missing			
2 - No qualifier given			
3 - Rule out			
4 - Probable/possible/?/question of			
5 - With, associated with, complicated by,			
secondary to, due to			
6 - Not, turned out not to be, was not			
7 - Or, versus			
8 - Well-care code assigned*			
DEI5526 indicates a diagnosis qualifier for the second			
diagnosis. In some instances (i.e., codes 2, 3, 5),			
it is possible for a diagnosis qualifier to be used			
in the absence of a primary diagnosis.			

*NOTE: See note on DEI5523.

VARIABLE	DEI5527	HMO FILE	11
2nd associated diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5527 indicates the associated diagnosis code			
when required by the qualifier.			

VARIABLE	DEI5575	HMO FILE 11
2nd problem/symptom date		
CODES		
19760504 to 19810721 - Not applicable, missing		
19760504 to 19810721 - Range on this file (YYYYMMDD)		
DEI5575 indicates the date that the second problem or symptom appeared, as reported by the participant (YYYYMMDD).		

VARIABLE	DEI5577	HMO FILE 11
Treatment history/status of the 2nd diagnosis		
CODES		
- Not applicable, missing		
1 - Initial visit for acute condition		
2 - Initial visit for chronic condition		
3 - Repeat visit for acute condition		
4 - Repeat visit for chronic condition (routine)		
5 - Initial visit for flareup of a chronic condition		
6 - Well-care or pregnancy-related		
7 - Repeat visit for flareup of a chronic condition		
8 - Acute; not specified as initial or repeat		
9 - Chronic; not specified as initial or repeat		
DEI5577 describes the patient's treatment history or status for the second diagnosis/problem.		

DEI5577	VALUE	FREQ	CUM FREQ	%	CUM %
1	3891	603	603	67.68	67.68
2	30	633	633	3.37	71.04
3	103	736	736	11.56	82.60
4	70	806	806	7.86	90.46
5	43	849	849	4.83	95.29
6	28	877	877	3.14	98.43
7	9	886	886	1.01	99.44
8	5	891	891	0.56	100.00

VARIABLE DE15528 HMO FILE 11

3rd diagnosis

CODES

Blank - Not applicable, missing

DE1528 indicates the code of the third condition diagnosed by the physician. Codes were assigned in the order in which the diagnoses appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."

VARIABLE DE15529 HMO FILE 11

3rd diagnosis qualifier

CODES

- 1 - Not applicable, missing
- 2 - No qualifier
- 3 - Rule out
- 4 - Probable/possible/?/question of
- 5 - With, associated with, complicated by, secondary to, due to
- 6 - Not, turned out not to be, was not
- 7 - Or, versus
- 8 - Well-care code assigned*

DE1529 indicates a diagnosis qualifier for the third diagnosis. In some instances (i.e., codes 2, 3, 5), it is possible for a diagnosis qualifier to be used in the absence of a primary diagnosis.

*NOTE: See note on DE15523.

DEI529 VALUE	FREQ	CUM FREQ	%	CUM %
1	4577	121	59.02	59.02
2	121	135	6.83	65.85
3	36	171	17.56	83.42
4	31	202	15.12	98.54
5	3	205	1.46	100.00

VARIABLE	DEI5530	HMO FILE 11
	3rd associated diagnosis	
	CODES	
	Blank - Not applicable, missing	
	DEI5530 indicates the associated diagnosis code when required by the qualifier.	

VARIABLE	DEI5578	HMO FILE 11
	3rd problem/symptom date	
	CODES	
	19760626 to 19810721 - Not applicable, missing	
	DEI5578 indicates the date that the third problem or symptom appeared, as reported by the participant.	

DEI5580	VALUE	FREQ	CUM FREQ	%	CUM %
1	1	4577	144	70.24	70.24
2	2	144	149	2.44	72.68
3	3	27	176	13.17	85.85
4	4	12	188	5.85	91.71
5	5	6	194	2.93	94.63
6	6	10	204	4.88	99.51
7	7	1	205	0.49	100.00

VARIABLE	DEI5580	HMO FILE	11
Treatment history/status of the 3rd diagnosis			
CODES			
1 - Not applicable, missing			
2 - Initial visit for acute condition			
3 - Initial visit for chronic condition			
4 - Repeat visit for acute condition			
5 - Initial visit for chronic condition (routine)			
6 - Well-care or pregnancy-related			
7 - Repeat visit for flareup of a chronic condition			
8 - Acute; not specified as initial or repeat			
9 - Chronic; not specified as initial or repeat			
DEI5580 describes the patient's treatment history or status for the third diagnosis/problem.			

VARIABLE	DEI5531	HMO FILE	11
4th diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5531 indicates the code of the fourth condition diagnosed by the physician. Codes were assigned in the order in which the diagnoses appeared on the record. Diagnosis codes used in the HIE claims files are listed in Section 1 of "Codes Used."			

DEI5532	VALUE	FREQ	CUM FREQ	%	CUM %
	1	4731	26	50.98	50.98
	2	26	27	1.96	52.94
	3	5	32	9.80	62.75
	4	19	51	37.26	100.00

VARIABLE	DEI5532	HMO FILE	11
4th diagnosis qualifier			
CODES			
1 - Not applicable, missing			
2 - Yes			
3 - No qualifier given			
4 - Rule out			
5 - Probable/possible/?/question of			
6 - With, associated with, complicated by,			
7 - secondary to, due to			
8 - Not, turned out not to be, was not			
9 - Or, versus			
10 - Well-care code assigned*			
DEI5532 indicates a diagnosis qualifier for the fourth			
diagnosis. In some instances (i.e., codes 2, 3, 5),			
it is possible for a diagnosis qualifier to be used			
in the absence of a primary diagnosis.			

*NOTE: See note on DEI5523.

VARIABLE	DEI5533	HMO FILE	11
4th associated diagnosis			
CODES			
Blank - Not applicable, missing			
DEI5533 indicates the associated diagnosis code			
when required by the qualifier.			

VARIABLE	DEI5581	HMO FILE 11
	4th problem/symptom date	
	DATE RANGE	
	19760626 to 19790627 - Not applicable, missing	
	DEI5581 indicates the date that the fourth problem or symptom appeared, as reported by the participant.	

DEI5583	VALUE	FREQ	CUM FREQ	%	CUM %
1	4731	28	28	54.90	54.90
2	1	1	29	1.96	56.86
3	6	6	35	11.77	68.63
4	2	2	37	3.92	72.55
5	1	1	38	1.96	74.51
6	13	13	51	25.49	100.00

VARIABLE	DEI5583	HMO FILE 11
	Treatment history/status of the 4th diagnosis	
	CODES	
	1 - Not applicable, missing	
	2 - Initial visit for acute condition	
	3 - Initial visit for chronic condition	
	4 - Repeat visit for acute condition	
	5 - Repeat visit for chronic condition (routine)	
	6 - Initial visit for flareup of a chronic condition	
	7 - Well-care or pregnancy-related	
	8 - Repeat visit for flareup of a chronic condition	
	9 - Acute; not specified as initial or repeat	
	DEI5583 describes the patient's treatment history or status for the fourth diagnosis/problem.	

VARIABLE	DE15557	HMO FILE 11	DE15557 VALUE	FREQ	CUM FREQ	%	CUM %
Category of hospital service							
CODES							
1 - Room and board			2	32	32	0.67	0.67
2 - Pharmacy			3	288	320	6.02	6.69
3 - X-ray			4	393	713	8.22	14.91
4 - Lab			5	258	971	5.40	20.31
5 - Miscellaneous hospital supplies			6	4	975	0.08	20.39
6 - Special lab, non-invasive			7	161	1136	3.37	23.76
7 - Operating room, recovery supplies, cast room			8	1	1137	0.02	23.78
8 - Operating room, supplies and anesthesia			9	21	1158	0.44	24.22
9 - Professional: Hospital-based therapeutic services and related supplies			11	2	1160	0.04	24.26
10 - Professional: hospital-based pathologist			14	1	1161	0.02	24.28
11 - Professional: hospital-based radiologist			15	2163	3324	45.23	69.51
12 - Professional: hospital-based other - medication administration fee			17	1	3325	0.02	69.53
13 - Kidney dialysis			19	1	3326	0.02	69.55
14 - Hospital-based professional in Emergency Room			20	2	3328	0.04	69.59
15 - Emergency Room			30	1	3329	0.02	69.62
16 - Special duty nurse			38	8	3337	0.17	69.78
17 - Blood, packed cells, etc.			39	4	3341	0.08	69.87
18 - Take-home drugs			40	20	3361	0.42	70.28
19 - Personal (e.g., TV, phone, etc.)			80	770	4131	16.10	86.39
20 - Special lab, invasive (procedures and supplies)			81	515	4646	10.77	97.16
21 - Mental health procedures and supplies - Mental health unit day care, electroconvulsive shock			82	43	4689	0.90	98.06
22 - Pharmacy (hospital's total charge for this category, divided by the length of stay)			83	81	4770	1.69	99.75
23 - X-ray (hospital's total charge for this category, divided by the length of stay)			84	1	4771	0.02	99.77
24 - Laboratory, regular (hospital's total charge for this category, divided by the length of stay)			97	11	4782	0.23	100.00
25 - Miscellaneous hospital supplies (hospital's total charge for this category, divided by the length of stay)							
26 - Special lab, non-invasive (hospital's total charge for this category, divided by the length of stay)							
27 - Therapeutic service - professional (hospital's total charge of this category, divided by the length of stay)							
28 - Lump sum daily charge, excluding professional fee							
29 - Lump sum daily charge, including professional fee							
30 - Miscellaneous, blood transportation charge, (cont.)							

VARIABLE DE15557 (cont.)

31	-	ambulance, cot for mother
32	-	Lump sum daily charge, excluding room and board
33	-	Hyperalimentation - supplies and service
34	-	Special surgical supplies (including cardiac pacemaker, Hunter tendon graft)
35	-	Lump sum daily charge - nursery
36	-	Insurance surcharge
37	-	Dental clinic: hospital-based
38	-	Anesthesia: professional (including anesthesia administration, anesthesia service, spinal block, etc.)
39	-	Operating room/anesthesia supplies
40	-	Anesthesia not otherwise specified
41	-	Emergency Room, including professional fee
80	-	Special blood procedures (including plasmaphoresis)
81	-	After hours charge, walk-in emergency room
82	-	Cast room
83	-	Observation room
84	-	GHC pharmacy/central supply not otherwise specified
85	-	GHC routine laboratory/electrocardiogram not otherwise specified
97	-	GHC services charged to patient because not covered under patient's GHC contract (IMPCRG has a value of zero in this case)

DE15557 categorizes the type of outpatient hospital or clinical service the participant received. Excluded are most physician services, except for certain hospital-based physician services (radiology, pathology, etc.). The references to charges are not applicable in this file, because imputed charges for outpatient services were not available.

XII. DRUGS DISPENSED, HMO FILE 15

INTRODUCTION

This file documents primary variables concerning drugs dispensed to HIE participants from GHC pharmacies. The HIE insurance plan for GHC experimental group participants covered all prescription-only drugs and, in certain cases, some over-the-counter drugs.¹

Drugs provided directly to participants by GHC physicians are shown in File 08. Drugs provided by GHC as part of inpatient or outpatient hospital care may also be found under the categories "pharmacy" and "take-home drugs" in the variable Category of Service (DEI5557) in File 01 (inpatient) and File 11 (outpatient).² Drugs purchased from non-GHC pharmacies by GHC participants appear in File 15 (Drugs Purchased) in the FFS claims line-item files.

The specific information found in this codebook includes each dispensed drug (identified by National Drug Code), the generic and therapeutic codes for that drug, the GHC location where the drug was dispensed, the date on which the drug was dispensed, the identifier of the prescriber and, if applicable, the physician who approved the prescription. Other variables indicate the quantity, form, strength, and dosage instructions for the drug dispensed, the number of refills authorized, and the date of refill (if applicable).

Because no standard values were available for calculating the costs of drugs or supplies, researchers were unable to impute charges for drugs provided within the HMO system. Thus, no imputed charges are provided in this file. Drug records were transcribed directly from GHC pharmacy data tapes; for this reason, no provider numbers or SERR numbers are given on this file.

¹For a listing of nonprescription drug coverage, see Appendix G.

²However, such drugs could not be specifically identified, and no quantities could be provided.

The units of observation in this file are line items representing drugs dispensed by GHC pharmacies.³ For an explanation of common variables used in this codebook, see the final subsection of Sec. II. Below we provide explanations for specific variables in this file.

PRESCRIPTION VARIABLES

We repeat this information for any users who did not encounter it in the introduction to File 08; prescription element information in this file was filled in by the pharmacy rather than the physician.

Prescriptions contain a variety of specific data. To reconstruct a prescription, the user must consider several variables, described below:

- The quantity of the drug indicated in variable DEI5589 (NDC Code) is found in variable DEI5588, Amount Sold (e.g., 30).
- The variable DEI5667, Dosage Instructions-Quantity, indicates the prescribed or suggested numerical quantity of each dosage (e.g., one).
- Both of these variables must be linked with DEI5668, Dosage Instructions-Form, to know in what form the quantity given is measured (e.g., tablet, ounce).
- The prescribed or suggested frequency for administering the drug (e.g., twice daily) is given in DEI5669, and these instructions are modified if necessary in DEI5670.
- The numerical dosage strength (e.g., 250) of the drug is given in DEI5586, and this number must be linked to its appropriate unit of measure (e.g., milligrams), given in DEI5587, Dosage Strength Unit.

The above information was filled in voluntarily; consequently, missing data can exist in the above prescription element variables.

³Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation to the unit of observation, *not* the number of participant visits.

NDC CODE

DEI5589 indicates the first seven digits of the National Drug Code identifier of the dispensed drug. (The last two digits of the national nine-digit code number represent trade package size and were not used by the HIE.) Codes were taken from the *National Drug Code Directory*, June 1972, whenever possible.⁴ A number of supplementary codes were added by the HIE to identify drugs not listed in the 1972 NDC Directory. NDC and supplementary codes used in the claims files are defined in Sec. V of *Codes Used*. Code 9999997 indicates a drug prescribed by a GHC physician to a GHC control participant that was not covered by the participant's GHC contract.

GENERIC CODES

DEI5590 - DEI5594 indicate codes that identify up to five generic components of the dispensed drug. This generic coding system was developed by the HIE; code definitions are found in Sec. VI of *Codes Used*.

DRUG THERAPEUTIC CODE

DEI5595 indicates a code identifying the therapeutic use category of the drug. Codes were taken from the American Medical Association's *AMA Drug Evaluations, 1973*,⁵ by using a code number that represents the chapter number of the drug's assigned therapeutic category. Therapeutic codes are defined in Sec. VII of *Codes Used*.

⁴Public Health Service, U.S. Department of Health and Human Services, Washington, D.C.

⁵Second edition, Publishing Sciences Group, Inc., Acton, MA.

CODEBOOK FOR HMO FILE 15

DRUGS DISPENSED

DIRECTORY OF VARIABLES - HMO FILE 15

DRUGS DISPENSED

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	305	DE15658	2nd therapeutic code	316
PERSON	Person identifier	305	DE15659	3rd therapeutic code	317
SITE	Site	305	DE15660	4th therapeutic code	318
INSTAT	Insurance status	306	DE15661	5th therapeutic code	319
CONTR	Contract year	306	DE15588	Amount provided	319
DE16300	SERR identifier	307	DE15667	Dosage instructions - quantity	320
DE15604	1st prescriber	307	DE15668	Dosage instructions - form	321
DE12567	2nd prescriber	308	DE15669	Dosage instructions - frequency	322
DE16343	GHC location	309	DE15670	Dosage instructions - flexibility	323
DE15603	Date dispensed	310	DE15586	Dosage strength	323
DE15666	Prescription status of drug	310	DE15587	Dosage strength unit	324
DE15589	NDC code	311	DE12568	Date of refill	324
DE15590	1st generic code	311	DE15652	Number of refills authorized	325
DE15591	2nd generic code	312			
DE15592	3rd generic code	312			
DE15593	4th generic code	313			
DE15594	5th generic code	313			
DE15595	1st therapeutic code	314			

FILENAME				
VALUE	FREQ	CUM FREQ	%	CUM %
PE152A	43935	43935	100.00	100.00

SITE				
VALUE	FREQ	CUM FREQ	%	CUM %
2	43935	43935	100.00	100.00

VARIABLE	FILENAME	HMO FILE 15
	Name of file	
	FILENAME is a 6-digit code that uniquely identifies the file. This file name is PE152A.	

VARIABLE	PERSON	HMO FILE 15
	Person identifier	
	PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; C=Charleston; H=Georgetown County.	

VARIABLE	SITE	HMO FILE 15
	Site	
	CODES	
	2 - Seattle, Washington	
	SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.	

VARIABLE	INSTAT	HMO FILE 15
Insurance status		
CODES		
1 - Ever insured (includes HMO experimental group)		
2 - Ever assigned to HMO control group		
3 - Never insured		
INSTAT describes the participant's insurance status in the Health Insurance Experiment.		

INSTAT	FREQ	CUM FREQ	%	CUM %
VALUE				
1	22931	22931	52.19	52.19
2	21004	43935	47.81	100.00

VARIABLE	CONTYR	HMO FILE 15
Contract year		
CODES		
01 - First year		
02 - Second year		
03 - Third year		
04 - Fourth year		
05 - Fifth year		
CONTYR identifies the participant's contract year of coverage in which the service was performed.		

CONTYR	FREQ	CUM FREQ	%	CUM %
VALUE				
01	10838	10838	24.67	24.67
02	9746	20584	22.18	46.85
03	9417	30001	21.43	68.29
04	7758	37759	17.66	85.94
05	6176	43935	14.06	100.00

VARIABLE	DEI6300	HMO FILE 15
	SERR number	
	DEI6300 indicates an identifier number which is used to link the line items from a given SERR.	

NOTE: Drug records were transcribed directly from GHC pharmacy data tapes. For this reason, the SERR number values in this file are all entered as missing.

VARIABLE	DEI5604	HMO FILE 15
	1st prescriber	
	CODES	
	blank - Not applicable, missing	
	DEI5604 indicates the provider number of the first physician who prescribed or suggested the drug. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

NOTE: DEI5604 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE	DE12567	HMO FILE 15
2nd prescriber		
CODES		
blank - Not applicable, missing		
DE12567 indicates the identifier number of the second physician (if any) who approved the prescription. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.		

NOTE: DE12567 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

DE16343	VALUE	FREQ	CUM FREQ	%	CUM %
	1	6664	6664	15.17	15.17
	2	2903	9567	6.61	21.78
	3	3172	12739	7.22	29.00
	4	5205	17944	11.85	40.84
	5	4256	22200	9.69	50.53
	6	2801	25001	6.38	56.91
	7	6264	31265	14.26	71.16
	8	7824	39089	17.81	88.97
	9	120	39209	0.27	89.24
	10	3708	42917	8.44	97.68
	11	31	42948	0.07	97.75
	13	40	42988	0.09	97.85
	17	263	43251	0.60	98.44
	18	684	43935	1.56	100.00

VARIABLE	DE16343	HMO FILE 15
GHC location		
1 - Clinic 1		
2 - Clinic 2		
3 - Clinic 3		
4 - Clinic 4		
5 - Clinic 5		
6 - Clinic 6		
7 - Clinic 7		
8 - Clinic 8		
9 - Clinic 9		
10 - Clinic 10		
11 - Non-GHC extended care facility		
12 - Hospital 1, inside Seattle		
13 - Clinic 11		
14 - Hospital 2, inside Seattle		
15 - Hospital 3, outside Seattle		
16 - Emergency room		
17 - Clinic 12		
18 - Clinic 13		
19 - Clinic 14		
20 - Specialty clinic		
21 - Clinic 15		
22 - GHC extended care facility		
23 - Non-GHC, inside GHC area		
24 - Non-GHC, outside GHC area		
25 - Clinic 16		
DE16343 identifies the GHC location where the supply was prescribed, or indicates that it was performed at a non-GHC (FFS) location.		

VARIABLE	DEI5603	HMO FILE 15
Date dispensed		
CODES		
	19760402 to 19810831 - Range on this file (YYYYMMDD)	
	DEI5603 indicates the date the drug prescription was filled.	

DEI5666	VALUE	FREQ	CUM FREQ	%	CUM %
	1	33777	33777	76.88	76.88
	2	9394	43171	21.38	98.26
	3	741	43912	1.69	99.95
	4	23	43935	0.05	100.00

VARIABLE	DEI5666	HMO FILE 15
Prescription status of drug		
CODES		
	- Not applicable, missing	
	1 - Prescription (legend)	
	2 - Over the counter (non-legend)	
	3 - Either (varies by state)	
	4 - Unknown	
	DEI5666 states whether the drug was prescription-only or could be sold over the counter; or whether it required a prescription in some states but not in others; or whether the information about the status of the drug was unobtainable.	

VARIABLE	DE15589	HMO FILE 15
	NDC code	
	DE15589 indicates the first seven digits of the National Drug Code for the drug provided by the physician. A number of codes were added by the HIE to identify drugs not listed in the 1972 NDC Directory. All NDC and supplementary codes used in the claims line-item files can be found in Section V of "Codes Used."	

VARIABLE	DE15590	HMO FILE 15
	1st generic code	
	CODES	
	. - Not applicable, missing	
	DE15590 identifies a generic component of the drug specified by NDC code in DE15589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5591	HMO FILE 15
2nd generic code		
CODES		
.	- Not applicable, missing	
	DEI5591 identifies a generic component of the drug specified by NDC code in DEI5589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5592	HMO FILE 15
3rd generic code		
CODES		
.	- Not applicable, missing	
	DEI5592 identifies a generic component of the drug specified by NDC code in DEI5589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5593	HMO FILE 15
	4th generic code	
	CODES	
	. - Not applicable, missing	
	DEI593 identifies a generic component of the drug specified by NDC code in DEI5589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5594	HMO FILE 15
	5th generic code	
	CODES	
	. - Not applicable, missing	
	DEI594 identifies a generic component of the drug specified by NDC code in DEI5589. Generic substances were identified using a coding system developed by the Health Insurance Experiment. Depending on the composition of the drug, from one to five generic components are specified for each drug. Generic codes are listed in Section VI of "Codes Used."	

VARIABLE	DEI5595	HMO FILE 15
1st therapeutic code		
CODES		
. - Not applicable, missing		
DEI5595 indicates the code for the therapeutic use of the drug specified in DEI5589. Codes were taken from the AMA Drug Evaluations, 1973, by assigning a code number which corresponds with the chapter number in which the drug's therapeutic uses are described. Therapeutic codes used in this file are listed and defined in Section VII of "Codes Used."		

DEI5595	VALUE	FREQ	CUM FREQ	%	CUM %
1	26	84	84	0.19	0.19
2	84	958	1042	2.18	2.37
3	425	1467	2507	0.97	3.34
4	50	1517	2557	0.11	3.46
5	1	1518	2558	0.00	3.46
6	1980	3498	3500	4.51	7.97
7	2	639	4139	0.01	7.97
8	39	4178	4178	1.46	9.43
12	218	4396	4396	0.09	9.52
13	18	4414	4414	0.50	10.01
14	924	5338	5338	0.04	10.05
15	4	5342	5342	2.10	12.16
16	110	5452	5452	0.01	12.17
17	97	5549	5549	0.25	12.42
18	537	6086	6086	0.22	12.64
20	1075	7161	7161	1.22	13.86
21	146	7307	7307	2.45	16.31
22	3871	11178	11178	0.33	16.64
24	118	11296	11296	8.82	25.46
25	458	11754	11754	0.27	25.73
26	447	12201	12201	1.04	26.77
27	360	12561	12561	1.02	27.79
28	108	12669	12669	0.82	28.61
29	190	12859	12859	0.25	28.85
30	57	12916	12916	0.43	29.29
31	102	13018	13018	0.13	29.42
32	536	13554	13554	0.23	29.65
33	9	13563	13563	1.22	30.87
35	2441	16004	16004	0.02	30.89
36	13	16017	16017	5.56	36.45
37	2241	18258	18258	0.03	36.48
39	569	18827	18827	5.10	41.58
41	2057	20884	20884	1.30	42.88
42	1004	21888	21888	4.69	47.56
43	838	22726	22726	2.29	49.85
44	1951	24677	24677	1.91	51.76
45	1376	26053	26053	4.44	56.20
46	2311	28364	28364	3.13	59.33
48	2416	30780	30780	5.26	64.60
49	108	30888	30888	5.50	70.10
50	954	31842	31842	0.25	70.35
51	26	31868	31868	2.17	72.52
52	51	31919	31919	0.06	72.58
				0.12	72.69

(cont.)

VARIABLE DE15595 (cont.)

VALUE	FREQ	CUM FREQ	%	CUM %
53	1124	33043	2.56	75.25
54	109	33152	0.25	75.50
55	780	33932	1.78	77.28
56	96	34028	0.22	77.50
57	360	34388	0.82	78.32
58	6	34394	0.01	78.33
59	1	34395	0.00	78.33
60	1402	35797	3.19	81.53
61	44	35841	0.10	81.63
62	184	36025	0.42	82.05
64	224	36249	0.51	82.56
65	72	36321	0.16	82.72
66	168	36489	0.38	83.10
67	101	36590	0.23	83.33
68	1295	37885	2.95	86.28
69	178	38063	0.41	86.69
70	4	38067	0.01	86.70
71	494	38561	1.13	87.82
72	174	38735	0.40	88.22
73	187	38922	0.43	88.64
74	8	38930	0.02	88.66
78	591	39521	1.35	90.01
79	1230	40751	2.80	92.81
80	320	41071	0.73	93.54
81	682	41753	1.55	95.09
82	138	41891	0.31	95.40
83	118	42009	0.27	95.67
84	15	42024	0.03	95.71
85	1159	43183	2.64	98.35
86	4	43187	0.01	98.36
87	8	43195	0.02	98.37
88	117	43312	0.27	98.64
89	2	43314	0.01	98.65
91	5	43319	0.01	98.66
92	588	43907	1.34	100.00
93	2	43909	0.01	100.00

VARIABLE	DEI5658	HMO FILE 15
Second therapeutic code		
CODES		
. - Not applicable, missing		
DEI5658 indicates the code for a second therapeutic use of the drug identified in DEI5589. Therapeutic codes are listed in Section VII of "Codes Used."		
DEI5658	VALUE	FREQ
1	29004	154
2	154	260
3	106	774
4	514	779
5	4	783
6	45	828
7	1846	2674
8	23	2697
13	33	2730
14	62	2792
16	220	3012
17	7	3019
18	41	3060
20	61	3121
22	1	3122
24	111	3233
25	382	3615
26	944	4559
27	5	4564
28	1029	5593
29	36	5629
30	4	5633
31	144	5777
32	59	5836
33	21	5857
34	68	5925
35	609	6534
37	10	6544
40	39	6583
41	129	6712
42	481	7193
43	191	7384
44	183	7567
45	1	7568
46	135	7703
48	13	7716
50	45	7761
52	18	7779
53	1	7780
55	26	7806
57	23	7829
58	5	7834
59	5	7839
60	144	7983
		(cont.)
		CUM FREQ
		%
		CUM %
		1.03
		1.74
		5.18
		5.22
		5.24
		5.55
		12.36
		18.06
		18.28
		18.70
		20.17
		20.22
		20.49
		20.90
		20.91
		21.65
		24.21
		30.53
		30.57
		37.46
		37.70
		37.73
		38.69
		39.09
		39.23
		39.68
		43.76
		43.83
		44.09
		44.95
		48.18
		49.45
		50.68
		50.69
		51.59
		51.68
		51.98
		52.10
		52.11
		52.28
		52.44
		52.47
		52.50
		53.47

VARIABLE DE15658 (cont.)

VALUE	FREQ	CUM FREQ	%	CUM %
61	1314	9297	8.80	62.27
64	184	9481	1.23	63.50
65	1	9482	0.01	63.51
67	62	9544	0.42	63.92
68	682	10226	4.57	68.49
69	12	10238	0.08	68.57
70	404	10642	2.71	71.28
71	2859	13501	19.15	90.42
72	11	13512	0.07	90.50
73	199	13711	1.33	91.83
74	794	14505	5.32	97.15
78	57	14562	0.38	97.53
79	1	14563	0.01	97.54
80	3	14566	0.02	97.56
81	25	14591	0.17	97.72
83	138	14729	0.92	98.65
85	86	14815	0.58	99.22
87	5	14820	0.03	99.26
88	32	14852	0.21	99.47
92	79	14931	0.53	100.00

DE15659

VALUE	FREQ	CUM FREQ	%	CUM %
.	35574	33	0.40	0.40
4	33	547	6.15	6.54
6	514	599	0.62	7.16
8	52	602	0.04	7.20
13	3	603	0.01	7.21
16	1	799	2.34	9.56
17	196	834	0.42	9.98
18	35	837	0.04	10.01
21	3	1225	4.64	14.65
26	388	1225	12.31	26.96
30	1029	2254	2.15	29.11
31	180	2434	0.20	29.32
35	17	2451	0.54	29.85
39	45	2496	4.59	34.45
41	384	2880	0.02	34.47
44	2	2882	10.26	44.73
45	858	3740	0.01	44.74
55	1	3741	0.12	44.86
57	10	3751	11.09	55.95
59	927	4678	0.01	55.96
60	1	4679	(cont.)	

VARIABLE DE15659 HMO FILE 15

Third therapeutic code

CODES

. - Not applicable, missing

DE15659 indicates the code for a third therapeutic use of the drug identified in DE1589. Therapeutic codes are listed in Section VII of "Codes Used."

VARIABLE DE15659 (cont.)

VALUE	FREQ	CUM FREQ	%	CUM %
63	1100	5779	13.16	69.12
66	2	5781	0.02	69.14
68	4	5785	0.05	69.19
69	1	5786	0.01	69.20
70	5	5791	0.06	69.26
71	184	5975	2.20	71.46
72	404	6379	4.83	76.30
73	48	6427	0.57	76.87
74	2	6429	0.02	76.89
75	206	6635	2.46	79.36
79	14	6649	0.17	79.52
80	1429	8078	17.09	96.62
81	16	8094	0.19	96.81
82	3	8097	0.04	96.84
83	1	8098	0.01	96.85
84	1	8099	0.01	96.87
85	96	8195	1.15	98.02
88	110	8305	1.32	99.33
92	56	8361	0.67	100.00

DE15660

VARIABLE	DE15660	HMO FILE 15
Fourth therapeutic code		
CODES		
.	Not applicable, missing	
DE15660	indicates the code for a fourth therapeutic use of the drug identified in DE15589. Therapeutic codes are listed in Section VII of "Codes Used."	

VALUE	FREQ	CUM FREQ	%	CUM %
39527	4	4	0.09	0.09
13	5	9	0.11	0.20
18	404	413	9.17	9.37
29	792	1205	17.97	27.34
31	940	2145	21.33	48.66
35	27	2172	0.61	49.27
41	66	2238	1.50	50.77
42	5	2243	0.11	50.89
62	296	2539	6.72	57.60
70	1	2540	0.02	57.62
71	631	3171	14.32	71.94
72	50	3221	1.13	73.07
73	50	3271	1.13	74.21
80	1109	4380	25.16	99.37
81	14	4394	0.32	99.68
85	1	4395	0.02	99.71
88	12	4407	0.27	99.98
89	1	4408	0.02	100.00

DEI5661	VALUE	FREQ	CUM FREQ	%	CUM %
	1	43153	4	0.51	0.51
	5	4	408	51.66	52.17
	13	404	417	1.15	53.33
	16	9	467	6.39	59.72
	44	50	470	0.38	60.10
	75	3	486	2.05	62.15
	88	16	782	37.85	100.00
		296			

VARIABLE	DEI5661	HMO FILE 15
	Fifth therapeutic code	
	CODES	
	. - Not applicable, missing	
	DEI5661 indicates the code for a fifth therapeutic use of the drug identified in DEI5589. Therapeutic codes are listed in Section VII of "Codes Used."	

VARIABLE	DEI5588	HMO FILE 15
	Amount provided	
	CODES	
	. - Not applicable, missing	
	DEI5588 indicates a number which identifies the amount of the drug provided (e.g., 40). Refer to DEI5668, dosage form, for an indication of the appropriate unit.	

NOTE: When necessary, the values were converted to metric.

DEI5667	VALUE	FREQ	CUM FREQ	%	CUM %
0	0	90	77	0.18	0.18
1	1	24678	24755	56.29	56.46
2	2	3998	28753	9.12	65.58
3	3	577	29330	1.32	66.90
4	4	591	29921	1.35	68.24
5	5	51	29972	0.12	68.36
6	6	481	30453	1.10	69.46
7	7	16	30469	0.04	69.49
8	8	316	30785	0.72	70.21
9	9	743	31528	1.70	71.91
10	10	51	31579	0.12	72.02
11	11	223	31802	0.51	72.53
12	12	89	31891	0.20	72.74
13	13	8	31899	0.02	72.75
14	14	25	31924	0.06	72.81
15	15	4	31928	0.01	72.82
16	16	1	31929	0.00	72.82
20	20	10	31939	0.02	72.85
21	21	4710	36649	10.74	83.59
22	22	82	36731	0.19	83.78
23	23	84	36815	0.19	83.97
24	24	13	36828	0.03	84.00
25	25	10	36838	0.02	84.02
26	26	1232	38070	2.81	86.83
27	27	4	38074	0.01	86.84
28	28	4165	42239	9.50	96.34
29	29	32	42271	0.07	96.41
30	30	4	42275	0.01	96.42
40	40	1	42276	0.00	96.42
50	50	1	42277	0.00	96.42
60	60	1	42278	0.00	96.43
98	98	1	42279	0.00	96.43
99	99	1566	43845	3.57	100.00

VARIABLE DEI5667 HMO FILE 15

Dosage instructions - quantity

CODES

0 - Not applicable, missing

1 - One quarter

2 - One, 1/2 to one

3 - Two

4 - Three

5 - Four

6 - Five

7 - Six

8 - Varies

9 - Eight

10 - Half (use 1/2 only)

11 - Ten

12 - 1 1/2, 1 - 1 1/2, 1/2 - 1 1/2

13 - Three-quarters

14 - One-third

15 - Two-thirds

20 - Fifteen

21 - Twenty

22 - One or two

23 - Two or three

24 - Three or four

25 - Four or five

26 - Five or six

27 - Sparingly

28 - Liberally

28+ - To, into, on, apply (e.g. cream)

98 - Values over 28 indicate actual dosage quantity

99 - No instructions as to quantity

99 - As directed (only instruction)

DEI5667 indicates the dosage amount for each use of the drug specified in DEI5589, NDC Code. This quantity refers to the form of the drug, which is given in DEI5668.

NOTE: An additional value, code value 16, appears in the frequencies, but is not a true code value and is believed to be a result of data entry errors.

DEI5668	VALUE	FREQ	CUM FREQ	%	CUM %
.	0	90	153	0.35	0.35
1	1	153	27908	63.30	63.65
2	2	27755	28422	1.17	64.82
3	3	514	34354	13.53	78.35
4	4	5932	36371	4.60	82.95
5	5	2017	37358	2.25	85.21
6	6	987	37946	1.34	86.55
7	7	588	43683	13.09	99.63
8	8	5737	43845	0.37	100.00
		162			

VARIABLE DEI5668 HMO FILE 15

Dosage instructions - form

CODES

- . - Not applicable, missing
- 0 - None
- 1 - Capsule, tablet, suppository
- 2 - Teaspoonful(s)
- 3 - Teaspoonful(s)
- 4 - Drop(s)
- 5 - Milliliter (ml) or cubic centimeter (cc)
- 6 - Applicator full
- 7 - Affected area, e.g. cream
- 8 - Units

DEI5668 states the dosage form for each use of the drug specified in DEI5589, NDC Code.

DEI5669 VALUE	FREQ	CUM FREQ	%	CUM %
0	90	44	0.10	0.10
1	44	185	0.32	0.42
2	141	1023	1.91	2.33
3	838	1499	1.09	3.42
4	7434	8933	16.96	20.37
5	16	8949	0.04	20.41
6	11035	19984	25.17	45.58
7	1	19985	0.00	45.58
8	5974	25959	13.63	59.21
9	7993	33952	18.23	77.44
12	5860	39812	13.37	90.80
17	95	39907	0.22	91.02
18	38	39945	0.09	91.11
19	105	40050	0.24	91.35
21	34	40084	0.08	91.42
22	228	40312	0.52	91.94
23	264	40576	0.60	92.54
24	294	40870	0.67	93.22
25	413	41283	0.94	94.16
26	855	42138	1.95	96.11
28	50	42188	0.11	96.22
98	96	42284	0.22	96.44
99	1561	43845	3.56	100.00

VARIABLE DEI5669 HMO FILE 15

Dosage instructions - frequency

CODES

- 0 - Not applicable, missing
- 1 - Every half hour
- 2 - Every 2 hours, 2-3 hours, or 12 times a day
- 3 - Every 3 hours, 3-4 hours, or 8 times a day
- 4 - Every 4 hours, 4-6 hours, or 5-6 times a day (baby feedings)
- 6 - Every six hours, 4 times a day, 3-4 times a day, after meals and at bedtime
- 8 - Every 8 hours, 3 times a day, 2-3 times a day, after meals
- 9 - Every day, at bedtime
- 12 - Every 12 hours, 2 times a day
- 17 - 3 times a week (or 2 weeks a month)
- 18 - Once a week
- 19 - Twice a week (or 1 week a month)
- 20 - Once a month
- 21 - Twice a month
- 22 - Every other day (QOD)
- 23 - 20 or 21 days a month, 5 days a week, 3 weeks a month
- 24 - As directed (UD)
- 25 - 25 days each month
- 26 - As needed (PRN)
- 27 - Every 3 weeks
- 28 - STAT (immediately)
- 98 - No instructions as to time
- 99 - As directed (only instructions)

DEI5669 states the prescribed frequency of use for the drug specified in DEI5589, NDC Code.

NOTE: A code value of 5 appears in the frequencies, but is not a true code value and is believed to be a result of data entry errors.

VARIABLE	DEI5670	HMO FILE 15
Dosage instructions - flexibility		
CODES		
0 - Not applicable, missing		
1 - No additional instructions		
2 - As needed (PRN)		
3 - May repeat if necessary (SOS)		
4 - Averaged (dosage tapering to 0)		
DEI5670 modifies the prescribed dosage frequency given in DEI5669 for the drug listed in DEI5589.		

VARIABLE	DEI5586	HMO FILE 15
Dosage strength		
CODES		
99999 - Not applicable, missing		
99999 - Standard fixed combination drug		
DEI5586 indicates a number which identifies the actual dosage strength of the drug, as measured in the dosage units given in DEI5587.		

DEI5587	VALUE	FREQ	CUM FREQ	%	CUM %
	0	471	4501	10.36	10.36
	1	4501	19235	33.90	44.26
	2	14734	19247	0.03	44.28
	3	12	21677	5.59	49.87
	4	2430	21796	0.27	50.15
	5	119	21797	0.00	50.15
	7	1723	23520	3.96	54.11
	8	12	23532	0.03	54.14
	9	3571	27703	8.22	62.36
	10	618	27721	1.42	63.78
	11	1860	29581	4.28	68.06
	12	264	29845	0.61	68.67
	13	220	30065	0.51	69.17
	14	21	30086	0.05	69.22
	99	13378	43464	30.78	100.00

VARIABLE	DEI5587	HMO FILE 15
	Dosage strength unit	
	CODES	
	0 - Not applicable, missing	
	1 - Strength unit not specified	
	2 - milligrams (mg)	
	3 - grams (gm)	
	4 - units/cubic centimeter (mg/cc), or	
	units/milliliter (u/ml)	
	5 - milligram/vial (mg/vial)	
	6 - grams/vial (gm/vial)	
	7 - percent (%)	
	8 - grains (gr)	
	9 - units (u)	
	10 - micrograms (mcg)	
	11 - 100ths or percent (.00 or %)	
	12 - micrograms/cubic centimeter (mcg/cc)	
	13 - units/gram (u/gm)	
	14 - milligrams/gram (mg/gm)	
	99 - Standard fixed dosage (SF)	
	DEI5587 identifies the unit in which the strength of the drug is measured.	

VARIABLE	DEI2568	HMO FILE 15
	Date of refill	
	CODES	
	19760413 to 19820225 - Not applicable, missing	
	DEI2568 indicates the date the drug prescription was refilled.	

DEI5652	VALUE	FREQ	CUM FREQ	%	CUM %
	0	35205	35205	80.13	80.13
	1	1675	36880	3.81	83.94
	2	1962	38842	4.47	88.41
	3	2675	41517	6.09	94.50
	4	969	42486	2.21	96.70
	5	419	42905	0.95	97.66
	6	657	43562	1.50	99.15
	7	22	43584	0.05	99.20
	8	29	43613	0.07	99.27
	9	10	43623	0.02	99.29
	10	224	43847	0.51	99.80
	11	7	43854	0.02	99.82
	12	45	43899	0.10	99.92
	30	4	43903	0.01	99.93
	32	1	43904	0.00	99.93
	88	12	43916	0.03	99.96
	99	19	43935	0.04	100.00

VARIABLE	DEI5652	HMO FILE 15
Number of refills authorized		
CODES		
. - Not applicable, missing		
DEI5652 indicates the number of refills which were originally authorized by the provider.		

XIII. SUPPLIES DISPENSED HMO FILE 18

INTRODUCTION

This codebook documents primary variables concerning supplies, mainly eyewear, dispensed to GHC participants by opticians and pharmacies.¹ Because no standard values exist for calculating the costs of supplies, researchers were unable to impute charges for supplies provided within the HMO system. Thus, no imputed charges are given in the following codebook. GHC locations where supplies were dispensed are also not found on this file.

Supplies obtained directly from a physician (or other health professional), including eyewear, are shown in File 09. Supplies obtained as part of outpatient care rendered by an institution can be found under "miscellaneous hospital supplies" in the variable Category of Service (DEI5557) in File 11.²

Variables in this file indicate the type of supply dispensed (identified by supply code), the date the supply was dispensed, and the number of units dispensed. Other variables indicate the supply provider and the prescriber (if applicable).

The units of observation in this file are line items representing supplies dispensed to GHC participants.³ For an explanation of common variables used in this codebook, see the final subsection of Sec. II.

¹In only a few cases were supplies obtained from non-GHC supply providers.

²However, such supplies could not be specifically identified, and no quantities could be given.

³Analysts should note that the statistical frequency of a variable in this file represents the number of times it occurs in relation to the unit of observation, *not* the number of participant visits.

CODEBOOK FOR HMO FILE 18

SUPPLIES DISPENSED

DIRECTORY OF VARIABLES - HMO FILE 18
 SUPPLIES DISPENSED

VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK	VARIABLE NAME	DESCRIPTION	PAGE # IN CODEBOOK
FILENAME	Name of file	331	DE15502	Provider number	333
PERSON	Person identifier	331	DE15603	Date dispensed	333
SITE	Site	331	DE15604	Prescribing physician	334
INSTAT	Insurance status	332	DE15605	Diagnosis/problem code	334
CONTYR	Contract year	332	DE15601	Supply code	335
DE16300	SERR number	333	DE15602	Amount provided	335

FILENAME			
VALUE	FREQ	CUM FREQ	CUM %
PE188A	1791	1791	100.00
SITE			
VALUE	FREQ	CUM FREQ	CUM %
2	1791	1791	100.00

VARIABLE	FILENAME	HMO FILE 18
Name of file		
FILENAME is a 6-digit code that uniquely identifies the file. This file name is PE182A.		

VARIABLE	PERSON	HMO FILE 18
Person identifier		
PERSON is an 8-character alphanumeric code that uniquely identifies the participant in the HIE to whom the following data refer. The 2nd character of PERSON designates in which site a participant resided during enrollment in the HIE: A=Dayton; B=Seattle; E=Fitchburg; F=Franklin County; G=Charleston; H=Georgetown County.		

VARIABLE	SITE	HMO FILE 18
Site		
CODES		
2 - Seattle, Washington		
SITE identifies the participant's place of residence when the participant enrolled. All GHC participants lived in the Seattle area.		

VARIABLE	INSTAT	HMO FILE 18
Insurance status		
CODES		
1 - Ever insured (includes HMO experimental group)		
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	1447	1447	80.79	80.79
2	344	1791	19.21	100.00

VARIABLE	CONTYR	HMO FILE 18
Contract year		
CODES		
01 - First year		
02 - Second year		
03 - Third year		
04 - Fourth year		
05 - Fifth year		
CONTYR identifies the participant's contract year of coverage in which the service was performed.		

CONTYR VALUE	FREQ	CUM FREQ	%	CUM %
01	407	407	22.73	22.73
02	355	762	19.82	42.55
03	490	1252	27.36	69.91
04	231	1483	12.90	82.80
05	308	1791	17.20	100.00

VARIABLE DE16300	HMO FILE 18
SERR number	
DE16300 indicates an identifier number which is used to link the line items from a given SERR.	

VARIABLE DE15502	HMO FILE 18
Provider number	
DE15502 is an 8-character code which refers, in this file, to the optician or supply provider who dispensed the supply listed in DE15601, Supply Code. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

NOTE: DE15502 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE DE15603	HMO FILE 18
Date dispensed	
CODES	
19760510 to 19810831 - Range on the file (YYYYMMDD)	
DE15603 indicates the date the supply was dispensed.	

VARIABLE	DE15604	HMO FILE 18
	Prescribing physician	
	CODES	
	blank - Not applicable, missing	
	DE15604 indicates the identifier number of the provider who prescribed or suggested the initial supply. For further information on the provider, this number can be linked to information in the provider file of the HIE reference series.	

NOTE: DE15604 begins with the letter "C" for GHC providers and the letter "E" for FFS providers.

VARIABLE	DE15605	HMO FILE 18
	Diagnosis/problem code	
	CODES	
	blank - Not applicable, missing	
	DE15605 indicates the code of the primary diagnosed condition. Diagnosis codes used in the HIE claims files are listed in Section I of "Codes Used."	

VARIABLE	DE15601	HMO FILE 18
Supply code		
DE15601 identifies the supply obtained. Each supply was identified using a coding system developed by the HIE. Supply codes are listed in Section III of "Codes Used."		

VARIABLE	DE15602	HMO FILE 18
Amount provided		
CODES		
DE15602 indicates the number of units of the supply dispensed. This quantity refers to the type of supply given in DE15601, Supply Code.		

DE15602	VALUE	FREQ	CUM FREQ	%	CUM %
1	944	944	944	52.71	52.71
2	679	679	1623	37.91	90.62
3	2	2	1625	0.11	90.73
4	3	3	1628	0.17	90.90
5	1	1	1629	0.06	90.96
6	6	6	1635	0.34	91.29
10	7	7	1642	0.39	91.68
12	25	25	1667	1.40	93.08
14	1	1	1668	0.06	93.13
16	1	1	1669	0.06	93.19
20	4	4	1673	0.22	93.41
22	1	1	1674	0.06	93.47
24	4	4	1678	0.22	93.69
25	9	9	1687	0.50	94.19
28	2	2	1689	0.11	94.31
30	5	5	1694	0.28	94.58
36	48	48	1742	2.68	97.26
50	5	5	1747	0.28	97.54
60	2	2	1749	0.11	97.66
72	1	1	1750	0.06	97.71
99	41	41	1791	2.29	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

¹Participation 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.

²In 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

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

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

	<i>3-yr Term</i>	<i>5-yr Term</i>
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.

⁵The 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

⁶The 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, AC3, 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 to 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 to LI25. *Vol. 2: Codebooks for Health Maintenance Organization Claims*, by C. E. Peterson, M. Nelsen, E. S. Bloomfield, and D. L. Wesley, 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

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, MH2A, 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

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

Claims Line-Item Series

- 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

TO BE ISSUED (cont.)

HIE Reference Series

- RF2. Providers cited in HIE data
- RF3. User's guide to HIE data

Insurance Preference Series

- IP1. Maximum-dollar-expenditures and fixed-dollar-limit families

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

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

Appendix C FILE DICTIONARIES

This appendix contains the 11 file dictionaries for the character version of the health maintenance organization claims line-item files. Each dictionary has two parts: basic identifying data, and listing by location.

Table C.1

HMO FILE 01 BASIC IDENTIFYING DATA

Data file name	PE012A01.PUF.DATA
Creation Date	July 16, 1986
Variable format	Character
Total number of data elements	34
Header length (bytes)	20
Primary data length (bytes)	224
Record length (bytes)	244

Table C.2

HMO FILE 01
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	DEI5511	109	8	I
PERSON	7	8	A	DEI5512	117	8	I
SITE	15	1	A	DEI5556	125	8	I
INSTAT	16	1	A	DEI5557	133	8	I
CONTYR	17	2	A	IMPCHRG	141	8	F
FILLER	19	2	A	DEI5522	149	8	A
DEI6300	21	8	A	DEI5523	157	8	I
DEI5502	29	8	A	DEI5524	165	8	A
DEI5513	37	8	I	DEI5525	173	8	A
DEI5555	45	8	I	DEI5526	181	8	I
DEI5514	53	8	I	DEI5527	189	8	A
DEI5520	61	8	I	DEI5528	197	8	A
DEI5521	69	8	A	DEI5529	205	8	I
DEI5515	77	8	A	DEI5530	213	8	A
DEI5508	85	8	A	DEI5531	221	8	A
DEI5509	93	8	A	DEI5532	229	8	I
DEI5519	101	8	I	DEI5533	237	8	A

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 and "F" data to 8.2 format.

Table C.3

HMO FILE 03
BASIC IDENTIFYING DATA

Data file name	PE032A01.PUF.DATA
Creation Date	July 18, 1986
Variable format	Character
Total number of data elements	41
Header length (bytes)	20
Primary data length (bytes)	280
Record length (bytes)	300

Table C.4

HMO FILE 03
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	IMPCHRG	141	8	F
PERSON	7	8	A	DEI6303	149	8	A
SITE	15	1	A	GHCUNITS	157	8	F
INSTAT	16	1	A	DEI6343	165	8	I
CONTYR	17	2	A	DEI5596	173	8	I
FILLER	19	2	A	DEI5522	181	8	A
DEI6300	21	8	A	DEI5523	189	8	I
DEI5502	29	8	A	DEI5524	197	8	A
DEI5513	37	8	I	DEI5597	205	8	I
DEI5555	45	8	I	DEI5525	213	8	A
DEI5514	53	8	I	DEI5526	221	8	I
DEI5584	61	8	I	DEI5527	229	8	A
DEI5515	69	8	A	DEI5598	237	8	I
DEI5509	77	8	A	DEI5528	245	8	A
DEI5511	85	8	I	DEI5529	253	8	I
DEI5512	93	8	I	DEI5530	261	8	A
DEI5566	101	8	I	DEI5599	269	8	I
DEI5606	109	8	I	DEI5531	277	8	A
DEI5607	117	8	I	DEI5532	285	8	I
DEI5608	125	8	I	DEI5533	293	8	A
CRVSUNIT	133	8	F				

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 = bbbbbb.bb ("b" meaning blank). To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integers and "F" data to 8.2 format.

Table C.5

HMO FILE 04
BASIC IDENTIFYING DATA

Data file name	PE042A01.PUF.DATA
Creation Date	July 18, 1986
Variable format	Character
Total number of data elements	52
Header length (bytes)	20
Primary data length (bytes)	368
Record length (bytes)	388

Table C.6

HMO FILE 04
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	DEI5525	181	8	A
PERSON	7	8	A	DEI5526	189	8	I
SITE	15	1	A	DEI5527	197	8	A
INSTAT	16	1	A	DEI5575	205	8	I
CONTYR	17	2	A	DEI5577	213	8	I
FILLER	19	2	A	DEI5598	221	8	I
DEI6300	21	8	A	DEI5528	229	8	A
DEI5502	29	8	A	DEI5529	237	8	I
DEI5503	37	8	A	DEI5530	245	8	A
DEI5505	45	8	A	DEI5578	253	8	I
DEI5565	53	8	A	DEI5580	261	8	I
DEI5568	61	8	A	DEI5599	269	8	I
DEI6308	69	8	A	DEI5531	277	8	A
DEI5570	77	8	A	DEI5532	285	8	I
DEI5571	85	8	A	DEI5533	293	8	A
DEI5511	93	8	I	DEI5581	301	8	I
DEI5512	101	8	I	DEI5583	309	8	I
DEI5566	109	8	I	DEI5632	317	8	I
DEI6343	117	8	I	DEI5666	325	8	I
DEI5596	125	8	I	DEI5589	333	8	A
DEI5522	133	8	A	DEI5590	341	8	I
DEI5523	141	8	I	DEI5591	349	8	I
DEI5524	149	8	A	DEI5592	357	8	I
DEI5572	157	8	I	DEI5593	365	8	I
DEI5574	165	8	I	DEI5594	373	8	I
DEI5597	173	8	I	DEI5595	381	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 = bbbbbb.bb ("b" meaning blank). To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integers and "F" data to 8.2 format.

Table C.7

HMO FILE 05
BASIC IDENTIFYING DATA

Data file name	PE052A01.PUF.DATA
Creation Date	July 18, 1986
Variable format	Character
Total number of data elements	45
Header length (bytes)	20
Primary data length (bytes)	312
Record length (bytes)	332

Table C.8

HMO FILE 05
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	DEI5572	157	8	I
PERSON	7	8	A	DEI5574	165	8	I
SITE	15	1	A	DEI5597	173	8	I
INSTAT	16	1	A	DEI5525	181	8	A
CONTYR	17	2	A	DEI5526	189	8	I
FILLER	19	2	A	DEI5527	197	8	A
DEI6300	21	8	A	DEI5575	205	8	I
DEI5502	29	8	A	DEI5577	213	8	I
DEI5503	37	8	A	DEI5598	221	8	I
- DEI5505	45	8	A	DEI5528	229	8	A
DEI5565	53	8	A	DEI5529	237	8	I
DEI5568	61	8	A	DEI5530	245	8	A
DEI6308	69	8	A	DEI5578	253	8	I
DEI5570	77	8	A	DEI5580	261	8	I
DEI5571	85	8	A	DEI5599	269	8	I
DEI5511	93	8	I	DEI5531	277	8	A
DEI5512	101	8	I	DEI5532	285	8	I
DEI5566	109	8	I	DEI5533	293	8	A
DEI6343	117	8	I	DEI5581	301	8	I
DEI5596	125	8	I	DEI5583	309	8	I
DEI5522	133	8	A	DEI5601	317	8	I
DEI5523	141	8	I	DEI5654	325	8	I
DEI5524	149	8	A				

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 = bbbbbb.bb ("b" meaning blank). To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integers and "F" data to 8.2 format.

Table C.9

HMO FILE 06
BASIC IDENTIFYING DATA

Data file name	PE062A01.PUF.DATA
Creation Date	July 18, 1986
Variable format	Character
Total number of data elements	51
Header length (bytes)	20
Primary data length (bytes)	360
Record length (bytes)	380

Table C.10
HMO FILE 06
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	GHCUNITS	173	8	F
PERSON	7	8	A	DEI6343	181	8	I
SITE	15	1	A	DEI5596	189	8	I
INSTAT	16	1	A	DEI5522	197	8	A
CONTYR	17	2	A	DEI5523	205	8	I
FILLER	19	2	A	DEI5524	213	8	A
DEI6300	21	8	A	DEI5572	221	8	I
DEI5502	29	8	A	DEI5574	229	8	I
DEI5555	37	8	I	DEI5597	237	8	I
DEI5584	45	8	I	DEI5525	245	8	A
DEI5503	53	8	A	DEI5526	253	8	I
DEI5505	61	8	A	DEI5527	261	8	A
DEI5565	69	8	A	DEI5575	269	8	I
DEI5568	77	8	A	DEI5577	277	8	I
DEI6308	85	8	A	DEI5598	285	8	I
DEI5570	93	8	A	DEI5528	293	8	A
DEI5571	101	8	A	DEI5529	301	8	I
DEI5511	109	8	I	DEI5530	309	8	A
DEI5512	117	8	I	DEI5578	317	8	I
DEI5566	125	8	I	DEI5580	325	8	I
DEI5606	133	8	I	DEI5599	333	8	I
DEI5607	141	8	I	DEI5531	341	8	A
CRVSUNIT	149	8	F	DEI5532	349	8	I
IMPCHRG	157	8	F	DEI5533	357	8	A
DEI6303	165	8	A	DEI5581	365	8	I
				DEI5583	373	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 = bbbbbb.bb ("b" meaning blank). To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integers and "F" data to 8.2 format.

Table C.11

HMO FILE 08
BASIC IDENTIFYING DATA

Data file name	PE082A01.PUF.DATA
Creation Date	July 18, 1986
Variable format	Character
Total number of data elements	57
Header length (bytes)	20
Primary data length (bytes)	408
Record length (bytes)	428

Table C.12

HMO FILE 08
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	DEI5577	205	8	I
PERSON	7	8	A	DEI5598	213	8	I
SITE	15	1	A	DEI5528	221	8	A
INSTAT	16	1	A	DEI5529	229	8	I
CONTYR	17	2	A	DEI5530	237	8	A
FILLER	19	2	A	DEI5578	245	8	I
DEI6300	21	8	A	DEI5580	253	8	I
DEI5502	29	8	A	DEI5599	261	8	I
DEI5555	37	8	I	DEI5531	269	8	A
DEI5584	45	8	I	DEI5532	277	8	I
DEI5503	53	8	A	DEI5533	285	8	A
DEI5505	61	8	A	DEI5581	293	8	I
DEI5568	69	8	A	DEI5583	301	8	I
DEI5570	77	8	A	DEI5666	309	8	I
DEI5511	85	8	I	DEI5589	317	8	A
DEI5512	93	8	I	DEI5590	325	8	I
DEI5566	101	8	I	DEI5591	333	8	I
DEI6343	109	8	I	DEI5592	341	8	I
DEI5596	117	8	I	DEI5593	349	8	I
DEI5522	125	8	A	DEI5594	357	8	I
DEI5523	133	8	I	DEI5595	365	8	I
DEI5524	141	8	A	DEI5588	373	8	I
DEI5572	149	8	I	DEI5667	381	8	I
DEI5574	157	8	I	DEI5668	389	8	I
DEI5597	165	8	I	DEI5669	397	8	I
DEI5525	173	8	A	DEI5670	405	8	I
DEI5526	181	8	I	DEI5586	413	8	I
DEI5527	189	8	A	DEI5587	421	8	I
DEI5575	197	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 = bbbbbb., I = bbbbbb., and F = bbbb.bb ("b" meaning blank). To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integers and "F" data to 8.2 format.

Table C.13

HMO FILE 09
BASIC IDENTIFYING DATA

Data file name	PE092A01.PUF.DATA
Creation Date	July 18, 1986
Variable format	Character
Total number of data elements	44
Header length (bytes)	20
Primary data length (bytes)	304
Record length (bytes)	324

Table C.14

HMO FILE 09
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	DEI5572	149	8	I
PERSON	7	8	A	DEI5574	157	8	I
SITE	15	1	A	DEI5597	165	8	I
INSTAT	16	1	A	DEI5525	173	8	A
CONTYR	17	2	A	DEI5526	181	8	I
FILLER	19	2	A	DEI5527	189	8	A
DEI6300	21	8	A	DEI5575	197	8	I
DEI5502	29	8	A	DEI5577	205	8	I
DEI5555	37	8	I	DEI5598	213	8	I
DEI5584	45	8	I	DEI5528	221	8	A
DEI5503	53	8	A	DEI5529	229	8	I
DEI5505	61	8	A	DEI5530	237	8	A
DEI5568	69	8	A	DEI5578	245	8	I
DEI5570	77	8	A	DEI5580	253	8	I
DEI5511	85	8	I	DEI5599	261	8	I
DEI5512	93	8	I	DEI5531	269	8	A
DEI5566	101	8	I	DEI5532	277	8	I
DEI6343	109	8	I	DEI5533	285	8	A
DEI5596	117	8	I	DEI5581	293	8	I
DEI5522	125	8	A	DEI5583	301	8	I
DEI5523	133	8	I	DEI5601	309	8	I
DEI5524	141	8	A	DEI5602	317	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 = bbbbbb.bb ("b" meaning blank). To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integers and "F" data to 8.2 format.

Table C.15

HMO FILE 10
BASIC IDENTIFYING DATA

Data file name	PE102A01.PUF.DATA
Creation Date	August 8, 1986
Variable format	Character
Total number of data elements	66
Header length (bytes)	20
Primary data length (bytes)	480
Record length (bytes)	500

Table C.16

HMO FILE 10
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	DEI5597	237	8	I
PERSON	7	8	A	DEI5525	245	8	A
SITE	15	1	A	DEI5526	253	8	I
INSTAT	16	1	A	DEI5527	261	8	A
CONTYR	17	2	A	DEI5575	269	8	I
FILLER	19	2	A	DEI5577	277	8	I
DEI6300	21	8	A	DEI5598	285	8	I
DEI5502	29	8	A	DEI5528	293	8	A
DEI5555	37	8	I	DEI5529	301	8	I
DEI5584	45	8	I	DEI5530	309	8	A
DEI5503	53	8	A	DEI5578	317	8	I
DEI5505	61	8	A	DEI5580	325	8	I
DEI5565	69	8	A	DEI5599	333	8	I
DEI5568	77	8	A	DEI5531	341	8	A
DEI6308	85	8	A	DEI5532	349	8	I
DEI5570	93	8	A	DEI5533	357	8	A
DEI5571	101	8	A	DEI5581	365	8	I
DEI5511	109	8	I	DEI5583	373	8	I
DEI5512	117	8	I	DEI5666	381	8	I
DEI5566	125	8	I	DEI5589	389	8	A
DEI5606	133	8	I	DEI5590	397	8	I
DEI5607	141	8	I	DEI5591	405	8	I
CRVSUNIT	149	8	F	DEI5592	413	8	I
IMPCHRG	157	8	F	DEI5593	421	8	I
DEI6303	165	8	A	DEI5594	429	8	I
GHCUNITS	173	8	F	DEI5595	437	8	I
DEI6343	181	8	I	DEI5665	445	8	I
DEI5596	189	8	I	DEI5613	453	8	A
DEI5522	197	8	A	DEI5614	461	8	I
DEI5523	205	8	I	DEI5615	469	8	I
DEI5524	213	8	A	DEI5616	477	8	I
DEI5572	221	8	I	DEI5619	485	8	I
DEI5574	229	8	I	DEI5602	493	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 = bbbbbb., I = bbbbbb., and F = bbbbbb.bb ("b" meaning blank). To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integers and "F" data to 8.2 format.

Table C.17

HMO FILE 11
BASIC IDENTIFYING DATA

Data file name	PE112A01.PUF.DATA
Creation Date	August 13, 1986
Variable format	Character
Total number of data elements	42
Header length (bytes)	20
Primary data length (bytes)	288
Record length (bytes)	308

Table C.18

HMO FILE 11
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	DEI6343	141	8	I
PERSON	7	8	A	DEI5522	149	8	A
SITE	15	1	A	DEI5523	157	8	I
INSTAT	16	1	A	DEI5524	165	8	A
CONTYR	17	2	A	DEI5572	173	8	I
FILLER	19	2	A	DEI5574	181	8	I
DEI6300	21	8	A	DEI5525	189	8	A
DEI5502	29	8	A	DEI5526	197	8	I
DEI5555	37	8	I	DEI5527	205	8	A
DEI5584	45	8	I	DEI5575	213	8	I
DEI5503	53	8	A	DEI5577	221	8	I
DEI5505	61	8	A	DEI5528	229	8	A
DEI5565	69	8	A	DEI5529	237	8	I
DEI5568	77	8	A	DEI5530	245	8	A
DEI6308	85	8	A	DEI5578	253	8	I
DEI5570	93	8	A	DEI5580	261	8	I
DEI5571	101	8	A	DEI5531	269	8	A
DEI5511	109	8	I	DEI5532	277	8	I
DEI5512	117	8	I	DEI5533	285	8	A
DEI5566	125	8	I	DEI5581	293	8	I
DEI5557	133	8	I	DEI5583	301	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 and "F" data to 8.2 format.

Table C.19

HMO FILE 15
BASIC IDENTIFYING DATA

Data file name	PE152A01.PUF.DATA
Creation Date	August 10, 1986
Variable format	Character
Total number of data elements	32
Header length (bytes)	20
Primary data length (bytes)	208
Record length (bytes)	228

Table C.20

HMO FILE 15
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	DEI5593	101	8	I
PERSON	7	8	A	DEI5594	109	8	I
SITE	15	1	A	DEI5595	117	8	I
INSTAT	16	1	A	DEI5658	125	8	I
CONTYR	17	2	A	DEI5659	133	8	I
FILLER	19	2	A	DEI5660	141	8	I
DEI6300	21	8	A	DEI5661	149	8	I
DEI6343	29	8	I	DEI5588	157	8	I
DEI5603	37	8	I	DEI5667	165	8	I
DEI5604	45	8	A	DEI5668	173	8	I
DEI2567	53	8	A	DEI5669	181	8	I
DEI5666	61	8	I	DEI5670	189	8	I
DEI5589	69	8	A	DEI5586	197	8	I
DEI5590	77	8	I	DEI5587	205	8	I
DEI5591	85	8	I	DEI2568	213	8	I
DEI5592	93	8	I	DEI5652	221	8	A

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 = bbbbbb.bb ("b" meaning blank). To obtain the appropriate positive and missing values, read all values as alphanumeric, then convert "I" data to integers and "F" data to 8.2 format.

Table C.21

HMO FILE 18
BASIC IDENTIFYING DATA

Data file name	PE182A01.PUF.DATA
Creation Date	July 18, 1986
Variable format	Character
Total number of data elements	13
Header length (bytes)	20
Primary data length (bytes)	56
Record length (bytes)	76

Table C.22

HMO FILE 18
LISTING BY LOCATION

Name	Location	Length	Type	Name	Location	Length	Type
FILENAME	1	6	A	DEI5502	29	8	A
PERSON	7	8	A	DEI5603	37	8	I
SITE	15	1	A	DEI5604	45	8	A
INSTAT	16	1	A	DEI5605	53	8	A
CONTYR	17	2	A	DEI5601	61	8	I
FILLER	19	2	A	DEI5602	69	8	I
DEI6300	21	8	A				

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 and "F" data to 8.2 format.

Appendix D

HOSPITAL/PCF SERR

1. Last Name of Patient		First Name		MI	2. GHC Medical History Number	
3. HIS Plan	4. Patient Family No.		5. Patient Individual No.		6. Hospital Location	
7. Was illness or injury employment-related? Yes <input type="checkbox"/> No <input type="checkbox"/>		10. Discharged to: <input type="checkbox"/> Home <input type="checkbox"/> _____		11. Date of Admission		12. Date of Discharge
8. Was illness or injury accident-related? Yes <input type="checkbox"/> No <input type="checkbox"/>						
9. Date of Injury/or Accident: _____						

GHC Business Office Will Complete the Items Below and Will Attach a Ledger "Bill"

13. Name of Admitting Physician:		14. Patient Status: <input type="checkbox"/> Discharged <input type="checkbox"/> Deceased		15. If patient was in a private room, state whether private room was: <input type="checkbox"/> The patient's choice <input type="checkbox"/> The only type of room available <input type="checkbox"/> Medically necessary	
16. Final Diagnosis(es):				PLEASE ATTACH LEDGER "BILL"	
17. Operations or Summary of Treatment:					
				18. This form completed by:	
				_____ Date completed: _____	

Appendix E
FFS CLAIMS LINE-ITEM FILES

File	Sample	Variables
(01) Inpatient Services Billed by Institutions	Hospital claims related to an inpatient stay in a hospital or nursing facility	Diagnoses, categories of hospital service, charges, noncovered charges
(03) Inpatient Physician Procedures Billed by Institutions	Hospital claims for hospital- employed physician procedures and services	Physician services, charges, noncovered charges, diagnoses, referral physicians
(04) Drugs Prescribed by Physicians	Drug prescriptions or suggestions written by a physician or independent health specialist	Prescribed drugs, generic codes, symptoms, diagnoses, treatment history/status (no charges)
(05) Supplies Prescribed by Physicians	Supply prescriptions or suggestions written by a physician or health specialist	Supplies, symptoms, diagnoses, treatment history/status (no charges)
(06) Services Rendered by Physicians	Claims by independent physicians and health professionals for inpatient and outpatient services	Services and diagnoses, symptoms, referral physicians, treatment history/status, charges, noncovered charges
(08) Drugs Sold by Physicians	Physician or health specialist claims for drugs sold to the patient by physician or specialist	Drugs, generic codes, symptoms, diagnoses, dosage instructions, treatment history/status, charges, noncovered charges
(09) Supplies Sold by Physicians	Physician or health specialist claims for supplies sold to the patient by physician or specialist	Supplies, symptoms, diagnoses, treatment history/status, charges, noncovered charges

Appendix E (cont.)

FFS CLAIMS LINE-ITEM FILES

File		Sample	Variables
(10)	Injections Administered by Physicians	Physician or health specialist claims for injections administered	Injected drugs, generic codes, symptoms, diagnoses, treatment history/status, charges, noncovered charges
(11)	Outpatient Services Billed by Institutions	Hospital claims for outpatient services	Diagnoses, services, symptoms, treatment history/status, charges, noncovered charges
(12)	Services Rendered by Dentists	Claims for dental services rendered	Symptoms, treatment plan, dental services, charges, noncovered charges
(13)	Drugs Prescribed by Dentists	Drug prescriptions or suggestions written by a dental provider	Drugs, generic codes, treatment plan, symptoms (no charges)
(15)	Drugs Purchased	Claims for drugs purchased other than from a physician or specialist (e.g., at pharmacy)	Drugs purchased, dosage instructions, generic codes, charges, noncovered charges
(16)	Supplies Purchased from Pharmacies	Claims for supplies purchased primarily at pharmacies (eyeglasses and hearing aids not included)	Supplies purchased, diagnoses, charges, noncovered charges
(18)	Supplies Purchased from Nonpharmacy Suppliers	Claims for supplies purchased primarily from opticians and nonpharmacy suppliers (includes eyeglasses and hearing aids)	Supplies purchased, diagnoses, charges, noncovered charges

Appendix F

GHC CODES

GHC Code	Verbal Description	CRVS Equivalent
MM	Visit reported by participant, but not in GHC record	90051
VM	Nursing visit, minimal visit	90030
V1	Brief return visit	90040
V2	Brief initial visit	90050
V3	Intermediate visit	90060
V4	Extended visit	90070
ERM	Nursing service ER, minimal ER visit	90530
ER1	Brief return visit ER	90540
ER2	Brief initial visit ER	90550
ER3	Intermediate visit ER	90560
ER4	Extended visit ER	90570
PE11	Camp physical exam (PE), any age, brief	90040
PE14	Well baby check only, under 1 year	90764
PE15	Well baby check only, 1-4 years	90763
PE2	Intermediate PE	90060
PE3	Annual PE	90088
PE4N	Comprehensive PE, initial (new)	90020
PE4R	Comprehensive PE, repeat	90080
C1	Consult, limited exam	90600
C2	Consult, extensive	90610
C3	Consult, comprehensive	90620
C4	Consult, unusual complexity	90630
DW1	Diagnostic workup, established patient, moderate	90060
DW2	Diagnostic workup, established patient, extensive	90070
DW31	Diagnostic workup, new patient, moderate	90020
DW32	Diagnostic workup, new patient, extensive	90080
NN	Nursing home call (new)	90400
NR	Nursing home call (established)	90451
E11	Eye exam, intermediate	92012
E12	Eye exam, comprehensive with refraction	92014
E13	Eye exam, comprehensive without refraction	92014-29
E14	Eye exam for contacts ("K" reading)	92310
PT1	Physical therapy	97000
PT2	Physical therapy	97050
PT3	Physical therapy	97100
PT4	Physical therapy	97200-97541
VP1-VP4	Prenatal visit (before 6/2/78, abstracted as V1-V4), first post-partum visit	59400-01
VSB1-VSB4	Pre-op visit (before 6/2/78, abstracted as V1-V4)	surgery CRVS-01
VSA1-VSA4	Post-op visit (if within CRVS follow-up days--otherwise abstracted as V1-V4)	surgery CRVS-01

GHC CODES FOR MENTAL HEALTH VISITS

A four-digit code is used. The first digit indicates the type of therapy, the second digit indicates the amount of professional time involved, the third digit indicates the number of patients treated, and the fourth digit indicates the number of therapists involved in the therapy.

First Digit:
Type of Therapy

- 1 = individual therapy (IT)
- 2 = group therapy (GT)
- 3 = family therapy (FT)
- 4 = individual diagnostic evaluation (IDE)
- 5 = family diagnostic evaluation (FDE)
- 6 = individual psychological evaluation (IPE)
- 7 = group psychological evaluation (GPE)

Third Digit:
Number of Patients

- 1 = 1 patient
- 2 = 2 patients in family therapy
- 3 = 3 patients in family therapy
- 4 = 4 patients in family therapy
- 5 = 1 to 15 patients (or undetermined number of patients) in group therapy or 5 patients in FT or FDE
- 6 = 16 or more patients in group therapy or 6 patients in FT or FDE
- 7 = 7 patients in FT or FDE
- 8 = 8 patients in FT or FDE
- 9 = 9 or more patients in FT or FDE

Second Digit:
Professional Time

- 1 = 15 minutes
- 2 = 30 minutes
- 3 = 60 minutes
- 4 = 90 minutes (never used for GT)
- 5 = 120 minutes (never used for GT)
- 6 = 61-120 minutes (used only for GT)
- 7 = 121-240 minutes (used only for GT)
- 8 = 241 or more minutes (used only for GT)
- 9 = additional 30 minute time periods (above 120 minutes) for individual or family therapy only)
- Z = time unspecified

Fourth Digit:
Number of Therapists

- 1 = 1 therapist
- 2 = 2+ therapists
- 3 = undetermined number of therapists

Appendix G
NONPRESCRIPTION DRUGS COVERED BY THE HIE
FOR CERTAIN CONDITIONS

Condition	Nonprescription drugs covered
Chronic Allergic (respiratory) Conditions	Decongestants Antihistamines
Arthritis/Rheumatism (spondylolisthesis)	Aspirin and similar aspirin-containing preparations
Diabetes	Insulin and associated supplies
Family Planning	Contraceptive substances
Chronic Lower Gastrointestinal Disease (enteritis, colitis, diverticulitis, hemorrhoidal disease, chronic constipation)	Stool softeners Bulk formers Laxatives Suppositories Hemorrhoidal preparations
Chronic Upper Gastrointestinal Disease (peptic ulcer, duodenal ulcer, gastric or stomach ulcer, esophagitis, gastrectomy, etc.)	Antacids Digestive enzymes
Pregnancy	Iron preparations Prenatal vitamins Stool softeners Bulk formers Laxatives
Nursing Mother	Vitamins
Chronic Respiratory Disease	Bronchial dilators Expectorants Cough suppressants
Chronic Skin Conditions:	
Acne	Anti-acne agents
Psoriasis, atopic dermatitis	Anti-psoriatic agents
Eczema, xerosis	Anti-eczema agents
Chronic Thrombophlebitis, Cardiac Valvular Disease, Thrombosis	Aspirin

GLOSSARY

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.
<i>Codes Used</i>	Shorthand term for the reference volume containing the codes and code definitions used in the claims files.
Contract year	Administrative unit of time for enrollees; year period(s) reckoned from date family signed enrollment contract. First contract year began on enrollment date, second contract year began on first anniversary of enrollment, and so on.
CRVS code	<i>California Relative Value Studies</i> code, a five-digit code created by the California Medical Association to define procedures and services performed by physicians and health professionals.
DEI	A variable prefix for primary variables that stands for "data element indicator."
Exit	Departure from the experiment after completion of assigned enrollment term, three or five years.
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.
HICDA codes	Codes that define the diagnoses of physicians and health professionals. HICDA codes were taken from the <i>Hospital Adaptation of the ICDA (International Classification of Disease Adapted for Use in the United States)</i> .
HIE	Health Insurance Experiment.

HIE-insured	Enrollee assigned to an experimental health insurance plan paid by the HIE (plans A-0, described on p. 3). 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.
Line item	A record of a service, drug or supply rendered by a provider to an HIE participant.
MDE	Maximum dollar expenditure. The maximum out-of-pocket amount to be paid by an HIE-insured family before health care was free. The amount was a function of the family's assigned insurance plan and family income.
MER	Medical Expense Report, the insurance claim forms used by the HIE. Different types of MERs were used for different types of providers.
NAMCS codes	Codes that define a participant's reasons or symptoms for a health care visit. NAMCS codes were taken from the <i>National Ambulatory Medical Care Survey: Symptom Classification</i> .
NDC	National Drug Code.
Participant	Anyone with a record in the HIE database; includes baseline-only participants and enrollees.
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.
SERR	Services Rendered Reports; documents used by the HIE to record information concerning GHC services. They were designed to gather the same information as MERs.

