MEPS HC-033D:
1999 Hospital Inpatient Stays

August 2002

Agency for Healthcare Research and Quality
Center for Cost and Financing Studies

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A. Data Use Agreement

Individual identifiers have been removed from the microdata contained in the files on this CD-ROM. Nevertheless, under sections 308 (d) and 903 (c) of the Public Health Service Act (42 U.S.C. 242m and 42 U.S.C. 299 a-1), data collected by the Agency for Healthcare Research and Quality (AHRQ) and/or the National Center for Health Statistics (NCHS) may not be used for any purpose other than for the purpose for which they were supplied; any effort to determine the identity of any reported cases, is prohibited by law.

Therefore in accordance with the above referenced Federal statute, it is understood that:

1. No one is to use the data in this data set in any way except for statistical reporting and analysis.

2. If the identity of any person or establishment should be discovered inadvertently, then (a) no use will be made of this knowledge, (b) the Director, Office of Management, AHRQ will be advised of this incident, (c) the information that would identify any individual or establishment will be safeguarded or destroyed, as requested by AHRQ, and (d) no one else will be informed of the discovered identity.

3. No one will attempt to link this data set with individually identifiable records from any data sets other than the Medical Expenditure Panel Survey or the National Health Interview Survey.

By using these data you signify your agreement to comply with the above-stated statutorily based requirements, with the knowledge that deliberately making a false statement in any matter within the jurisdiction of any department or agency of the Federal Government violates 18 U.S.C. 1001 and is punishable by a fine of up to $10,000 or up to 5 years in prison.

The Agency for Healthcare Research and Quality requests that users cite AHRQ and the Medical Expenditure Panel Survey as the data source in any publications or research based upon these data.

B. Background

The Medical Expenditure Panel Survey (MEPS) provides nationally representative estimates of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian noninstitutionalized population. MEPS is cosponsored by the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics (NCHS).

MEPS is a family of three surveys. The Household Component (HC) is the core survey and forms the basis for the Medical Provider Component (MPC) and part of the Insurance Component (IC). Together these surveys yield comprehensive data that provide national estimates of the level and distribution of health care use and expenditures, support health services research, and can be used to assess health care policy implications.

MEPS is the third in a series of national probability surveys conducted by AHRQ on the financing and use of medical care in the United States. The National Medical Care Expenditure Survey (NMCES) was conducted in 1977, and the National Medical Expenditure Survey (NMES) was conducted in 1987. Since 1996, MEPS has continued this series with design enhancements and efficiencies that provide a more current data resource to capture the changing dynamics of the health care delivery and insurance system.

The design efficiencies incorporated into MEPS are in accordance with the Department of Health and Human Services (DHHS) Survey Integration Plan of June 1995, which focused on consolidating DHHS surveys, achieving cost efficiencies, reducing respondent burden, and enhancing analytical capacities. To advance these goals, MEPS includes linkage with the National Health Interview Survey (NHIS)--a survey conducted by NCHS from which the sample for the MEPS HC is drawn--and enhanced longitudinal data collection for core survey components. The MEPS HC augments NHIS by selecting a sample of NHIS respondents, collecting additional data on their health care expenditures, and linking these data with additional information collected from the respondents' medical providers, employers, and insurance providers.

1.0   Household Component

The MEPS HC, a nationally representative survey of the U.S. civilian noninstitutionalized population, collects medical expenditure data at both the person and household levels. The HC collects detailed data on demographic characteristics, health conditions, health status, use of medical care services, charges and payments, access to care, satisfaction with care, health insurance coverage, income, and employment.

The HC uses an overlapping panel design in which data are collected through a preliminary contact followed by a series of five rounds of interviews over a 2 ½ -year period. Using computer-assisted

personal interviewing (CAPI) technology, data on medical expenditures and use for 2 calendar years are collected from each household. This series of data collection rounds is launched each subsequent year on a new sample of households to provide overlapping panels of survey data and, when combined with other ongoing panels, will provide continuous and current estimates of health care expenditures.

The sampling frame for the MEPS HC is drawn from respondents to NHIS. NHIS provides a nationally representative sample of the U.S. civilian noninstitutionalized population, with oversampling of Hispanics and blacks.

2.0 Medical Provider Component

The MEPS MPC supplements and/or replaces information on medical care events reported in the MEPS HC by contacting medical providers and pharmacies identified by household respondents. The MPC sample includes all home health agencies and pharmacies reported by HC respondents. Office-based physicians, hospitals, and hospital physicians are also included in the MPC but may be subsampled at various rates, depending on burden and resources, in certain years.

Data are collected on medical and financial characteristics of medical and pharmacy events reported by HC respondents. The MPC is conducted through telephone interviews and record abstraction.

3.0 Insurance Component

The MEPS IC collects data on health insurance plans obtained through private and public-sector employers. Data obtained in the IC include the number and types of private insurance plans offered, benefits associated with these plans, premiums, contributions by employers and employees, and employer characteristics.

Establishments participating in the MEPS IC are selected through three sampling frames:

- A list of employers or other insurance providers identified by MEPS HC respondents who report having private health insurance at the Round 1 interview.
- A Bureau of the Census list frame of private-sector business establishments.
- The Census of Governments from the Bureau of the Census.

To provide an integrated picture of health insurance, data collected from the first sampling frame (employers and other insurance providers identified by MEPS HC respondents) are linked back to data provided by those respondents. Data collected from the two Census Bureau sampling frames are used to produce annual national and State estimates of the supply and cost of private health insurance available to American workers and to evaluate policy issues pertaining to health insurance. National estimates of employer contributions to group health insurance from the MEPS IC are used in the computation of Gross Domestic Product (GDP) by the Bureau of Economic Analysis.

The MEPS IC is an annual panel survey. Data are collected from the selected organizations through a prescreening telephone interview, a mailed questionnaire, and a telephone follow-up for nonrespondents.

4.0   Survey Management

MEPS data are collected under the authority of the Public Health Service Act. They are edited and published in accordance with the confidentiality provisions of this act and the Privacy Act. NCHS provides consultation and technical assistance.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports, microdata files, and compendiums of tables. Data are also released through MEPSnet, an online interactive tool developed to give users the ability to statistically analyze MEPS data in real time. Summary reports and compendiums of tables are released as printed documents and electronic files. Microdata files are released on CD-ROM and/or as electronic files.

Printed documents and selected public use file data on CD-ROMs are available through the AHRQ Publications Clearinghouse. Write or call:

AHRQ Publications Clearinghouse
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P.O. Box 8547
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Be sure to specify the AHRQ number of the document or CD-ROM you are requesting.

Selected electronic files are available through the Internet on the MEPS Web site:
http://www.meps.ahrq.gov/

Additional information on MEPS is available from the MEPS project manager or the MEPS public use data manager at the Center for Cost and Financing Studies, Agency for Healthcare Research and Quality.

C. Technical and Programming Information

1.0   General Information

This documentation describes one in a series of public use event files from the 1999 Medical Expenditure Panel Survey (MEPS) Household Component (HC) and Medical Provider Component (MPC). Released as an ASCII data file and SAS transport file, the 1999 Hospital Inpatient Stays (STAZ) public use file provides detailed information on hospital inpatient stays for a nationally representative sample of the civilian noninstitutionalized population of the United States. Data from the STAZ event file can be used to make estimates of hospital inpatient stay utilization and expenditures for calendar year 1999. As illustrated below, this file consists of MEPS survey data from the 1999 portion of Round 3 (Round 2 for some cases, see IPR2FLAG) and Rounds 4 and 5 for Panel 3, as well as Rounds 1, 2 and the 1999 portion of Round 3 for Panel 4 (i.e., the rounds for the MEPS panels covering calendar year 1999).
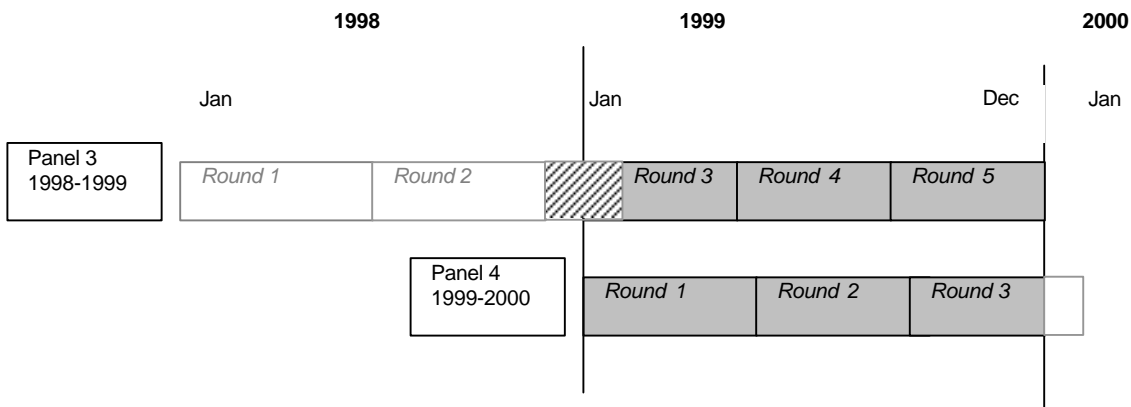
NOTE: Typically for MEPS panels, MEPS Round 2 data collection ends in the first year of a panel and Round 3 data collection begins in the first year of the panel and crosses the year boundary into the second year of the panel. The crosshatched area in the above figure signifies that Round 2 data collection for approximately one quarter of the Panel 3 households began in 1998, the first year of the panel, but ended in 1999. For those households, all of the Round 3 data collection occurred in 1999. For the other three quarters of Panel 3 households, Round 2 data collection followed the typical pattern and began and ended in 1998. For those households, Panel 3 Round 3 data collection took place during both the first and second years of the panel, as is typically done for Round 3.

Hospital stay events reported in Round 3, Panel 4 and known to have begun after December 31, 1999 are not included on this file.

Each record on the STAZ event file represents a unique hospital inpatient stay; that is, a hospital inpatient stay reported by the household respondent. In addition to expenditures related to the stay,

each record contains household reported medical conditions and procedures associated with the hospitalization and information on the length of stay.

Counts of hospital inpatient stay utilization are based entirely on household reports. Information from the MEPS MPC was used to supplement expenditure and payment data reported by the household.

Data from this event file can be merged with other 1999 MEPS HC data files for purposes of appending person level data such as demographic characteristics or health insurance coverage to each hospital inpatient stay record.

This file can also be used to construct summary variables of expenditures, sources of payment, and related aspects of hospital inpatient care. Aggregate annual person-level information on the use of hospital inpatient stays and other health services use is provided on the MEPS 1999 Full Year Person Level Expenditure File, where each record represents a MEPS sampled person.

This documentation offers an overview of the types and levels of data provided the content and structure of the files and the codebook. It contains the following sections:

Data File Information
Sample Weights and Variance Estimation Variables
Strategies for Estimation
Merging/Linking MEPS Data Files
References
Definitions
Variable - Source Crosswalk

Any variable not found on this file but released on previous years' files were excluded because they contained only missing data.

For more information on MEPS HC survey design see S. Cohen, 1997; J. Cohen, 1997; and S. Cohen, 1996. For information on the MEPS MPC design, see S. Cohen, 1998. Copies of the HC and the MPC survey instruments used to collect the information on the STAZ file are available in the *Survey Instruments* section on the MEPS web site at the following address: <http://www.meps.ahrq.gov>.

2.0   Data File Information

The 1999 Hospital Inpatient Stays public use data set consists of one event level data file. The file contains characteristics associated with the STAZ event and imputed expenditure data. For users wanting to impute expenditures, pre-imputed data are available through the CCFS data center. Please visit the CCFS data center website for details: <http://www.meps.ahrq.gov>. The data user/analyst is forewarned that the imputation of expenditures will necessitate a sizable commitment of resources: financial; staff; and time.

The STAZ public use data set contains variable and frequency distributions for a total of 2,438 hospital inpatient stay records reported during the 1999 portion of Round 3 (Round 2 for some cases,

see IPR2FLAG) and Rounds 4 and 5 for Panel 3, as well as Rounds 1, 2, and the 1999 portion of Round 3 for Panel 4 (i.e., the Rounds for the MEPS panels covering calendar year 1999). These files include hospital inpatient stay records for all household survey respondents who resided in eligible responding households and reported at least one hospital inpatient stay. Hospital inpatient stay records known to have occurred after December 31, 1999, are not included on this file. Some household respondents may have multiple hospital inpatient stays and, thus, will be represented in multiple records on this file. Other household respondents may have reported no hospital inpatient stays and, thus, will have no records on this file. Of the 2,438 hospital inpatient stay records, 2,352 are associated with persons having a positive person-level weight (PERWT99F). The persons represented on this file had to meet the following three criteria:

> 1) The hospital stay had to have been reported by a household survey respondent as an inpatient hospital stay (regardless of a stay's length). Thus, the file contains some hospitalizations that were reported as not including an overnight stay.

> 2) The hospital stay had to have ended during 1999. Stays that began prior to 1999, but ended during 1999, are included on this file. Stays that began in 1999, but ended during 2000, are excluded from this file and will be represented on a subsequent 2000 data file. Please note that persons with no hospital inpatient stays use for 1999 are not included on this file (but are represented on MEPS person-level files).

> 3) The persons represented on this file also had to meet either 3a or 3b:

>> a) Be classified as a key in-scope person who responded for his or her entire period of 1999 eligibility (i.e., persons with a positive 1999 full-year person-level sampling weight (PERWT99F > 0)), or

>> b) Be classified as either an eligible non-key person or an eligible out-of-scope person who responded for his or her entire period of 1999 eligibility, and belonged to a family (i.e., all persons within a household (DUID) with the same value of FAMID) in which all eligible family members responded for their entire period of 1999 eligibility, and at least one family member has a positive 1999 full-year person weight (i.e., eligible non-key or eligible out-of-scope persons who are members of a family all of whose members have a positive 1999 full-year family-level weight).

Please refer to Attachment 1 for definitions of keyness, in-scope, and eligibility.

One caveat that should be noted is that, in the case of a newborn and the hospital inpatient stay associated with the newborn's birth, a separate hospital inpatient stay record exists on the file only

if the newborn was discharged after the mother. Thus, hospital stays associated with a normal birth are generally represented on the file as a single record (i.e., the mother's hospital inpatient stay record, covering expenditure data for both the mother and baby). In situations where the newborn was discharged after the mother, the birth event will be represented as two records: one record for the mother and one record for the baby. For newborns re-admitted to the hospital during the reference year, each subsequent re-admission will have a separate record.

Each STAZ record includes the following: start and end dates of the hospital inpatient stay; number of nights in the hospital; reason entered the hospital; main surgical procedure; condition(s) associated with the hospital inpatient stay; medicines prescribed at discharge; flat fee information; imputed sources of payment; total payment and total charge for both the facility and physician portions of the hospital inpatient stay expenditure; and a full-year person-level weight.

Data from this file can be merged with the MEPS 1999 Full Year Population Characteristics File using the unique person identifier, DUPERSID, to append person level information, such as demographic or health insurance characteristics, to each record. Hospital inpatient stay events can also be linked to the MEPS 1999 Medical Conditions File and the MEPS 1999 Prescribed Medicines File. Section 5.0 and the MEPS 1999 Appendix File contain details on how to link MEPS data files.

Panel 3 cases (PANEL99 = 3 on the 1999 Full Year Population Characteristics File) can also be linked back to the 1998 MEPS HC public use data files. However, data users/analysts should be aware that, at this time, no weight is being provided to facilitate two-year analysis of Panel 3 data.

2.1   Codebook Structure

For each variable on the STAZ event file, both weighted and unweighted frequencies are provided in the codebook. The codebook is located on the MEPS web site: <http:\\www.meps.ahrq.gov>. The codebook and data file sequence list variables in the following order:

        Unique person identifiers
        Unique hospital inpatient stay identifiers
        Other survey administration variables
        Hospital inpatient stay characteristics variables
        ICD-9 condition and procedure codes
        Clinical Classification Software codes
        Imputed expenditure variables
        Weight and variance estimation variables

2.2   Reserved Codes

The following reserved code values are used:

        Value   **Definition**

-1 INAPPLICABLE	Question was not asked due to skip pattern.
-7 REFUSED	Question was asked and respondent refused to answer question.
-8 DK	Question was asked and respondent did not know answer.
-9 NOT ASCERTAINED	Interviewer did not record the data.

Generally, the values of -1, -7, -8, and -9 have not been edited on this file. The values of -1 and -9 can be edited by data users/analysts by following the skip patterns in the HC survey questionnaire (located on the MEPS web site: <http:\\www.meps.ahrq.gov>).

2.3　Codebook Format

The STAZ codebook describes an ASCII data set (although the data are also being provided in a SAS transport file). The following codebook items are provided for each variable:

Identifier	Description
Name	Variable name (maximum of 8 characters)
Description	Variable descriptor (maximum of 40 characters)
Format	Number of bytes
Type	Type of data: numeric (indicated by NUM) or character (indicated by CHAR)
Start	Beginning column position of variable in record
End	Ending column position of variable in record

2.4　Variable Source and Naming Conventions

In general, variable names reflect the content of the variable, with an 8-character limitation. For questions asked in a specific round, the last digit in the variable name reflects the round in which the question was asked. All imputed/edited variables end with an "X."

2.4.1　Variable - Source Crosswalk

Variables on this file were either derived from the HC questionnaire itself, derived from the MPC data collection instrument, derived from the CAPI, or assigned in sampling. The source of each variable is identified in Section D, "Variable - Source Crosswalk." Sources for each variable are indicated in one of four ways in the Source Column:

(1) Variables which are derived from CAPI or assigned in sampling are indicated as "CAPI derived" or "Assigned in sampling", respectively;

(2) Variables which come from one or more specific questions have those questionnaire sections and question numbers indicated in the "Source" column; questionnaire sections are identified as,

HS - Hospital Stays Questionnaire (HC)
FF - Flat Fee Questionnaire (HC)
CP and **CPOV**- Charge Payment Questionnaire (HC)
HEF - Hospital Event Form (MPC)

(3) Variables constructed from multiple questions using complex algorithms are labeled "Constructed" in the "Source column; and

(4) Variables which have been edited or imputed are so indicated.

2.4.2 Expenditure and Sources of Payment Variables

The imputed versions of the expenditure and sources of payment variable names follow a standard naming convention. They are 8 characters in length with the last one being an "X" indicating that they are fully edited and imputed.

The total sum of payments variable, 12 sources of payment variables, and the total charge variable are named consistently in the following way:

The first two characters indicate the type of event:

IP - inpatient stay	OB - office-based visit
ER - emergency room visit	OP - outpatient visit
HH - home health visit	DV - dental visit
OM - other medical equipment	RX - prescribed medicine

For expenditure variables on these files, the third character indicates whether the expenditure is associated with the facility (F) or the physician (P).

In the case of the source of payment variables, the fourth and fifth characters indicate:

SF - self or family	OF - other Federal Government	XP - sum of payments
MR - Medicare	SL - State/local government	
MD - Medicaid	WC – Worker's Compensation	
PV - private insurance	OT - other insurance	
VA - Veterans	OR - other private	
CH - CHAMPUS/CHAMPVA	OU - other public	

The sixth and seventh characters indicate the year (99).

The eighth character of all imputed/edited variables is an "X."

Example: IPFSF99X is the edited/imputed amount paid by self or family for the facility portion of the hospital inpatient stay expenditure incurred in 1999.

2.5 File Contents

2.5.1 Survey Administration and ID Variables

2.5.1.1 Person Identifiers (DUID, PID, DUPERSID)

The dwelling unit ID (DUID) is a 5-digit random number assigned after the case was sampled for MEPS. The 3-digit person number (PID) uniquely identifies each person within the dwelling unit. The 8-character variable DUPERSID uniquely identifies each person represented on the file and is the combination of the variables DUID and PID. For detailed information on dwelling units and families, please refer to the documentation for the 1999 Full Year Population Characteristics File or to definitions listed in Attachment 1.

2.5.1.2 Record Identifiers (EVNTIDX, ERHEVIDX, FFEEIDX, MPCDATA)

EVNTIDX uniquely identifies each hospital inpatient stay/event (i.e. each record on the STAZ file) and is the variable required to link hospital inpatient stay events to data files containing details on conditions and/or prescribed medicines (MEPS 1999 Medical Conditions File and MEPS 1999 Prescribed Medicines File, respectively). For details on linking, see Section 5.0 or the MEPS 1999 Appendix File.

ERHEVIDX is a constructed variable identifying a STAZ record that includes the facility expenditures for the preceding emergency room visit. This variable was constructed by comparing data for the reported hospital stay and all emergency room visits for the same person. On the 99 STAZ file, there are 117 hospital stays linked to a preceding emergency room visit; that is, there are 117 records with a valid ERHEVIDX value. ERHEVIDX has not been reconciled with the unedited variable EMERROOM. Please note that, the physician expenditures associated the emergency room visit remain on the emergency room file.

FFEEIDX is a constructed variable which uniquely identifies a flat fee group, that is, all events that were a part of a flat fee payment situation. For example, dialysis treatments are typically covered in a flat fee arrangement where all visits are covered under one flat fee dollar amount. On the 1999 STAZ file, there are 19 Flat Fee variables. These events have the same value for FFEEIDX. Please note that FFEEIDX should be used to link up all MEPS event files (excluding prescribed medicines) in order to determine the full set of events that are part of a flat fee group.

MPCDATA is a constructed variable which indicates whether or not MPC data were collected for the hospital inpatient stay. While all hospital inpatient events are sampled into the Medical Provider Component, not all hospital inpatient stay records have MPC data associated with them. This is dependent upon the cooperation of the household respondent to provide permission forms to contact the hospital as well as the cooperation of the hospital to participate in the survey.

2.5.1.3 Round Indicators (EVENTRN, IPR2FLAG)

EVENTRN indicates the round in which the 2,438 hospital inpatient stays/events were first reported. Please note that Rounds 3 (Round 2 for some cases, see IPR2FLAG), 4, and 5 are associated with MEPS survey data collected from Panel 3. Likewise, Round 1, 2, and 3 are associated with data collected from Panel 4.

IPR2FLAG indicates whether or not a Panel 3 Round 2 event occurred in 1999. IPR2FLAG was assigned a value = 1 where an event in Round 2 of Panel 3 occurred in a portion of calendar year 1999. Events from Panel 4 will have IPR2FLAG = -1. Typically, only Round 3 of a MEPS panel covers two calendar years, so the IPR2FLAG was developed to identify where data collection procedures were modified. All utilization data for calendar year 1999 were provided on this file regardless of the round in which it happened to be collected. Data users/analysts need not modify any procedures to deal with this departure from the usual data collection process as the event variables have been developed so that the process is transparent.

2.5.2 Characteristics of Hospital Inpatient Stays

The 1999 STAZ event file contains 16 variables describing hospital inpatient stays/events reported by respondents in the Hospital Stays section of the MEPS HC questionnaire. The questionnaire contains specific probes for determining details about the hospital inpatient stay.

2.5.2.1 Start and End Dates of Event (IPBEGDD-IPENDYR)

This file contains variables describing hospital inpatient stays reported by household respondents in the Hospital Section of the MEPS HC questionnaire. There are three variables which indicate the day, month and year a hospital stay began (IPBEGDD, IPBEGMM, IPBEGYR, respectively). Similarly, there are three variables which indicate the day, month and year a hospital stay ended (IPENDDD, IPENDMM, IPENDYR, respectively). These variables have not been edited.

2.5.2.2 Length of Stay (NUMNIGHX, NUMNIGHT)

NUMNIGHX denotes the length of a hospital inpatient stay. For stays beginning in 1999 and ending in 1999, this variable would include the nights associated with 1999. It was edited using the above mentioned begin and end dates of the hospital inpatient stay (Section 2.5.2.1). If the dates were unknown, then NUMNIGHX used the number from the unedited variable NUMNIGHT (number of nights in the hospital). If both the dates and NUMNIGHT were missing data, then NUMNIGHX was imputed. Users should note that NUMNIGHT was only asked for events with missing date information. Hence, it contains large amounts of missing data and cannot be used alone but rather in conjunction with date information.

2.5.2.3   Preceding ER Visits (EMERROOM)

The variable EMERROOM was derived directly from the Hospital Inpatient Stays section of the HC survey instrument and is unedited. EMERROOM describes whether or not the hospital inpatient stay began with an emergency room visit. Data users/analysts should be aware that no attempt was made to reconcile EMERROOM with information from the Emergency Room Visit File.

2.5.2.4   Other Visit Detail (SPECCOND - VAPLACE)

Also provided are the following unedited variables: hospital inpatient stays related to a medical condition (SPECCOND), the reason the person entered hospital (RSNINHOS), any operation or surgery performed while respondent was in hospital (ANYOPER), and if surgery was performed, then what was the main surgical procedure (SURGPROC).

With respect to RSNINHOS, please note that while there were 324 cases where RSNINHOS = 4 (reason entered hospital – to give birth to a baby), this does not mean that there were actually 324 *new births*. In fact, it may have been reported that the mother went to the hospital for delivery (hence, the interviewer would have assigned the event RSNINHOS = 4), but the mother could have had, for example, false labor pains or a stillbirth or multiple births. Thus, this unedited, self-reported variable, may be inconsistent with reported number of births (see the 1999 Full Year Population Characteristics File, section 2.5.1 "Person Status").

VAPLACE is a constructed variable that indicates whether the provider worked at a VA facility. This variable only has valid data for providers that were sampled into the Medical Provider Component. All other providers are classified as unknown.

2.5.2.5   Condition and Procedure Codes (IPICD1X-IPICD4X, IPPRO1X, IPPRO2X) and Clinical Classification Codes (IPCCC1X-IPCCC4X)

Information on household reported medical conditions and procedures associated with each hospital inpatient stay event are provided on this file. There are up to four condition codes (IPICD1X-IPICD4X) and up to two procedure codes (IPPRO1X and IPPRO2X) listed for each hospital inpatient stay event. In order to obtain complete condition information associated with an event, the data user/analyst must link to the MEPS 1999 Medical Conditions File. Details on how to link the 1999 STAZ file to the MEPS 1999 Medical Conditions File are provided in Section 5.2 and the 1999 MEPS Appendix File. The data user/analyst should note that because of confidentiality restrictions, provider reported condition information is not publicly available.

The medical conditions and procedures reported by the Household Component respondent were recorded by the interviewer as verbatim text, which were then coded to fully-specified 1999 ICD-9-CM codes, including medical condition and V codes (Health Care Financing Administration, 1980) by professional coders. Although codes were verified and error rates did not exceed 2.5 percent for any coder, data users/analysts should not presume this level of precision in the data; the ability of household respondents to report condition data that can be coded accurately should not be assumed (Cox and Cohen, 1985; Cox and Iachan, 1987; Edwards, et al., 1994; and Johnson and Sanchez,

1993). For detailed information on how condition and procedures were coded, please refer to the documentation on MEPS 1999 Medical Conditions File. For frequencies of conditions by event type, please see the 1999 MEPS Appendix File.

The ICD-9-CM condition and procedure codes were aggregated into clinically meaningful categories. These categories, included on the file as IPCCC1X-IPCCC4X, were generated using Clinical Classification Software [formerly known as Clinical Classifications for Health Care Policy Research (CCHPR), (Elixhauser, et al., 1998)] which aggregates conditions and V-codes into 260 mutually exclusive categories, most of which are clinically homogeneous.

In order to preserve respondent confidentiality, nearly all of the condition codes provided on this file have been collapsed from fully-specified codes to 3-digit code categories. The reported ICD-9-CM code values were mapped to the appropriate clinical classification category prior to being collapsed to the 3-digit categories. Details on this procedure can be found in the 1999 MEPS Medical Conditions File.

The condition and procedure codes linked to each hospital inpatient stay event are sequenced in the order in which the conditions were reported by the household respondent, which was in chronological order of occurrence and not in order of importance or severity. Labels for all values of the variables IPICD1X-IPICD3X and IPPRO1X are provided in the sas programming statements in this release. (See the H33DF1SU.TXT file.) Data users/analysts who use the MEPS 1999 Medical Conditions File in conjunction with this hospital inpatient stay event file should note that the order of conditions on this file is not identical to that on the Medical Conditions file.

The user should also note that because of the design of the HC survey instrument, most hospital stays that are reported as being for a delivery (RSNINHOS=4) link to condition codes that are for pregnancy rather than a delivery. In addition, RSNINHOS has not been reconciled with the ICD-9 condition codes, the procedure codes, nor the CCC codes that are on the file.

2.5.2.6   Discharge and Outside Visit Detail (DSCHPMED, DROUTSID)

DSCHPMED and DROUTSID are both derived directly from the Hospital Stays Section of the HC survey instrument. DSCHPMED indicates whether or not any medicines were prescribed at discharge; DROUTSID, whether or not any physicians were seen outside the hospital facility.

2.5.3   Flat Fee Variables

2.5.3.1   Definition of Flat Fee Payments

A flat fee is the fixed dollar amount a person is charged for a package of health care services provided during a defined period of time. Examples would be: obstetrician's fee covering a normal delivery, as well as pre- and post-natal care; or a surgeon's fee covering surgical procedure and post-surgical care. A flat fee group is the set of medical services (i.e., events) that are covered under the same flat fee payment situation. The flat fee groups represented on the STAZ file, include flat fee groups where at least one of the health care events, as reported by the HC respondent, occurred during 1999.

By definition, a flat fee group can span multiple years. Furthermore, a single person can have multiple flat fee groups.

Four variables on the STAZ file describe a flat fee payment situation and the number of hospital inpatient stays/events that are a part of a flat fee group.

2.5.3.2   Flat Fee Variable Descriptions

2.5.3.2.1 Flat Fee ID (FFEEIDX)

As noted earlier in Section 2.5.1.2, (Record Identifiers), the variable FFEEIDX can be used to uniquely identify all 1999 MEPS events (excluding the prescribed medicines file) that are part of the same flat fee group because FFEEIDX is the same value on all MEPS 1999 event files. For the hospital inpatient stays that are not part of a flat fee payment situation, the flat fee variables described below are all set to -1 INAPPLICABLE.

2.5.3.2.2 Flat Fee Type (FFIPTYPE)

FFIPTYPE indicates whether the 1999 hospital stay is the "stem" or "leaf" of a flat fee group. A stem (records with FFIPTYPE = 1) is the initial medical service (event) which is followed by other medical events that are covered under the same flat fee payment. The leaves of the flat fee group (records with FFIPTYPE = 2) are those medical events that are tied back to the initial medical event (the stem) in the flat fee group. These "leaf" records have their expenditure variables set to zero. For the hospital inpatient stays that are not part of a flat fee payment situation, the FFIPTYPE is set to -1 INAPPLICABLE.

2.5.3.2.3 Counts of Flat Fee Events that Cross Years (FFBEF99, FFTOT00)

As explained in Section 2.5.3.1, a flat fee payment situation covers multiple events and the multiple events could span multiple years. For situations where the hospital inpatient stay/event occurred in 1999 as a part of a group of events, and some event occurred before or after 1999, counts of the known events are provided on the STAZ record. Variables that indicate events occurred before or after 1999 are:

> FFBEF99 − total number of pre-1999 events in the same flat fee group as the hospital inpatient stay(s) that occurred in 1999. This count would not include hospital inpatient stay(s) that occurred in 1999. Because there were no pre-1999 STAZ events represented in the flat fee groups, FFBEF99 was omitted from the 1999 STAZ file.

> FFTOT00 − indicates whether or not there are 2000 hospital inpatient stays in the same flat fee group as the hospital inpatient stay that occurred in 1999. Because there were no 2000 EROM event represented in the flat fee groups, FFTOT00 was omitted from the 1999 EROM file.

2.5.3.3   Caveats of Flat Fee Groups

There are 19 hospital inpatient stays/events that are identified as being part of a flat fee payment group.

In general, every flat fee group should have an initial visit (stem) and at least one subsequent visit (leaf). There are some situations where this is not true. For some of these flat fee groups, the initial visit reported occurred in 1999 but the remaining visits that were part of this flat fee group occurred in 2000. In this case, the 1999 flat fee group would consist of one event, the stem. The 2000 events that are part of this flat fee group are not represented on the file. Similarly, the household respondent may have reported a flat fee group where the initial visit began in 1998 but subsequent visits occurred during 1999. In this case, the initial visit would not be represented on the file. This 1999 flat fee group would then only consist of one or more leaf records and no stem. Another reason for which a flat fee group would not have a stem and a leaf record is that the stems or leaves could have been reported as different event types. In a small number of cases, flat fee groups span event types. The stem may have been reported as one event type and the leaves may have been reported as another event type. In order to determine the different event types in a flat fee group, the data user/ analyst must link all MEPS event files (excluding the prescribed medicine file) using the variable FFEEIDX to create the complete flat fee group.

2.5.4   Expenditure Data

2.5.4.1   Definition of Expenditures

The expenditure variables on this file refer to what is paid for health care services. More specifically, expenditures in MEPS are defined as the sum of payments for care received for each hospital stay, including out of pocket payments and payments made by private insurance, Medicaid, Medicare and other sources. The definition of expenditures used in MEPS differs slightly from its predecessors: the 1987 NMES and 1977 NMCES surveys where "charges" rather than sum of payments were used to measure expenditures. This change was adopted because charges became a less appropriate proxy for medical expenditures during the 1990's due to the increasingly common practice of discounting. Although measuring expenditures as the sum of payments incorporates discounts in the MEPS expenditure estimates, these estimates do not incorporate any payment not directly tied to specific medical care visits, such as bonuses or retrospective payment adjustments paid by third party payers. Another general change from the two prior surveys is that charges associated with uncollected liability, bad debt, and charitable care (unless provided by a public clinic or hospital) are not counted as expenditures because there are no payments associated with those classifications. While charge data are provided on this file, data users/analysts should use caution when working with this data because a charge does not typically represent actual dollars exchanged for services or the resource costs of those services; nor are they directly comparable to the expenditures defined in the 1987 NMES. For details on expenditure definitions, please reference the following, "Informing American Health Care Policy" (Monheit et al., 1999).

Expenditure data related to hospital inpatient events are broken out by facility and separately billing doctor expenditures. This file contains five categories of expenditure variables per stay: basic hospital

facility expenses; expenses for doctors who billed separately from the hospital for any inpatient services provided during hospital stay; total expenses, which is the sum of the facility and physician expenses; facility total charge; and physician total charge.

2.5.4.2 Imputation and Data Editing Methodologies of Expenditure Variables

2.5.4.2.1 General Imputation Methodology

The expenditure data included on this file were derived from both the MEPS Household (HC) and Medical Provider Components (MPC). The MPC contacted medical providers identified by household respondents. The charge and payment data from medical providers were used in the expenditure imputation process to supplement missing household data. For all hospital inpatient stays, MPC data were used if complete; otherwise, HC data were used if complete. Missing data for hospital inpatient stays, where HC data were not complete and MPC data were not collected or complete, were constructed during the imputation process.

2.5.4.2.2 General Data Editing Methodology

Logical edits were used to resolve internal inconsistencies and other problems in the HC and MPC survey-reported data. The edits were designed to preserve partial payment data from households and providers, and to identify actual and potential sources of payment for each household-reported event. In general, these edits accounted for outliers, copayments or charges reported as total payments, and reimbursed amounts that were reported as out of pocket payments. In addition, edits were implemented to correct for misclassifications between Medicare and Medicaid and between Medicare HMO's and private HMO's as payment sources. These edits produced a complete vector of expenditures for some events and provided the starting point for imputing missing expenditures in the remaining events.

2.5.4.2.3 General Hot-Deck Imputation

A weighted sequential hot-deck procedure was used to impute for missing expenditures as well as total charge. This procedure uses survey data from respondents to replace missing data while taking into account the respondents' weighted distribution in the imputation process. Classification variables vary by event type in the hot-deck imputations, but total charge and insurance coverage are key variables in all of the imputations. Separate imputations were performed for nine categories of medical provider care: inpatient hospital stays, outpatient hospital department visits, emergency room visits, visits to physicians, visits to non-physician providers, dental services, home health care by certified providers, home health care by paid independents, and other medical expenses. After the imputations were finished, visits to physician and non-physician providers were combined into a single medical provider file. The two categories of home care also were combined into a single home health file.

2.5.4.2.4 Data Editing and Imputation Methodology for Hospital Inpatient Stays

Facility expenditures for hospital inpatient stays were developed in a sequence of logical edits and imputations. "Household" edits were applied to sources and amounts of payment for all events reported by HC respondents. "MPC" edits were applied to provider-reported sources and amounts of payment for records matched to household-reported events. Both sets of edits were used to correct obvious errors (as described above) in the reporting of expenditures. After the data from each source were edited, a decision was made as to whether household- or MPC-reported information would be used in the final editing and hot-deck imputations for missing expenditures. The general rule was that MPC data would be used for events where a household reported event corresponded to a MPC reported event (i.e. a matched event), since providers usually have more complete and accurate data on sources and amounts of payment than households.

Separate imputations were performed for flat fee and simple events. Most hospital inpatient stays were imputed as simple events because facility charges for an inpatient hospital stay are rarely grouped with other events. (See Section 2.5.3 for more details on flat fee groups.)

Logical edits also were used to sort each event into a specific category for the imputations. Events with complete expenditures were flagged as potential donors for the hot-deck imputations, while events with missing expenditure data were assigned to various recipient categories. Each event was assigned to a recipient category based on its pattern of missing data. For example, an event with a known total charge but no expenditures information were assigned to one category, while an event with a known total charge and some expenditures information was assigned to a different category. Similarly, events without a known total charge were assigned to various recipient categories based on the amount of missing data.

The logical edits produced eight recipient categories in which all events had a common pattern of missing data. Separate hot-deck imputations were performed on events in each recipient category, and the donor pool was restricted to events with complete expenditures from the MPC. The donor pool restriction was used even though some unmatched events had complete household-reported expenditures. These events were not allowed to donate information to other events because the MPC data were considered to be more reliable.

The donor pool included "free events" because, in some instances, providers are not paid for their services. These events represent charity care, bad debt, provider failure to bill, and third party payer restrictions on reimbursement in certain circumstances. If free events were excluded from the donor pool, total expenditures would be over-counted because the cost of free care would be both implicitly included in paid events, and explicitly included in events that should have been treated as free from provider.

Expenditures for services provided by separately billing doctors in hospital settings were also edited and imputed. These expenditures are shown separately from hospital facility charges for hospital inpatient, outpatient, and emergency room care.

2.5.4.3 Capitation Imputation

Health maintenance organizations (HMOs) receive time-based (capitation) payments to cover their members' cost of health care. Services provided by HMOs are referred to as "capitated events" in the MEPS expenditure imputations. They are singled out for special treatment because the payments received by HMOs are not tied directly to individual events and services. That is, per person per month payments to an HMO, as opposed to fee-for-service reimbursement for health care, pose a problem in the estimation of health care costs because MEPS uses event-level payments for service as its measure of expenditures. Capitated events are sent through there own imputation procedure.

2.5.4.4 Imputation Flag Variable (IMPFLAG)

Unlike prior data releases, only one imputation flag was created for 1999 event files. This variable, IMPFLAG, is a six category variable that indicates if the event contains complete Household Component (HC) or Medical Provider Component (MPC) data, was fully or partially imputed, or was imputed in the capitated imputation process. Following is how the new imputation flag is coded; the categories are mutually exclusive.

    IMPFLAG=0 (not eligible for imputation)
    IMPFLAG=1 (complete HC data)
    IMPFLAG=2 (complete MPC data)
    IMPFLAG=3 (fully imputed)
    IMPFLAG=4 (partially imputed)
    IMPFLAG=5 (capitation imputation)

2.5.4.5 Flat Fee Expenditures

The approach used to count expenditures for flat fees was to place the expenditure on the first visit of the flat fee group. The remaining visits have zero payments. Thus, if the first visit in the flat fee group occurred prior to 1999, all of the events that occurred in 1999 will have zero payments. Conversely, if the first event in the flat fee group occurred at the end of 1999, the total expenditure for the entire flat fee group will be on that event, regardless of the number of events it covered after 1999. See Section 2.5.3 for details on the flat fee variables.

2.5.4.6 Zero Expenditures

There are some medical events reported by respondents where the payments were zero. This could occur for several reasons including (1) free care was provided, (2) bad debt was incurred, (3) care was covered under a flat fee arrangement beginning in an earlier year, or (4) follow-up visits were provided without a separate charge (e.g., after a surgical procedure). If all of the medical events for a person fell into one of these categories, then the total annual expenditures for that person would be zero.

2.5.4.7   Discount Adjustment Factor

An adjustment was also applied to some HC reported expenditure data because an evaluation of matched HC/MPC data showed that respondents who reported that charges and payments were equal were often unaware that insurance payments for the care had been based on a discounted charge. To compensate for this systematic reporting error, a weighted sequential hot-deck imputation procedure was implemented to determine an adjustment factor for HC reported insurance payments when charges and payments were reported to be equal. As for the other imputations, selected predictor variables were used to form groups of donor and recipient events for the imputation process.

2.5.4.8   Mother/Newborn Expenditures

Expenditure data for newborns were edited to exclude discharges after birth when the newborn left the hospital on the same day as the mother. As a result, inpatient expenditures reported for 1999 births were usually applied to the mother and not treated as separate expenditures for the infant. However, if a newborn was discharged at a later date than the mother's discharge date, then the hospitalization was treated as a separate hospital stay for the newborn.

This means that, in most cases, expenditure data for the newborn is included on the mother's record. A separate record for the newborn only exists if the newborn was discharged after the mother. In this case, the expenditure for the newborn is on the newborn's record.

In addition, the user should note that for the purposes of the expenditure imputation, deliveries were identified using the variable RSNINHOS which has not been reconciled with pregnancy and delivery ICD-9 codes on this file as well as on the Medical Conditions File. As mentioned previously, in most instances where RSNINHOS = 4 delivery, the ICD-9 code indicates a pregnancy rather than a delivery.

2.5.4.9   Hospital Inpatient Stay/Emergency Room Expenditures

Although a person may have indicated that there was an emergency room visit that preceded this hospital stay (EMERROOM), there was no verification that, in fact, the emergency room visit was actually recorded within the Emergency Room Section of the questionnaire.

While it is true that all of the event files can be linked by DUPERSID, there is no unique record link between hospital inpatient stays and emergency room visits. That is, a person could have one hospital inpatient stay and three emergency room visits during the calendar year. While the hospital inpatient stay record may indicate that it was preceded by an emergency room visit, there is no unique record link to the appropriate (of the three) emergency room visit.

However, where ever this relationship could be identified (using MPC start and end date of the events as well as information from the provider), the facility expenditure associated with the emergency room visit was moved to the hospital facility expenditure. Hence, for some hospital stays, facility expenditures for a preceding emergency room visits are included. In these situations, the corresponding emergency room record on the MEPS 1999 Emergency Room Visit File will have its

facility expenditure information zeroed out to avoid double-counting. The variable ERHEVIDX identifies these hospital stays whose expenditures include the expenditures for the preceding emergency room visit (see ERHEVIDX in Section 2.5.1.2). It should also be noted that for these cases, there is only one hospital stay associated with the emergency room stay.

2.5.4.10 Sources of Payment

In addition to total expenditures, variables are provided which itemize expenditures according to major sources of payment categories. These categories are:

1. Out of pocket by user or family
2. Medicare
3. Medicaid
4. Private Insurance
5. Veteran's Administration, excluding CHAMPVA
6. CHAMPUS or CHAMPVA
7. Other Federal sources - includes Indian Health Service, Military Treatment Facilities, and other care by the Federal government
8. Other State and Local Source - includes community and neighborhood clinics, State and local health departments, and State programs other than Medicaid.
9. Worker's Compensation
10. Other Unclassified Sources - includes sources such as automobile, homeowner's, liability, and other miscellaneous or unknown sources.

Two additional sources of payment variables were created to classify payments for events with apparent inconsistencies between insurance coverage and sources of payment based on data collected in the survey. These variables include:

11. Other Private - any type of private insurance payments reported for persons not reported to have any private health insurance coverage during the year as defined in MEPS; and

12. Other Public - Medicaid payments reported for persons who were not reported to be enrolled in the Medicaid program at any time during the year.

Though relatively small in magnitude, data users/analysts should exercise caution when interpreting the expenditures associated with these two additional sources of payment. While these payments stem from apparent inconsistent responses to health insurance and source of payment questions in the survey, some of these inconsistencies may have logical explanations. For example, private insurance coverage in MEPS is defined as having a major medical plan covering hospital and physician services. If a MEPS sampled person did not have such coverage but had a single service type insurance plan (e.g. dental insurance) that paid for a particular episode of care, those payments may be classified as "other private." Some of the "other public" payments may stem from confusion between Medicaid and other state and local programs or may be from persons who were not enrolled in Medicaid, but were presumed eligible by a provider who ultimately received payments from the program.

2.5.4.11 Imputed Hospital Inpatient Stay Expenditure Variables

This file contains 2 sets of imputed expenditure variables: facility expenditures and physician expenditures.

2.5.4.11.1 Hospital Inpatient Facility Expenditures (IPFSF99X-IPFOT99X, IPFXP99X, IPFTC99X)

Hospital facility expenses include all expenses for direct hospital care, including room and board, diagnostic and laboratory work, x-rays, and similar charges, as well as any physician services included in the hospital charge.

Hospital facility expenditures were obtained primarily through the MPC. If the physician charges were included in the hospital bill, then this expenditure is included in the facility expenditure variables. The imputed facility expenditures are provided on this file. IPFSF99X - IPFOT99X are the 12 sources of payment: self/family, Medicare, Medicaid, private insurance, Veterans Administration, CHAMPUS/CHAMPVA, other federal, state/local governments, Workman's Compensation, other private insurance, other public insurance and other insurance.   IPFXP99X is the sum of the 12 sources of payments for the facility expenditure. IPFTC99X is the total charge.

2.5.4.11.2 Hospital Inpatient Physician Expenditures (IPDSF99X - IPDOT99X, IPDTC99X, IPDXP99X)

Separately billing doctor (SBD) expenses typically cover services provided to patients in hospital settings by providers like anesthesiologists, radiologists, and pathologists, whose charges are often not included in hospital bills.

For medical doctors who bill separately (i.e. outside the hospital bill), a separate data collection effort within the Medical Provider Component was performed to obtain this same set of expenditure information from each separately billing doctor. It should be noted that there could be several separately billing doctors associated with a medical event. For example, a hospital inpatient stay could have a radiologist, anesthesiologist, pathologist and a surgeon associated with it. If their services are not included in the hospital bill then this is one medical event with 4 separately billing doctors. The imputed expenditure information associated with the separately billing doctors for a hospital inpatient stay (i.e. the expenditures incurred by the radiologist + anesthesiologist + pathologist + surgeon) and is provided on the file. IPDSF99X - IPDOT99X are the 12 sources of payment; IPDXP99X is the sum of the 12 sources of payments. IPDTC99X is the total charge.

Data users/analysts need to take into consideration whether to analyze facility and SBD expenditures separately, combine them within service categories, or collapse them across service categories (e.g. combine SBD expenditures with expenditures for physician visits to offices and/or outpatient departments). Data users/analysts interested in total expenditure should use the variable IPEXP99X, which includes both the facility and physician amounts.

2.5.4.11.3 Total Expenditures and Charges for Hospital Inpatient Stays (IPXP99X, IPTC99X)

Data users/analysts interested in total expenditures should use the variable IPXP99X, which includes both facility and physician amounts. Those interested in total charges should use the variable IPTC99X (see Section 2.5.4.1 for an explanation of the "charge" concept).

2.5.4.12   Rounding

Expenditure variables on this file have been rounded to the nearest penny. Person level expenditure information released on the MEPS 1999 Person Level Use and Expenditure File were rounded to the nearest dollar. It should be noted that using the MEPS 1999 event files to create person level totals will yield slightly different totals than that found on the MEPS 1999 Person Level Use and Expenditure File. These differences are due to rounding only. Moreover, in some instances, the number of persons having expenditures on the MEPS 1999 event files for a particular source of payment may differ from the number of persons with expenditures on the MEPS 1999 Person Level Use and Expenditure File for that source of payment This difference is also an artifact of rounding only. Please see the MEPS 1999 Appendix File for details on such rounding differences.

3.0   Sample Weights (PERWT99F)

3.1   Overview

There is a single full year person-level weight (PERWT99F) assigned to each record for each key, in-scope person who responded to MEPS for the full period of time that he or she was in-scope during 1999. A key person either was a member of an NHIS household at the time of the NHIS interview, or became a member of such a household after being out-of-scope at the time of the NHIS (examples of the latter situation include newborns and persons returning from military service, an institution, or living outside the United States). A person is in-scope whenever he or she is a member of the civilian noninstitutionalized portion of the U.S. population.

3.2   Details on Person Weights Construction

The person-level weight PERWT99F was developed in three stages. A person level weight for Panel 4 was created, including both an adjustment for nonresponse over time and poststratification, controlling to Current Population Survey (CPS) population estimates based on five variables. Variables used in the establishment of person-level poststratification control figures included: census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic, black but non-Hispanic, and other); sex; and age. Then a person level weight for Panel 3 was created, again including an adjustment for nonresponse over time and poststratification, again controlling to CPS population estimates based on the same five variables. When poverty status information derived from income variables became available, a 1999 composite weight was formed from the Panel 3 and Panel 4 weights by multiplying the Panel weights by .5. Then a final poststratification was done on this composite weight variable, including poverty status (below poverty, from 100 to 125 percent of poverty, from 125 to 200 percent of poverty, from 200 to 400 percent of poverty, at least 400 percent

of poverty) as well as the original five poststratification variables in the establishment of control totals.

3.2.1   MEPS Panel 3 Weight

The person level weight for MEPS Panel 3 was developed using the 1998 full year weight for an individual as a "base" weight for survey participants present in 1998. For key, in-scope respondents who joined a RU some time in 1999 after being out of scope in 1998, the 1998 family weight associated with the family the person joined served as a "base" weight. The weighting process included an adjustment for nonresponse over Rounds 4 and 5 as well as poststratification to population control figures for December 1999.   These control figures were derived by scaling back the population totals obtained from the March 1999 CPS to reflect the December, 1999 CPS estimated population distribution across age and sex categories as of December, 1999. Variables used in the establishment of person level poststratification control figures included: census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic, black but non-Hispanic, and other); sex, and age. Overall, the weighted population estimate for the civilian, noninstitutionalized population on December 31, 1999 is 273,003,778. Key, responding persons not in-scope on December 31, 1999 but in-scope earlier in the year retained, as their final Panel 3 weight, the weight after the nonresponse adjustment.

3.2.2   MEPS Panel 4 Weight

The person level weight for MEPS Panel 4 was developed using the MEPS Round 1 person-level weight as a 'base" weight. For key, in-scope respondents who joined a RU after Round 1, the Round 1 family weight served as a "base" weight. The weighting process included an adjustment for nonresponse over Round 2 and the 1999 portion of Round 3 as well as poststratification to the same population control figures for December 1999 used for the MEPS Panel 3 weights. The same five variables employed for Panel 3 poststratification (census region, MSA status, race/ethnicity, sex, and age) were used for Panel 4 poststratification. Similarly, for Panel 4, key, responding persons not in-scope on December 31, 1999 but in-scope earlier in the year retained, as their final Panel 4 weight, the weight after the nonresponse adjustment.

Note that the MEPS round 1 weights (for both panels with one exception as noted below) incorporated the following components: the original household probability of selection for the NHIS; ratio-adjustment to NHIS-based national population estimates at the household (occupied dwelling unit) level; adjustment for nonresponse at the dwelling unit level for Round 1; and poststratification to figures at the family and person level obtained from the March 1999 CPS data base.

3.2.3   The Final Weight for 1999

Variables used in the establishment of person level poststratification control figures included: poverty status (below poverty, from 100 to 125 percent of poverty, from 125 to 200 percent of poverty, from 200 to 400 percent of poverty, at least 400 percent of poverty); census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic, black but non-Hispanic, and other); sex, and age. Overall, the weighted population estimate for the civilian, noninstitutionalized

population for December 31, 1999 is 273,003,778 (PERWT99F>0 and INSC1231=1). The inclusion of key, in-scope persons who were not in-scope on December 31, 1999 brings the estimated total number of persons represented by the MEPS respondents over the course of the year up to 276,410,767 (PERWT99F>0). The weighting process included poststratification to population totals obtained from the 1996 MEPS Nursing Home Component for the number of individuals admitted to nursing homes. For the 1999 full year file an additional poststratification was done to population totals obtained from the 1998 Medicare Current Beneficiary Survey (MCBS) for the number of deaths among Medicare beneficiaries experienced in the 1999 MEPS.

3.2.4 Coverage

The target population for MEPS in this file is the 1999 U.S. civilian, noninstitutionalized population. However, the MEPS sampled households are a subsample of the NHIS households interviewed in 1998 (Panel 3) and 1999 (Panel 4). New households created after the NHIS interviews for the respective Panels and consisting exclusively of persons who entered the target population after 1998 (Panel 3) or after 1999 (Panel 4) are not covered by MEPS. These would include families consisting solely of: immigrants; persons leaving the military; U.S. citizens returning from residence in another country; and persons leaving institutions. It should be noted that this set of uncovered persons constitutes only a tiny proportion of the MEPS target population.

4.0 Strategies for Estimation

This file is constructed for efficient estimation of utilization, expenditure, and sources of payment for hospital inpatient care and to allow for estimates of number of persons with inpatient hospital utilization for 1999.

4.1 Variables with Missing Values

It is essential that the data user/analyst examine all variables for the presence of negative values used to represent missing values. For continuous or discrete variables, where means or totals may be taken, it may be necessary to set minus values to values appropriate to the analytic needs. That is, the data user/analyst should either impute a value or set the value to one that will be interpreted as missing by the computing language used. For categorical and dichotomous variables, the data user/analyst may want to consider whether to recode or impute a value for cases with negative values or whether to exclude or include such cases in the numerator and/or denominator when calculating proportions.

Methodologies used for the editing/imputation of expenditure variables (e.g. sources of payment, flat fee, and zero expenditure) are described in Section 2.5.4.

4.2 Basic Estimates of Utilization, Expenditure, and Sources of Payment

While the examples described below illustrate the use of event level data in constructing person level total expenditures, these estimates can also be derived from the person level expenditure file unless the characteristic of interest is event specific.

In order to produce national estimates related to hospital inpatient stays, expenditure and sources of payment, the value in each record contributing to the estimates must be multiplied by the weight (PERWT99F) contained on that record.

Example 1

For example, the total number of hospital inpatient stays, regardless of the length of the hospital stay for the civilian non-institutionalized population of the U.S. in 1999, is estimated as the sum of the weight (PERWT99F) across all records. That is,

$$\Sigma \, W_j = 27,626,926 \tag{1}$$

Example 2

Subsetting to records based on characteristics of interest expands the scope of potential estimates. For example, the estimate for the mean out-of-pocket payment at the hospital inpatient stay level (for those who had such expense greater than 0), should be calculated as the weighted mean of the facility bill and doctor's bill paid by self/family. That is,

$$(\Sigma \, W_j \, X_j)/(\Sigma \, W_j) = \$220.42 \tag{2}$$

where $X_j = \text{IPFSF99X}_j + \text{IPDSF99X}_j$ and $\Sigma \, W_j = 27,140,278$

for all records with $\text{IPXP99X}_j > 0$

This gives \$220.42 as the estimated mean amount of out-of-pocket payment of expenditures associated with hospital inpatient stays (discharges) and 27,140,278 as an estimate of the total number of hospital inpatient stays with expenditures. Both of these estimates are for the civilian non-institutionalized population of the U.S. in 1999.

Example 3

Another example would be to estimate the mean proportion of total expenditures paid by private insurance for hospital inpatient stays with expenditures. This should be calculated as the weighted mean of the proportion of total expenditures paid by private insurance at the event level. That is,

$$(\Sigma \, W_j \, Y_j)/(\Sigma \, W_j) = 0.3912 \tag{3}$$

where $Y_j = (\text{IPFPV99X}_j + \text{IPDPV99X}_j)/\text{IPXP99X}_j$ and $\Sigma \, W_j = 27,140,278$

for all records with $\text{IPXP99X}_j > 0$.

This gives 0.3912 as the estimated mean proportion of total expenditures paid by private insurance for hospital inpatient stays with expenditures for the civilian non-institutionalized population of the U.S. in 1999.

4.3　　Estimates of the Number of Persons with Hospital Inpatient Stays

When calculating an estimate of the total number of persons with hospital inpatient stays, users can use a person-level file or this event file. However, this event file must be used when the measure of interest is defined at the event level. For example, to estimate the number of persons, in the civilian non-institutionalized population of the U.S., discharged from a hospital in 1999 with at least one hospital stay of 10 or more nights, this event file must be used. This would be estimated as,

$$\sum W_i X_i \qquad \text{across all unique persons i on this file} \qquad (4)$$

where　W_i is the sampling weight (PERWT99F) for person i
and
　　$X_i = 1$　　if $NUMNIGHX_j$ GE 10 for any stay of person i.
　　　$= 0$　　otherwise

4.4　　Person-Based Ratio Estimates

4.4.1　　Person-Based Ratio Estimates Relative to Persons with Hospital Inpatient Use

This file may be used to derive person-based ratio estimates. However, when calculating ratio estimates where the denominator is at person-level, care should be taken to properly define and estimate the unit of analysis as person-level. For example, the mean expense for persons with hospital inpatient stays is estimated as,

$$(\sum W_i Z_i)/(\sum W_i) \quad \text{across all unique persons i on this file} \qquad (5)$$

where
　　W_i is the sampling weight (PERWT99F) for person i
and
　　$Z_i = \sum IPXP99X_j$ across all stays for person i.

4.4.2　　Person-Based Ratio Estimates Relative to the Entire Population

If the ratio relates to the entire population, this file cannot be used to calculate the denominator, as only those persons with at least one hospital inpatient stay are represented on this data file. In this case the person level file, which has data for all sampled persons, must be used to estimate the total number of persons (i.e. those with use and those without use). For example, to estimate the proportion of civilian non-institutionalized population of the U.S. with at least one hospital inpatient stay of four or more days would be estimated as:

$$(\sum W_i Z_i)/(\sum W_i) \quad \text{across all unique persons i on the person level file} \qquad (6)$$

where　W_i is the sampling weight (PERWT99F) for person i

and

$$Z_i = 1 \quad \text{if NUMNIGHX}_j \text{ GE 4 for any stay of person i.}$$
$$= 0 \quad \text{otherwise.}$$

4.5 Sampling Weights for Merging Previous Releases of MEPS Household Data with this Event File

There have been several previous releases of MEPS Household Survey public use data. Unless a variable name common to several files is provided, the sampling weights contained on these data files are file-specific. The file-specific weights reflect minor adjustments to eligibility and response indicators due to birth, death, or institutionalization among respondents.

For estimates from a MEPS data file that do not require merging with variables from other MEPS data files, the sampling weight(s) provided on that data file are the appropriate weight(s). When merging a MEPS Household data file to another, the major analytical variable (i.e. the dependent variable) determines the correct sampling weight to use.

4.6 Variance Estimation (VARSTR99, VARPSU99)

To obtain estimates of variability (such as the standard error of sample estimates or corresponding confidence intervals) for estimates based on MEPS survey data, one needs to take into account the complex sample design of MEPS. Various approaches can be used to develop such estimates of variance including use of the Taylor series or various replication methodologies. Replicate weights have not been developed for the MEPS 1999 data. Variables needed to implement a Taylor series estimation approach are provided in the file and are described in the paragraph below.

Using a Taylor Series approach, variance estimation strata and the variance estimation PSUs within these strata must be specified. The corresponding variables on the MEPS full year utilization database are VARSTR99 and VARPSU99, respectively. Specifying a "with replacement" design in a computer software package such as SUDAAN (Shah, 1996) should provide standard errors appropriate for assessing the variability of MEPS survey estimates. It should be noted that the number of degrees of freedom associated with estimates of variability indicated by such a package may not appropriately reflect the actual number available. For MEPS sample estimates for characteristics generally distributed throughout the country (and thus the sample PSUs), there are over 100 degrees of freedom associated with the corresponding estimates of variance. The following illustrates these concepts using two examples from section 4.2.

Examples 2 and 3 from Section 4.2

Using a Taylor Series approach, specifying VARSTR99 and VARPSU99 as the variance estimation strata and PSUs (within these strata) respectively and specifying a "with replacement" design in a computer software package SUDAAN will yield standard error estimates of $32.34 and 0.0158 for the estimated mean of out-of-pocket payment and the estimated mean proportion of total expenditures paid by private insurance respectively.

5.0　　　　Merging/Linking MEPS Data Files

Data from the MEPS 1999 Hospital Inpatient Stays File can be used alone or in conjunction with other files. This section provides instructions for linking the hospital stays files with other MEPS public use files, namely, the person-level file, the prescribed medicines file, and the medical conditions file.

5.1　　　　Merging a Person-Level File to the Hospital Inpatient Stays File

Merging characteristics of interest from person-level files (e.g., MEPS 1999 Population Characteristics File, or MEPS 1999 Person Level Use and Expenditure File) expands the scope of potential estimates. To estimate the total number of hospital inpatient stays for persons with specific demographic characteristics (e.g., age, race, and sex), population characteristics from a person-level file need to be merged onto the hospital inpatient stays file. This procedure is illustrated below. The MEPS 1999 Appendix File provides additional detail on how to merge MEPS data files.

1. Create data set PERS by sorting the MEPS 1999 Full Year Population Characteristics File, by the person identifier, DUPERSID. Keep only variables to be merged on to the hospital inpatient stays file and DUPERSID.

2. Create data set STAZ by sorting the hospital inpatient stays file by person identifier, DUPERSID.

3. Create final data set NEWSTAZ by merging these two files by DUPERSID, keeping only records on the hospital inpatient stays file.

The following is an example of SAS code which completes these steps:

```
PROC SORT DATA=HCXXX(KEEP=DUPERSID AGE SEX EDUC)    OUT=PERSX;
    BY DUPERSID;
RUN;

PROC SORT DATA=STAYS;
    BY DUPERSID;
RUN;

DATA NEWSTAYS;
    MERGE STAYS (IN=A) PERSX(IN=B);
    BY DUPERSID;
    IF A;
RUN;
```

5.2　　　　Linking the MEPS 1999 Hospital Inpatient Stays to the MEPS 1999　　　　Medical Conditions File and/or the 1999 Prescribed Medicines File

Because of survey design issues, data users/analysts must keep limitations and/or caveats in mind when linking the different files. Those limitations/caveats are listed below. For detailed linking examples, including SAS code, data users/analysts should refer to the MEPS 1999 Appendix File.

5.2.1 Limitations/Caveats of RXLK (the Prescribed Medicine Link File)

The RXLK file provides a link from the MEPS event files to records on the 1999 Prescribed Medicine File. When using RXLK, data users/analysts should keep in mind that one hospital inpatient stay could link to more than one prescribed medicine record. Conversely, a prescribed medicine event may link to more than one hospital inpatient stay or different types of events. When this occurs, it is up to the data user/analyst to determine how the prescribed medicine expenditures should be allocated among those medical events.

5.2.2 Limitations/Caveats of CLNK (the Medical Conditions Link File)

The CLNK provides a link from MEPS event files to the 1999 Medical Conditions File. When using the CLNK, data users/analysts should keep in mind that (1) conditions are self-reported and (2) there may be multiple conditions associated with a hospital inpatient stay. Data users/analysts should also note that not all hospital inpatient stays link to the medical conditions file.

References

American Psychiatric Association. Task Force on DSM-IV. *Diagnostic and Statistical Manual of Mental Disorders: DSM-IV*. 4th edition. Washington, DC. American Psychiatric Association, 1994.

Cohen, S.B. (1998). Sample Design of the 1996 Medical Expenditure Panel Survey Medical Provider Component. Journal of Economic and Social Measurement. Vol. 24, 25-53.

Cohen, S.B. (1997). Sample Design of the 1996 Medical Expenditure Panel Survey Household Component. Rockville (MD): Agency for Health Care Policy and Research; 1997. *MEPS Methodology Report*, *No. 2.* AHCPR Pub. No. 97-0027.

Cohen, J.W. (1997). Design and Methods of the Medical Expenditure Panel Survey Household Component. Rockville (MD): Agency for Health Care Policy and Research; 1997. *MEPS Methodology Report, No. 1.* AHCPR Pub. No. 97-0026.

Cohen, S.B. (1996). The Redesign of the Medical Expenditure Panel Survey: A Component of the DHHS Survey Integration Plan. *Proceedings of the COPAFS Seminar on Statistical Methodology in the Public Service.*

Cox, B.G. and Cohen, S.B. (1985). Chapter 6: A Comparison of Household and Provider Reports of Medical Conditions. In *Methodological Issues for Health Care Surveys.* Marcel Dekker, New York.

Cox, B.G. and Cohen, S.B. (1985). Chapter 8: Imputation Procedures to Compensate for Missing Responses to Data Items. In *Methodological Issues for Health Care Surveys.* Marcel Dekker, New York.

Cox, B. and Iachan, R. (1987). A Comparison of Household and Provider Reports of Medical Conditions. Journal of the American Statistical Association 82(400):1013-18.

Edwards, W.S., Winn, D.M., Kurlantzick V., et al. (1994). Evaluation of National Health Interview Survey Diagnostic Reporting. National Center for Health Statistics, Vital Health 2(120).

Elixhauser, A., Steiner, C.A., Whittington, C.A., and McCarthy, E. Clinical Classifications for Health Policy Research: Health Inpatient Statistics, 1995. Healthcare Cost and Utilization Project, HCUP-3 Research Note. Rockville, MD: Agency for Health Care Policy and Research: 1998. AHCPR Pub. No. 98-0049.

Health Care Financing Administration (1980). International Classification of Diseases, 9th Revision, Clinical Modification (ICD-CM). Vol. 1. (DHHS Pub. No. (PHS) 80-1260). DHHS: U.S. Public Health Services.

Johnson, A.E. and Sanchez, M.E. (1993). Household and Medical Provider Reports on Medical Conditions: National Medical Expenditure Survey, 1987. Journal of Economic and Social Measurement. Vol. 19, 199-233.

Monheit, A.C., Wilson, R., and Arnett, III, R.H. (Editors). Informing American Health Care Policy. (1999). Jossey-Bass Inc., San Francisco.

Shah, B.V., Barnwell, B.G., Bieler, G.S., Boyle, K.E., Folsom, R.E., Lavange, L., Wheeless, S.C., and Williams, R. (1996). *Technical Manual: Statistical Methods and Algorithms Used in SUDAAN Release 7.0,* Research Triangle Park, NC: Research Triangle Institute.

Attachment 1
Definitions

Dwelling Units, Reporting Units, Families, and Persons - The definitions of dwelling units (DUs) and group quarters in the MEPS Household Survey are generally consistent with the definitions employed for the National Health Interview Survey.

The dwelling unit ID (DUID) is a five-digit random ID number assigned after the case was sampled for MEPS. The person number (PID) uniquely identifies all persons within the dwelling unit. The variable DUPERSID is the combination of the variables DUID and PID.

A Reporting Unit (RU) is a person or group of persons in the sampled dwelling unit who are related by blood, marriage, adoption or other family association, and who are to be interviewed as a group in MEPS. Thus, the RU serves chiefly as a family-based "survey operations" unit rather than an analytic unit. Regardless of the legal status of their association, two persons living together as a "family" unit were treated as a single reporting unit if they chose to be so identified.

Unmarried college students under 24 years of age who usually live in the sampled household, but were living away from home and going to school at the time of the Round 1 MEPS interview, were treated as a Reporting Unit separate from that of their parents for the purpose of data collection. These variables can be found on MEPS person level files.

In-Scope - A person was classified as in-scope (IN-SCOPE) if he or she was a member of the U.S. civilian, non-institutionalized population at some time during the Round 1 interview. This variable can be found on MEPS person level files.

Keyness - The term "keyness" is related to an individual's chance of being included in MEPS. A person is key if that person is appropriately linked to the set of NHIS sampled households designated for inclusion in MEPS. Specifically, a key person either was a member of an NHIS household at the time of the NHIS interview, or became a member of such a household after being out-of-scope prior to joining that household (examples of the latter situation include newborns and persons returning from military service, an institution, or living outside the United States).

A non-key person is one whose chance of selection for the NHIS (and MEPS) was associated with a household eligible but not sampled for the NHIS, who happened to have become a member of a MEPS reporting unit by the time of the MEPS Round 1 interview. MEPS data, (e.g., utilization and income) were collected for the period of time a non-key person was part of the sampled unit to permit family level analyses. However, non-key persons who leave a sample household would not be recontacted for subsequent interviews. Non-key individuals are not part of the target sample used to obtain person level national estimates.

It should be pointed out that a person may be key even though not part of the civilian, non-institutionalized portion of the U.S. population. For example, a person in the military may be living with his or her civilian spouse and children in a household sampled for the NHIS. The person in the military would be considered a key person for MEPS. However, such a person would not receive

a person-level sample weight so long as he or she was in the military. All key persons who participated in the first round of a MEPS panel received a person level sample weight except those who were in the military. The variable indicating "keyness" is KEYNESS. This variable can be found on MEPS person level files.

Eligibility - The eligibility of a person for MEPS pertains to whether or not data were to be collected for that person. All key, in-scope persons of a sampled RU were eligible for data collection. The only non-key persons eligible for data collection were those who happened to be living in the same RU as one or more key persons, and their eligibility continued only for the time that they were living with a key person. The only out-of-scope persons eligible for data collection were those who were living with key in-scope persons, again only for the time they were living with a key person. Only military persons meet this description. A person was considered eligible if they were eligible at any time during Round 1. The variable indicating "eligibility" is ELIGRND1, where 1 is coded for persons eligible for data collection for at least a portion of the Round 1 reference period, and 2 is coded for persons not eligible for data collection at any time during the first round reference period. This variable can be found on MEPS person level files.

Pre-imputed - This term describes HC variables that have undergone a series of logical edits to correct for several problems, including outliers, copayments or charges reported as total payments, and reimbursed amounts counted as out of pocket payments. Missing data remain.

Unimputed – This term describes MPC variables that have undergone a series of logical edits to correct for several problems, including outliers, copayments or charges reported as total payments, and reimbursed amounts counted as out of pocket payments. These data were used as the imputation source to account for missing HC data.

Imputation - This term is used to describe the use of predictive models to adjust for the missing data items based on data available on the same (or similar) cases. Hot-deck imputation creates a data set with complete data for all nonrespondent cases, often by substituting the data from a respondent case that resembles the nonrespondent on certain known variables.

D. Variable Source Cross-walk

Survey Administration and ID Variables

Variable	Description	Source
DUID	Dwelling unit ID	Assigned in sampling
PID	Person number	Assigned in sampling
DUPERSID	Sample person ID (DUID + PID)	Assigned in sampling
EVNTIDX	Event ID : DUPERSID + EVENTN	Assigned in Sampling
EVENTRN	Round number	CAPI derived
IPR2FLAG	Flag for Panel 3 R2 Event in 1999	Constructed
ERHEVIDX	Emergency Room/Hospital Stay Link ID	Constructed
FFEEIDX	Flat fee ID	CAPI derived
MPCDATA	MPC Data Flag	Constructed

Characteristics of Hospital Inpatient Stays

Variable	Description	Source
IPBEGYR	Event start date – year	CAPI derived
IPBEGMM	Event start date – month	CAPI derived
IPBEGDD	Event start date – day	CAPI derived
IPENDYR	Event end date – year	CAPI derived
IPENDMM	Event end date – month	CAPI derived
IPENDDD	Event end date – day	CAPI derived
NUMNIGHX	Number of nights in Hospital – Edited/imputed	(Edited/imputed)
NUMNIGHT	Number of nights stayed at provider (Hospital)	HS01
EMERROOM	Did stay begin with emergency room visit	HS02
SPECCOND	Hospital stay related to condition	HS03
RSNINHOS	Reason entered hospital	HS05
ANYOPER	Any operations or surgery performed	HS06
SURGPROC	Main surgical procedure	HS07
VAPLACE	Hospital is a VA facility (Flag)	Constructed
IPICD1X	3 digit ICD-9 condition code	HS02 (Edited)
IPICD2X	3 digit ICD-9 condition code	HS02 (Edited)
IPICD3X	3 digit ICD-9 condition code	HS02 (Edited)
IPICD4X	3 digit ICD-9 condition code	HS02 (Edited)
IPPRO1X	2 digit ICD-9 procedure code	HS02 (Edited)
IPPRO2X	2 digit ICD-9 procedure code	HS02 (Edited)
IPCCC1X	Modified Clinical Classification Code	Constructed/Edited
IPCCC2X	Modified Clinical Classification Code	Constructed/Edited
IPCCC3X	Modified Clinical Classification Code	Constructed/Edited
IPCCC4X	Modified Clinical Classification Code	Constructed/Edited
DSCHPMED	Medicines prescribed at discharge	HS08
DROUTSID	Any of the DRS seen outside the provider (hospital)	HS10

Flat Fee Variables

Variable	Description	Source
FFIPTYPE	Flat Fee Bundle	FF01, FF02

Imputed Total Expenditure Variables

Variable	Description	Source
IPXP99X	Total expenditure for hospital inpatient stay (IPFXP99X + IPDXP99X)	Constructed
IPTC99X	Total charge for hospital inpatient stay (IPFTC99X + IPDTC99X)	Constructed

Imputed Facility Expenditure Variables

Variable	Description	Source
IPFSF99X	Facility amount paid, family (imputed)	Imputed
IPFMR99X	Facility amount paid, Medicare (imputed)	Imputed
IPFMD99X	Facility amount paid, Medicaid (imputed)	Imputed
IPFPV99X	Facility amount paid, private insurance (imputed)	Imputed
IPFVA99X	Facility amount paid, Veterans (imputed)	Imputed
IPFCH99X	Facility amount paid, CHAMP/CHAMPVA (imputed)	Imputed
IPFOF99X	Facility amount paid, other federal (imputed)	Imputed
IPFSL99X	Facility amount paid, state/local govt. (imputed)	Imputed
IPFWC99X	Facility amount paid, Worker's Comp (imputed)	Imputed
IPFOR99X	Facility amount paid, other private (imputed)	Imputed
IPFOU99X	Facility amount paid, other public (imputed)	Imputed
IPFOT99X	Facility amount paid, other insurance (imputed)	Imputed
IPFXP99X	Facility sum of payments IPFSF99X – IPFOT99X	Constructed
IPFTC99X	Facility total charge (imputed)	Imputed

Imputed Separately Billing Physician Expenditure Variables

Variable	Description	Source
IPDSF99X	Doctor amount paid, family (imputed)	Imputed
IPDMR99X	Doctor amount paid, Medicare (imputed)	Imputed
IPDMD99X	Doctor amount paid, Medicaid (imputed)	Imputed
IPDPV99X	Doctor amount paid, private insurance (imputed)	Imputed
IPDVA99X	Doctor amount paid, Veterans (imputed)	Imputed
IPDCH99X	Doctor amount paid, CHAMP/CHAMPVA (imputed)	Imputed
IPDOF99X	Doctor amount paid, other federal (imputed)	Imputed
IPDSL99X	Doctor amount paid, state/local govt. (imputed)	Imputed
IPDWC99X	Doctor amount paid, Worker's Comp (imputed)	Imputed
IPDOR99X	Doctor amount paid, other private (imputed)	Imputed
IPDOU99X	Doctor amount paid, other public (imputed)	Imputed
IPDOT99X	Doctor amount paid, other insurance (imputed)	Imputed
IPDXP99X	Doctor sum of payments (IPPSF99X – IPPOT99X)	Constructed
IPDTC99X	Doctor total charge (imputed)	Imputed
IMPFLAG	Imputation status	Constructed

Weights

Variable	Description	Source
PERWT99F	Final person level weight, 1999	Constructed
VARPSU99	Variance estimation PSU, 1999	Constructed
VARSTR99	Variance estimation stratum, 1999	Constructed