

MEDICARE CURRENT BENEFICIARY SURVEY

CY 1992 Access to Care

INTRODUCTION

The accompanying public use file is the second in a series of data releases relating to beneficiary access to care from the ongoing Medicare Current Beneficiary Survey (MCBS). It consists of interview data collected during September through December of 1992, linked with Medicare claims and administrative data for calendar year 1992.

PURPOSE OF THE SURVEY

The MCBS is a continuous, multi-purpose survey of a representative sample of the Medicare population, both aged and disabled. It is sponsored by the Centers for Medicare and Medicaid Services (CMS). CMS's primary mission is the administration of Medicare (Health Insurance for the Aged and Disabled) and assisting the States in administering the Medicaid program (Grants to States for Medical Assistance Programs). In 1991 federal expenditures for these two programs exceeded \$178 billion -- approximately 25% of all personal health care expenditures in the nation.

The purpose of the MCBS is to aid in CMS's administration, monitoring, and evaluation of the Medicare and Medicaid programs. MCBS data will enable CMS to monitor the financial effects of changes in the Medicare program, to develop reliable and current information on the use and cost of services not covered by Medicare (such as prescription drugs and long term care), and to develop reliable and current information on the sources of payment for costs of covered services not reimbursed by Medicare.

The MCBS focuses on economic issues: health care use and expenditures and factors that affect use of care and the beneficiary's ability to pay. The MCBS also collects a variety of information about demographic characteristics, health status and functioning, access to care, insurance coverage, financial resources, and family supports. The longitudinal design of the MCBS allows analysis of the effects of these factors on patterns of use over time.

THE DESIGN OF THE MCBS

Fieldwork for Round 1 began in September, 1991 and was completed in December, 1991. New rounds, re-interviewing the same sample persons (or other appropriate respondents), begin every four months. Interviews are conducted regardless of whether the sample person resides at home or in a long term care facility, using the questionnaire version appropriate to the setting.

Repeated Interviews. The MCBS is a longitudinal panel survey. Sample persons are interviewed three times a year over several years to form a continuous profile of their health care experience. The MCBS is thus uniquely capable of tracing changes in use with changes in coverage and personal circumstances, and observing processes that occur over time, such as people leaving their homes and taking up residence in long term care facilities, or spending their assets for medical care until they become eligible for Medicaid.

Sample. Respondents for the MCBS were sampled from the Medicare enrollment file to be representative of the Medicare population as a whole and by age group: under 45, 45 to 64, 65 to 69, 70 to 74, 75 to 79, 80 to 84, and 85 and over. Because of interest in their special health care needs, the oldest old (85 and over) and the disabled (64 and under) were over-sampled to permit more detailed analysis of these subpopulations.

The sample was drawn from 107 primary sampling units (PSUs) chosen to represent the nation, including the District of Columbia and Puerto Rico, with a second stage of 1,163 geographic clusters randomly drawn within those PSUs. The sample is supplemented annually for attrition, as well as for newly eligible persons, beginning in the fourth round. Beginning in Round 10 (Sept-Dec 1994), the sample will be enlarged to yield 16,000 completed interviews at the end of calendar 1995; beginning in Round 13 (Sept-Dec 1996), we will adopt a rotating panel design, replacing 1/3 of the sample each Fall.

The Round 1 MCBS sample consisted of 14,530 Medicare beneficiaries, for whom 12,674 interviews were completed. The response rate for the first round was 87 percent, yielding 11,732 community interviews and 942 institutional interviews. Round 4 interviews were completed for 10,388 of those for whom a Round 1 interview was completed. An additional 1,995 Round 4 interviews were completed for the 2,366 Round 4

supplemental sample persons. This release includes the responses of 12,383 beneficiaries: 11,421 community interviews and 962 institutional interviews.

Round 4

	<u>Round 1</u>	<u>Longitudinal</u>	<u>Supplemental</u>	<u>Total</u>
Community	11,732	9,497	1,925	11,421
Facility	942	891	70	962
	12,674	10,388	1,995	12,383

The Community Interview. Sampled individuals in the community are interviewed using computer-assisted personal interviewing (CAPI) survey instruments installed on notebook-size portable computers. The CAPI program automatically guides the interviewer through the questions, records the answers, and compares them to edit specifications, thereby increasing the output of timely, clear, and high quality data. CAPI guides the interviewer through complex skip patterns and inserts follow-up questions where certain data were missing or incorrect from the previous round interview. When the interview is completed, CAPI allows the interviewer to transmit the data by telephone to the home office computer.

These interviews will yield a series of data over time for each sampled beneficiary on utilization of health services, medical care expenditures, health insurance coverage, sources of payment, (public and private, including out-of-pocket payments), health status and functioning, and a variety of demographic and behavioral information (such as income, assets, living arrangements, family supports, and quality of life). The access to care supplement, is ask once a year in the September - December round. This release represents the 1992 access to care supplement.

An effort is made to interview the sampled person directly, but in case this person is unable to answer the questions, he or she is asked to designate a proxy respondent, usually a family member or close acquaintance. In Round 4, 14% of the community interviews were done with proxies.

The Facility Interview. The MCBS conducts interviews for persons in long-term care facilities using a similar, but shortened instrument. A long-term care facility is defined as having three or more beds and providing long-term care services throughout the facility or in a separately identifiable unit. Types of facilities currently participating in the survey include nursing homes, retirement

homes, domiciliary or personal care facilities, distinct long-term units in a hospital complex, mental health facilities and centers, assisted and foster care homes, and institutions for the mentally retarded and developmentally disabled.

If an institutionalized person returns to the community, a community interview is conducted. If he or she spent part of the reference period in the community and part in an institution, a separate interview is conducted for each period of time. Because of this, a beneficiary can be followed in and out of facilities, and a continuous record is maintained regardless of the location of the respondent.

The initial contact for the institutional interview is always with the facility administrator. Interviews are then conducted with the staff designated by the director as the most appropriate to answer each section of the questionnaire.

It was decided early in the design of the study not to attempt interviews with the sample person or family members. The facility interview does not include attitudinal or other subjective items. The facility instruments include:

- (1) The Facility Screener - This instrument gathers information on the facility to determine the facility type. It is asked during the initial interview;
- (2) The Baseline Questionnaire - Gathers information on the health status, insurance coverage, residence history, and demographic items on the beneficiary. This questionnaire is updated annually; and
- (3) The Facility Core Questionnaire - Collects information on facility utilization, charge and payment information. This questionnaire is asked in every round but the first.

The institutional questionnaires also differ from those used in the community because they are administered using a conventional printed instrument with hand written entries.

Data Linkage. MCBS interview data have been linked to Medicare claims and other administrative data to enhance their analytic power. This results in a database, which combines data that can only be obtained from personal interviews with highly accurate Medicare administrative data. The survey data plus Medicare claims data constitute a more complete data set for the MCBS sample than is available from either source alone. Administrative data such as buy-in status and prepaid plan membership are also added to the file. The final file

consists of survey, administrative, and claims data. All personal identifying information is removed.

DESIGN OF THE ACCESS TO CARE FILE

The Access to Care file is designed to provide early release of MCBS data related to Medicare beneficiary access to care. Rapid release of access data is achieved by omitting survey reported utilization and expenditure data. This eliminates the need for imputation of cost variable and bypasses the reconciliation of the utilization and expenditure data collected in the survey with Medicare claims data.

The content of the access to care PUF is governed by its central focus. In addition to questions from the access supplement concerning access to care, satisfaction with care and usual source of care, the file contains demographic and health insurance data and data on health status and functioning. To facilitate analysis, the information collected in the survey is augmented with data on the use and cost of Medicare services from Medicare claims data.

CONTENTS OF THIS DOCUMENTATION

The rest of this manual contains detailed information about this public use file, and specific background information intended to make the data more understandable. The sections are described below.

Section 1: Technical description of the data file specifications and the structure of the file. It also provides a brief description and count of each of the record types in this release.

Section 2: Codebook of the file variables. This codebook is organized by record type and contains the question number (for data collected in the survey), and variable name, description and location in the record. Codes or possible values and value labels are also supplied. Frequencies for most variables (those with fewer than 120 distinct values) are also included in the codebook, as are notes concerning when variables are inapplicable (e.g., questions were not asked due to skip patterns in the CAPI program). An index of variables is also included at the end of the codebook. Variables in the CMS bill records are documented slightly

differently. Record layouts are provided, and are cross-walked to CMS data dictionary names. The data dictionary supplies a full explanation of all the variables and their various values.

Section 3: Notes on how individual variables were collected.

Section 4: A list of anomalies that exist in the data which were intentionally left as reported by the respondent ("No-Fix" edits).

Section 5: Hard copy versions of the questionnaires used in Round 4. The questionnaires have been annotated with variable names to associate the questions with the codebook.

Section 6: A general description of the MCBS sample design, estimation procedures and projections. A brief discussion of response rates is also included. This section concludes with a comparison of the MCBS projections to CMS control figures.

Medicare Current Beneficiary Survey

CY 1992 Access to Care

File Structure

File specifications

The MCBS Calendar Year 1992 Access to Care public use file(s) consist of a series of 31 separate datasets, or files. Eighteen of these datasets contain data on the MCBS sample persons; these files are the data files. The other 13 datasets contain SAS® code (SAS input statements, formats and labels) to facilitate the use of the data files by users who have access to a SAS mainframe environment. These are the README files.

Figure 1.1 shows file specifications such as file names, record counts, and the associated README file names.

Summary of the Data

The 18 data files represent completed Round 4 interviews with a sample of 12,383 Medicare beneficiaries, and supplemental information from CMS's Medicare files. Of these cases, 11,421 beneficiaries had community interviews and 962 beneficiaries had facility interviews.

- **Figure 1.1:** File organization

File name	Record Counts
MCBS.readme.rick	
MCBS.readme.rica	
MCBS.readme.ric1	
MCBS.readme.ric2	
MCBS.readme.ric3	
MCBS.readme.ric4	
MCBS.readme.ric5	
MCBS.readme.ric6	
MCBS.readme.ric7	
MCBS.readme.ric8	
MCBS.readme.ricx	
MCBS.readme.ricz	
MCBS.rick	12,383
MCBS.rica	12,383
MCBS.ric1	12,383
MCBS.ric2	12,380
MCBS.ric3	11,415
MCBS.ric4	12,382
MCBS.ric5	11,421
MCBS.ric6	962
MCBS.ric7	962
MCBS.ric8	12,383
MCBS.ricx	12,383
MCBS.ricz	10,388
MCBS.readme.billrec	
MCBS.billrec.inp	3,675
MCBS.billrec.snf	487
MCBS.billrec.hsp	80
MCBS.billrec.hha	3,979
MCBS.billrec.otp	26,483
MCBS.billrec.dme	89
MCBS.billrec.phy	366,042

Using the Data

All datasets are standard "flat" files to allow for processing with a wide variety of operating systems and programming languages. The datasets can be divided into two subject matter groups: files related to Medicare bill data and files related to MCBS survey data with related Medicare administrative variables.

Figure 1.2: Text of a Typical README file
(MCBS.README.RIC5 Illustrated)

```

INPUT  @1    RIC      $1.
        @2    FILEYR  $2.
        @4    BASEID  $8.
        @12   D_HHTOT  $CHAR2.
        @14   D_HHREL  $CHAR2.
        @16   D_HHUNRL $CHAR2.
        @18   D_HHCOMP $CHAR2.
        @20   D_HHLT50 $CHAR2.
        @22   D_HHGE50 $CHAR2.
        @24   D_WRKBEN $CHAR2.
        @26   D_WRKSPO $CHAR2. ;

PROC FORMAT;

VALUE $HHCPFMT  '-8' = 'DONT KNOW'
                ' 1' = 'NO ONE'
                ' 2' = 'SPOUSE ONLY'
                ' 3' = 'SPOUSE AND OTHERS'
                ' 4' = 'CHILDREN ONLY'
                ' 5' = 'CHILDREN AND OTHERS'
                ' 6' = 'OTHERS ONLY'
                ' 7' = 'NONE RELATIVE ONLY';

VALUE $WRKFMT   ' 0' = 'NOT REPORTED'
                ' 1' = 'YES';

LABEL  FILEYR='1992 SUMMARY FILE'
        D_HHTOT='TOTAL NUMBER OF PEOPLE IN HH'
        D_HHREL='NO. IN HH RELATED TO SP (INCLUDING SP)'
        D_HHUNRL='TOTAL NO. PEOPLE IN HH UNRELATED TO SP'
        D_HHCOMP='HOUSEHOLD COMPOSITION CODE'
        D_HHLT50='NUMBER IN HH UNDER 50 (MAY INCLUDE SP)'
        D_HHGE50='NO. IN HH 50 AND OVER (MAY INCLUDE SP)'
        D_WRKBEN='DID BENEFICIARY WORK IN PAST YEAR?'
        D_WRKSPO='DID SPOUSE WORK IN PAST YEAR?';

FORMAT D_HHCOMP $HHCPFMT.
        D_WRKBEN D_WRKSPO $WRKFMT.;

```

There are 12 data files containing survey data and related summary administrative variables. For each of these files there is a "README" file which includes a SAS INPUT statement, a PROC FORMAT to interpret the coded fields, LABELs

which provide more information about the variable than would be possible in an 8-character name, and a FORMAT statement which associates the code interpretations with the appropriate variables.

There are six data files containing Medicare bill data. The MCBS.README.BILLREC file contains SAS input statements and labels (but no formats) for all six bill record files.

As an illustration of the structure of the README files, Figure 1.2 is a copy of the README file for the Survey Enumeration record, RIC 5.

Structure of the MCBS public use file(s)

As mentioned above, the data files can be divided into two subject matter groups: files containing survey data with related Medicare administrative variables, and files containing Medicare bill data.

There are 12 data files in the survey and administrative summary data group:

- Key
- Administrative Identification
- Survey Identification
- Survey Health Status and Functioning
- Survey Access to Care
- Survey Health Insurance
- Survey Enumeration
- Survey Facility Residence History
- Survey Facility Identification
- Survey Interview
- Survey Cross-Sectional Weights
- Survey Longitudinal Weights

There are seven types of Medicare bill records in the detailed utilization portion of the file:

- Inpatient hospital
- Skilled nursing facility
- Hospice
- Home health
- Outpatient
- Physician/supplier
- DME

The bill records represent services provided during calendar year 1992 and processed by CMS in conjunction with our administrative functions. To facilitate analysis, the

Administrative Identification record contains a summary of the utilization that these bills present in detail.

All MCBS public use records begin with the same three variables: a record identification code (RIC), the version of the RIC (VERSION) and a unique number that identifies the person who was sampled (BASEID). These elements serve to identify the type of record and to provide a link to other types of records. To obtain complete survey information for an individual, an analyst must link together records for that individual from the various data files using the variable BASEID. In Round 4, none of the sample people has a record on every data file. Figure 1.3 provides an overview of the presence of data records on the various data files for community and facility respondents.

The tables that follow Figure 1.3 describe all of the types of records in this release. Table 1.A describes the survey and administrative records; Table 1.B describes the bill records.

Figure 1.3 The number of records present on each of the data files for community and facility sample respondents

Data files	Community respondents	Facility respondent
RIC K - Key record	1 per respondent	1 per respondent
RIC A - Administrative Identification	1 per respondent	1 per respondent
RIC 1 - Survey Identification	1 per respondent	1 per respondent
RIC 2 - Survey Health Status and Functioning	1 per respondent	1 per respondent
RIC 3 - Survey Access to Care	1 per respondent	none
RIC 4 - Survey Health Insurance	1 per respondent	1 per respondent
RIC 5 - Survey Enumeration	1 per respondent	none
RIC 6 - Survey Facility Residence History	none	1 per respondent
RIC 7 - Survey Facility Identification	none	1 per respondent
RIC 8 - Survey Interview	1 per respondent	1 per respondent
RIC X - Survey Cross-sectional Weights	1 per respondent	1 per respondent
RIC X2 - Survey Longitudinal Weights	1 per respondent	1 per respondent
Hospital bills *	1, several, or none per respondent	
Skilled nursing facility bills *	1, several, or none per respondent	
Hospice bills *	1, several, or none per respondent	
Home health bills *	1, several, or none per respondent	
Outpatient bills *	1, several, or none per respondent	
Physician/supplier bills *	1, several, or none per respondent	
Durable Medical Equipment bills *	1, several, or none per respondent	

* These bills are summarized in the Administrative Identification record (RIC A), but are provided for more detailed analysis. If the sample person used Medicare benefits, there will be one or many bills, of one or many types, depending on what types of services were used. If the sample person used no Medicare benefits of a certain type, there will be no bills of that type. If the sample person used no Medicare benefits at all, there will be no bills. The RIC A summary provides information about how many services of each type will be found in the bill record files.

Table 1.A - File Overviews

Survey and Administrative Summary Data Files

File: KEY

RIC: K

Number of Records: 12,383-1 for each person who completed an interview

Description: The BASEID key identifies the person interviewed. It is an 8-digit element, consisting of a unique, randomly-assigned 7-digit number concatenated with a single-digit checkdigit.

In addition to the BASEID, the KEY file contains the type of interview conducted and other variables for classifying the beneficiary.

File: ADMINISTRATIVE IDENTIFICATION

RIC: A

Number of records: 12,383 - 1 for each person who completed an interview

Description: The ADMINISTRATIVE IDENTIFICATION file contains information about the sample person from Administrative records maintained by the Health Care Financing Administration. It contains basic demographic information (date of birth, sex), insurance information (Medicare entitlement, Medicaid eligibility, HMO enrollment), and summarizes the sample person's Medicare utilization for 1992.

Table 1.A - File Overviews

Survey and Administrative Summary Data Files

File: SURVEY IDENTIFICATION

RIC: 1

Number of records: 12,383 - 1 for each person who completed an interview

Description: The SURVEY IDENTIFICATION file contains demographic information collected in the survey. To some extent, it parallels the demographic information provided in the ADMINISTRATIVE IDENTIFICATION file (date of birth and sex, for example). Demographic information that is not available in the CMS records, such as education, income and military service, are also present.

File: SURVEY HEALTH STATUS AND FUNCTIONING

RIC: 2

Number of Records: 12,380 - 1 for each person who completed an interview

Description: The SURVEY HEALTH STATUS AND FUNCTIONING file contains information about the sample person's health, including: self-reported height and weight, a self-assessment of vision and hearing, use of preventive measures such as immunizations and mammograms, avoidable risk factors such as smoking, and a history of medical conditions. Standard measures - activities of daily living (ADLs) and instrumental activities of daily living (IADLs) - also appear in this file.

Table 1.A - File Overviews

Survey and Administrative Summary Data Files

File: SURVEY ACCESS TO CARE

RIC: 3

Number of Records: 11,415 - 1 for each person who completed a community interview

Description: The ACCESS TO CARE file contains information from the Access to Care and Satisfaction with Care sections of the questionnaire. Sample people were asked general questions about their use of all types of medical services in 1992 and about their usual source of medical care. This file also contains the sample people's assessment of the quality of the medical care that they are receiving.

File: SURVEY HEALTH INSURANCE

RIC: 4

Number of Records: 12,382 - 1 for each person who completed an interview

Description: The SURVEY HEALTH INSURANCE file summarizes the health insurance information provided by the sample people.

One derived variable, the summary insurance indicator, indicates the variety and number of policies reported by the sample person. Medicaid coverage and details of other types of coverage are also included. To limit the size of the record, only 5 additional policies are detailed.

NOTE: Five individuals in the sample had more than 5 additional policies. For those five people the total in the summary indicator is correct, but the number of plans detailed is one less than the total.

Table 1.A - File Overviews

Survey and Administrative Summary Data Files

File: SURVEY ENUMERATION

RIC: 5

Number of Records: 11,421 - 1 for each person who completed a community interview

Description: The ENUMERATION file contains information about the sample person's household. It reflects the size of the household, and the age and relationship of the people in it.

File: SURVEY FACILITY RESIDENCE HISTORY

RIC: 6

Number of Records: 962 - 1 for each person who completed a facility interview

Description: The FACILITY RESIDENCE HISTORY file summarizes the sample person's stay(s) in the facility, providing information about the admission and some limited information about the sample person's living arrangement prior to admission.

File: SURVEY FACILITY IDENTIFICATION

RIC: 7

Number of Records: 962 - 1 for each sample person interviewed in a facility

Description: The FACILITY IDENTIFICATION file provides general characteristics of the institutions, most of the information from the facility screener. In several cases, more than one person resided in the same facility. In these cases the RIC 7 records are redundant (containing all of the same information), and differ only in the BASEID.

Table 1.A - File Overviews

Survey and Administrative Summary Data Files

File: SURVEY INTERVIEW

RIC: 8

Number of Records: 12,383 - 1 for each person who completed an interview

Description: The SURVEY INTERVIEW file summarizes the characteristics of the interview, including type of questionnaire, duration, and whether or not the interview was conducted with a proxy respondent.

File: SURVEY CROSS-SECTIONAL WEIGHTS

RIC: X

Number of Records: 12,393 - 1 for each sample person

Description: The CROSS-SECTIONAL WEIGHTS file provides cross-sectional weights, including general-purpose weights and a series of replicate weights.

File: SURVEY LONGITUDINAL WEIGHTS

RIC: X2

Number of Records: 10,388 - 1 for each sample person who completed both 1991 and 1992 interviews.

Description: The LONGITUDINAL WEIGHTS file provides longitudinal weights, including general-purpose weights and a series of replicate weights.

Table 1.B - File Overviews

Medicare Utilization Data Files

File: HOSPITAL BILL

RIC: INP

Number of Records: 3,675

Description: Inpatient hospital bills for the MCBS population. These include bills from short stay general hospitals, and long-term hospitals such as psychiatric and TB hospitals. Different provider types are distinguishable. Generally, there is one bill for each stay. Some hospitals, particularly the long-term facilities, may bill on a cyclical basis and several bills may constitute a single hospitalization.

File: SKILLED NURSING FACILITY BILL

RIC: SNF

Number of Records: 487

Description: Skilled nursing facility bills for the MCBS population. These include Christian Science facilities and other skilled nursing facilities. Different provider types are distinguishable. Generally, several bills constitute a period of institutionalization.

File: HOSPICE BILL

RIC: HSP

Number of Records: 80

Description: Hospice bills for the MCBS population. Billing practices vary by provider in that some hospices bill on a cycle (e.g. monthly) so that several bills constitute a period of hospice care; others submit a series of "final" bills.

Table 1.B - File Overviews

Medicare Utilization Data Files

File: HOME HEALTH BILL

RIC: HHA

Number of Records: 3,979

Description: Home health bills for the MCBS population.
Home health agencies generally bill on a
cycle, e.g. monthly.

File: OUTPATIENT BILL

RIC: OTP

Number of Records: 26,483

Description: Outpatient hospital bills for the MCBS
population. These bills are generally for
Part B services that are delivered through the
outpatient department of a hospital
(traditionally, a Part A provider).

File: PHYSICIAN/SUPPLIER BILL

RIC: PHY

Number of Records: 366,042

Description: Medicare Part B (physician and supplier)
claims for the MCBS population. These records
reflect services such as doctor visits,
laboratory tests, X-rays and other types of
radiological tests, surgeries, inoculations
and durable medical equipment.

Medicare Current Beneficiary Survey
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Codebook

This public use release consists of two parts: 1.) a summary segment, which contains all of the survey information and summary data from CMS's administrative and claims files, and 2.) a bill segment, which contains itemized bill records from CMS's National Claims History (NCH) database.

The first part of this section includes frequency tables for all of the variables in the summary segment. The second part of this section documents the variables (without frequencies) in the bill detail records.

SUMMARY SEGMENT

Using the tables

The following tables list the variables in each of the records, give their physical location in the record, list their possible values and relate them to the questionnaires or to source CMS files.

The first part of the Medicare Current Beneficiary Survey data file (that is, the survey and CMS summary data) is made up of 12 different types of records. The record type (RIC) is shown on the second line both in the middle of the page and on the upper right hand corner for each page within a section. This will enable more rapid access to particular parts of the codebook. The name of the record being described is on the third line in the middle of the page.

Variable - This column contains the variable names that we have associated with the SAS version of our data files. Since SAS limits variable names to 8 characters, these names are not always immediately meaningful. You can change them to more informative names, but the names in the tables were used to annotate the copies of the questionnaires.

Certain conventions apply to the SAS variable names. All variables that are preceded by the character "D_", such as D_SMPTYP are derived variables. The variables did not come directly from the survey data, but compiled from several survey variables. Variables preceded by the characters "H_" come from CMS source files.

Section 2: Codebook

Col (Column) - This column locates the variable physically in the record.

Len (Length) - This column describes the length of the field of the variable.

Fmt (Format) Name - This column contains two pieces of information about the variable. First, it identifies the format name associated with the variable in the SAS README file for this variable's RIC. Second, it displays the frequency count for possible values of the variable.

Ques # - The column headed "Ques #" contains a reference to the questionnaire for direct variables, or to the source of derived variables. For example, the "Ques #" entry that accompanies the variable ERVISIT in the Access to Care record is "AC1." The first question in the Access to Care portion of the community questionnaire is the one referenced.

Table 2.1 lists the abbreviations that may appear in this column when a section of the questionnaire is referenced.

This column will be blank for variables that relate to neither the questionnaire nor to CMS source files. These variables, such as the record identification code (variable name is RIC), are usually ones that we created to manage the data and the file.

Ty (Type) - This column identifies the type of variable, that is, numeric (N) or character (C).

Label (Variable label and codes) - In the first line under this column, you will find an explanation of the variable, which describes it more explicitly than would be possible in only 8 letters. These labels are available in README files, if you wish to use them in creating SAS data sets.

All of the possible values of the variable appear in lines beneath that explanation. Associated with each possible value (in the column labeled "Fmt Name") is a count of the number of times that the variable had that value, and, under the column labeled "Label," a short format expanding on the coded value. Formats are also available in the README files.

Certain conventions were used in coding all variables to distinguish between questions that beneficiaries would not, or

Section 2: Codebook

could not, answer, and questions that were not asked. These conventional codes are: "." or "-1" if the question was not applicable; "-7" if the respondent refused to answer; "-8" if the respondent didn't know the answer; and "-9" if the answer could not be ascertained from the response. With derived variables, a " " (blank) or "." mean that the variable could not be derived because one or more of the component parts was not available.

Many questions were posed to elicit simple "Yes" or "No" answers, or to limit responses to one choice from a list of categories. In these cases, the responses are "Yes" or "No," or one of the codes from the list. In other questions, the respondent was given a list of items to choose from, and all of the responses were recorded. In these cases, each of the responses is coded "Indicated" or "Not indicated."

If a beneficiary responded with an answer that was not on the list of possible choices, it was recorded verbatim. All of the verbatim responses were reviewed and categorized. New codes were added to the original list of options to accommodate narratives that appeared frequently. For this reason, the list of possible values for some variables may not exactly match the questionnaire.

Inapplicable - Each variable is followed by a statement that describes when a question was not asked, resulting in a missing variable. Questions were not asked when the response to a prior question or other information gathered earlier in the interview, would make them inappropriate. For example, if the sample person said he has never smoked (community component, question HS16), he would not be asked if he smokes now (question HS17).

Section 2: Codebook

Table 2.1: Abbreviations Used to Identify Sections of the Questionnaires

Community Questionnaire

UPD	Name-Address Update
IN	Introduction
ENS	Enumeration Summary
EN	Enumeration
HI	Health Insurance
UTS	Utilization Summary
DU	Dental Utilization-Events
ER	Emergency Room Utilization Events
IP	Inpatient Utilization-Events
IU	Institutional Utilization
OP	Outpatient Hospital Utilization-Event
HHS	Home Health Utilization Summary
HH	Home Health Utilization-Events
MP	Medical Provider Utilization-Events
OM	Other Medical Expenses Utilization
PMS	Prescribed Medicine Summary
PM	Prescribed Medicine Utilization
ST	Charge Question-Statement
NS	Charge Question-No Statement
CPS	Charge-Payment Summary
DI	Demographics/Income
US	Usual Source of Care
HS	Health Status and Functioning
SC	Satisfaction with Care
AC	Access to Care
CL	Closing Materials
IR	Interviewer Remarks

Facility Questionnaire (Screener)

FQ

Facility Baseline Questionnaire

BQ	Baseline Questionnaire
	Core Questionnaire
SQ	Sup Core Questionnaire

BILL DETAIL SEGMENT

Using the tables

The tables in the bill detail section describe the Medicare utilization files included on the public use file. There are two sets of tables; they must be considered together in order to interpret the data in this segment.

- **FILE DESCRIPTIONS FOR MEDICARE CLAIMS** - These record layouts correspond to the seven Medicare utilization files on the data file(s). The inpatient hospital and SNF bill files are described in the same record layout even though they are in separate datasets.

NCH No. - The number associated with each variable in the public use file bill records and CMS's Data Dictionary (discussed below). The NCH No. can be used to crosswalk from the bill record to the more detailed description in the dictionary.

Variable - The name we have assigned to the data element (variable). Names may be up to eight characters long, and are mnemonic. The variable name links the record layout to the remainder of the bill detail documentation. This name is also the name that we have supplied in the "README" SAS INPUT statement and labels.

Type - The format of the data element, or variable. Singly occurring data fields may be numeric, character or packed-decimal.

Group items may appear more than once, depending on the information that is present in the bill. For example, if several surgical procedures were reported on the bill, each of them would appear as a separate group item. One surgical procedure would translate to a single group item. A counter shows how many of each trailer type are present. For example, the number of ICD-9-CM procedure code groups present on the claim would be indicated by the counter PROCNT.

Length - The number of bytes physically occupied by the variable in the record.

Format - How the data should be interpreted. For example, date fields may be read as six characters, interpreted as CCYYMMDD (two-digit century, two-digit year, followed by two-digit month, followed by the two-

digit day of the month).

Description - A more complete explanation of what the variable contains. These descriptions can be assigned to variables with the SAS LABEL code that is provided in the "README" file.

- DATA DICTIONARY - These tables are maintained by CMS to describe their internal records. They contain standard definitions of the variables in this file and values for all coded variables. Some of the variables referenced in this dictionary do not appear in this file. We have deleted some fields to protect the privacy of those who are participating in the survey.

Medicare Current Beneficiary Survey
CY 1992 Access to Care

Notes on Using the Data

In an undertaking of this nature and magnitude, there are bound to be questions about how terms are defined operationally and how field procedures affect the data collection process. We have included this section to address those questions.

This section is a collection of information about various data fields present in this public use release. We have not attempted to present information on every survey data field; rather, we concentrated our efforts on data fields where we have something useful to introduce. We start with information, which is relevant across the board (global information). We follow that with specific information on individual data fields, presented in the same sequence as the data fields appear in the codebook.

Global Information

Missing Values

Various negative values are used to indicate missing data. For instance, a value of -1 indicates that the variable is inapplicable. A variable is generally inapplicable because the question is not appropriate, for example, a question about hysterectomy when the respondent is a male. In this file, the value -1 has been replaced with SAS® standard missing values (blank for character and "." for numeric). Other missing value codes: -7 for "refused", -8 for "don't know", and -9 for "not ascertained" were not changed.

Dates

The dates in this public use release have been written as six numeric characters: CCYYMMDD (2-digit century, 2-digit year, 2-digit month and 2-digit day). Due to the manner in which the responses were given, these dates must be evaluated in parts because one or more of the parts may be missing. For example, a vague response about a particular date - "I know it was in June of last-year, but I'm not sure of the exact day" -

Notes on Using the Data

would be coded "199206-8" ("19" for the century, "92" for the year, "06" for June, and the code "-8" for "Don't know" for the day).

Narratives

Respondents were asked a number of open-ended questions. The respondents answered these questions in their own words, and interviewers recorded the responses, verbatim. The interviewer was prohibited from paraphrasing or summarizing the respondents' answer. However, this public use release does not contain narratives. Instead, we have supplied codes that summarize the answer. Often there will be more than one code because the answer included several specific topics.

Specific variables - Key Record (RIC K)

There are 12,383 key records, one for each individual who completed an interview (11,421 community interviews **INTERVU="C"** and 962 facility interviews **INTERVU="F"**).

The facility interview was conducted whenever the sample person was residing in a facility that contains three or more beds, classified itself as providing long-term care, and could identify long-term care residents of the facility separately from those of the institution as a whole. This broad definition allows analysis beyond traditional views of long-term care, that is, nursing home and related care homes having three or more beds and providing either skilled nursing, or rehabilitative or personal care (other than supervision). Analysts can narrow or extend the focus of their studies of facility care by using information from the Survey Facility Identification Record. This record is present for each sample person for whom a facility questionnaire was administered.

Some sample people had more than one interview in this round. This release is a mix of the continuing 1991 sample (**D_SMPTYP="L"**) and people who joined the survey in Round 4 (**D_SMPTYP** not ="L"). Interviews are conducted for the continuing sample in as many settings as necessary, to create a seamless view of the entire round. Only one interview-- facility or community--is conducted with the new sample people, depending on the situation in which we locate them. In this group of 12,383 beneficiaries, 12,312 had one, and only one, interview. The remaining 71 people experienced some transition in their living arrangement which is reflected in

Notes on Using the Data

the MCBS database: 7 people moved from a facility to the community; 47 moved from the community to a facility; and 17 people moved from one facility to another.

To avoid duplication of data, the records in this file represent only the last interview in Round 4: 11,421 community and 962 facility interviews.

This record contains a special-purpose variable, **SURVIVE**. The Round 4 MCBS data are not suited for making estimates of the "ever enrolled" 1992 Medicare population because the sample only includes some beneficiaries new to Medicare in that year. For the same reason, point-in-time estimates are also inappropriate. It is appropriate, however, to use the Round 4 data to approximate the "always enrolled" 1992 Medicare population, i.e., those beneficiaries who were alive and enrolled on or before January 1, 1992 and were still alive and enrolled on January 1, 1993. We estimate this population at 33,308,300 beneficiaries. This group can be separated from the entire group of Round 4 interviews by selecting only beneficiaries who were enrolled before 1992 and survived until 1993 (**SURVIVE**="Y").

Administrative Identification Record (RIC A)

Except as noted otherwise, the variables in this record were derived from CMS's Medicare enrollment database. History records were searched to establish the beneficiary's status as of July 1, 1992.

Four variables relating to the sample person's age are provided. Date of birth as reported by the respondent during the interview is recorded in the RIC 1 - Survey Identification record (**D_DOB**). Date of birth from the Medicare - Social Security Administration records is recorded in the Administrative Identification Record (**H_DOB**). The variable **H_AGE** represents the sample person's age as of July 1, 1992. The variable **H_STRAT** groups the sample persons by **H_AGE**. The variables **H_DOB**, **H_AGE**, and **H_STRAT** appear in the Administrative Identification record.

Approximately 11 percent of the Medicare population have their Part B premiums paid by a State agency. This process, called State buy-in, is tracked by CMS and is used as a general proxy for Medicaid participation. The variables that describe this participation (**H_MCSW** and **H_MCDE1** - **H_MCDE12**)

Notes on Using the Data

were derived through a match with CMS's Third Party buy-in master file of March 1993.

Approximately 6 percent of the Medicare population receive Medicare benefits through a coordinated care organization (such as an HMO) which contracts directly with CMS to provide those services. Some of the beneficiaries in the MCBS sample belong to such organizations. The variables that describe this membership (**H_PLTP1 - H_PLTP12**) were derived through a match with CMS's Group Health Plan master file of March 1993.

Utilization Summary

For easier comparison of groups of people by the number and cost of medical services they have received, the Administrative Identification Record also includes a summary of all Medicare bills and claims for calendar year 1992, as received and processed by CMS through June 1993. (See the variables in the Administrative Identification Record from **H_LATDRG** to the end). Itemized bill records are supplied as part of this public use release for researchers who wish to look at Medicare bills in detail (i.e., the HOSPITAL BILL RECORD, the SNF BILL RECORD, the HOSPICE BILL, the HOME HEALTH BILL, the OUTPATIENT BILL and the PHYSICIAN/SUPPLIER BILL).

The utilization summary represents services rendered in calendar year 1992. If a beneficiary used no Medicare services at all, all summary variables will be empty. If the beneficiary used no services of a particular type (e.g., hospitalization), the variables relating to those benefits will be empty. Empty variables are zero-filled, except as noted in the next paragraphs.

The variables pertaining to deductibles (Part A deductible, **H_INPDED**, Part B deductible, **H_PTBDDED**, and blood pints deductible, **H_BLDDED**) are always blank. This information is not consistently available from CMS's present files. An approximation can be derived from the individual bill records.

The variables pertaining to special coverage (lifetime reserve days, **H_RESDAY**, and psychiatric days, **H_PSYDAY**) are always blank. These benefits are applied to the beneficiary once in a lifetime, and they are decremented as they are used. At the current time, CMS files contain a "current balance" of these benefit days rather than a history of their

Notes on Using the Data

utilization. For example, the files will reflect that Mr. Johnson has 20 lifetime reserve days remaining today, but will not tell us how many days were used in CY 1992.

Utilization summary Adjustment bills

There are two types of Part A adjustment transactions: credit-debit pairs, and cancel-only credit transactions. Both types of transactions cancel out a bill that was processed earlier (the credit bill exactly matches the earlier bill). The difference between them lies in how (or if) a new debit transaction is applied to show the correct utilization. If the adjustment consists of a credit-debit pair, the new debit is applied immediately because it is submitted as the "debit" half of the pair. If the adjustment is a cancel-only transaction, the debit may be processed at a later date through a separate bill. In some cases, as when the original bill was completely in error, the cancel-only transaction simply serves to "erase" a mistake, and no new debit would be submitted. For this file, the adjustment processing removes the original debit and the credit, which cancels it out, leaving only the final, corrected debit.

[NOTE: A few rare cases of credit bills with no prior debit may be in this file; these records can be dropped from analysis because they are, in effect, canceling out something of which CMS has no record.]

For Part B claims, we summarized only accepted claims (process code is "A"), or adjusted claims if the adjustment concerned money (process code either "R" or "S" and allowed charges greater than \$0). If the claim disposition code (DISPCD) was "03" or "63" (indicating a credit), both the credit and the matching debit were deleted.

Utilization summary Individual fields

After adjustments were processed, the bills were summarized following the rules set forth below.

Inpatient hospital bills

Utilization is summarized by admissions, days, charges, covered charges, reimbursement amount, coinsurance days and coinsurance amount. Admissions (**H_INPSTY**) were totaled by

Notes on Using the Data

sorting the bills in chronological order, and counting the first admission in each sequence. Total covered days (**H_INPDAY**) were summed from **COVDAY** in the bill. Total coinsurance days (**H_INPCDY**) were summed from **COINDAY**. Total bill charges and non-covered charges were selected from the revenue center trailer coded "001"; total charges were summed as **H_INPCHG** and covered charges (total charges less non-covered charges) were summed as **H_INPCCH**. Coinsurance amounts (**H_INPCAM**) were summed from **COINAMTA** in the bill. Reimbursement (**H_INPRMB**) is the sum of **PROVPAY**, organ acquisition costs (if any) and "pass through" amounts. Organ acquisition costs were accumulated from revenue center trailers when the first 2 positions of the code were "81". Pass through amounts were calculated by multiplying covered days (**COVDAY** in the bill record) by the pass through per diem (**PTDIEM** in the bill record).

Skilled nursing facility

Utilization is summarized by admissions, days, charges, covered charges, reimbursement amount, coinsurance days and coinsurance amount. Admissions (**H_SNFSTY**) were totaled by sorting the bills in chronological order, and counting the first admission in each sequence. Total covered days (**H_SNFDAY**) were summed from **COVDAY** in the bill. Total coinsurance days (**H_SNFCDY**) were summed from **COINDAY**. Total bill charges and non-covered charges were selected from the revenue center trailer coded "001"; total charges were summed as **H_SNFCHG** and covered charges (total charges less non-covered charges) were summed as **H_SNFCCH**. Coinsurance amounts (**H_SNFCAM**) were summed from **COINAMTA** in the bill. Reimbursement (**H_SNFRMB**) is the sum of **PROVPAY**, organ acquisition costs (if any) and "pass through" amounts. Organ acquisition costs were accumulated from revenue center trailers when the first 2 positions of the code were "81". Pass through amounts were calculated by multiplying covered days (**COVDAY** in the bill record) by the pass through per diem (**PTDIEM** in the bill record).

Home Health

Utilization is summarized by visits and other charges. If the first two positions of the revenue center code were 42, 43, 44, 47, 55, 56, 57, or 58, then the units in the trailer (visits) were added to total visits (**H_HHAVST**) and the charges were accumulated as total covered visit charges (**H_HHACCH**).

Notes on Using the Data

If the revenue center codes did not indicate visits, the charges were accumulated as other HHA charges (**H_HHACHO**). Total home health reimbursement (**H_HHARMB**) was summed from the variable **PROVPAY**.

Hospice

Utilization is summarized by days, covered charges and reimbursement amount. Covered hospice days (**H_HSDAYS**) were summed from the bill variable **COVDAY**. Covered charges were selected from the revenue center trailer coded "001" and summed as **H_HSTCHG**. Total hospice reimbursement (**H_HSREIM**) was summed from the variable **PROVPAY**.

Outpatient

Utilization is summarized by bills, covered charges and reimbursement amount. All bills were counted as **H_OUTBIL**. Covered charges were selected from the revenue center trailer coded "001" and summed as **H_OUTCHG**. Total outpatient reimbursement (**H_OUTRMB**) was summed from the variable **PROVPAY**.

Part B (Carrier) claims

Utilization is summarized by number of claims, number of line items, submitted and allowed charges, reimbursement, office visits and office visit charges. All claims and individual line items (there can be up to 13 per claim) were counted and summed as (**H_PMTCLM**) and (**H_PMTLIN**). Submitted charges and allowed charges (**H_PMTTCH**) and (**H_PMTCHG**) were summed from **SUBCRG** and **ALLOWCRG** in the bill. Total reimbursement for Part B claims (**H_PMTRMB**) was summed from the variable **PAYAMT** in the bill.

Office visits and their charges are summed with other services and as separate categories (**H_PMTVST**) and (**H_PMTCHO**). We summed office visits separately for two reasons. An office visit is a universally understood measure of service use and access to medical care. It also is an accurate measure of levels of service use across separate groups, unlike charge or payment figures which vary depending on the services that have been performed. Office visits are identified by HCPCS codes in the series 90000-90090 in the revenue center trailer.

Survey Identification Record (RIC 1)

"Once in a survey lifetime" variables

Some questions are asked only once in the lifetime of the survey because they are not likely to change. Such questions include "Have you ever served in the armed forces?" and "What is the highest grade of school you ever completed?". Similarly, once the sample person has told us that he or she has a chronic condition (such as diabetes), the interviewer will not ask "Have you ever been told you have diabetes?" in a subsequent interview. For this reason, the answers to these questions are missing from Round 4 for people from the original sample. To maximize the usefulness of this public use release as a cross-sectional file, we have filled in this missing information from the original Round 1 interview. Variables that have been reproduced this way are annotated "OSL".

When the complete date of birth was entered (**D_DOB**), the CAPI program automatically calculated the person's age, which was then verified with the respondent. In spite of this validation, the date of birth given by the respondent (**D_DOB**) does not always agree with the Medicare record date of birth (**H_DOB**). In these cases, the sample person was asked again, in the next interview, to provide a date of birth. Some recording errors have been identified this way, but in most cases beneficiaries provided the same date of birth both times they were asked. In some cases, proxies indicated that no one was exactly sure of the correct date of birth. (OSL variables)

The VA disability rating (**D_VARATE**) is a percentage and is expressed in multiples of ten; it refers to disabilities that are officially recognized by the government as service-related. (OSL variable)

Race categories (**D_RACE**) are recorded as interpreted by the respondent. Categories were not suggested by the interviewer, nor did the interviewer try to explain or define any of the groups. Ethnic groups such as Irish or Cuban were not recorded. (OSL variable)

Hispanic (**D_ETHNIC**) includes persons of Mexican, Puerto Rican, Cuban Central or South American or other Spanish culture or origin, regardless of race. Again, these answers are recorded as interpreted by the respondent. (OSL variable)

Notes on Using the Data

The respondent was allowed to define marital status categories (**SPMARSTA**); there was no requirement for a legal arrangement (e.g., separated). (OSL variable)

SPCHNLNM: Respondents were asked to report all living children, whether stepchildren, natural or adopted children. (OSL variable)

SPHIGRAD: Education does not include education or training received in vocational, trade or business schools outside of the regular school system. This variable only includes years the sample person actually finished. If the sample person had earned a GED, the response was coded "high school--4th year". If the sample person said he or she earned a college degree in fewer than 4 years, the response was coded "college and graduate school--4 years". If the sample person attended school in a foreign country, in an un-graded school, under a tutor or under special circumstances, the nearest equivalent or the number of years of attendance was coded. (OSL variable)

INCOME: Income includes all sources, such as pension, Social Security and retirement benefits, for the sample person and spouse. In some cases the respondent would not, or could not, provide specific information but did say the income was below \$25,000 (or, conversely, \$25,000 or more).

Survey Health Status and Functioning Record (RIC 2)

The answers in the health status and functioning section of the questionnaire are a reflection of the respondent's opinion, not a medical opinion.

Limitations on activities (**FACLMTAC**) and social life (**HELMTACT**) reflect the sample person's experience over the preceding month, even if that experience was atypical.

In the height measurement **HEIGHTIN**, fractions of an inch have been rounded: those one half inch or more were rounded up to the next whole inch, those less than one half inch were rounded down. (OSL variable)

In the weight measurement (**WEIGHT**), fractions of a pound have been rounded: those one half pound or more were rounded up to the next whole inch, those less than one half pound were rounded down. (OSL variable)

Notes on Using the Data

The sample person was asked to recall or estimate, not to measure or weigh himself or herself.

HYSTEREC: "Hysterectomy" includes partial hysterectomies. (OSL variable)

Use of other forms of tobacco, such as chewing tobacco, are not relevant to the "smoking" questions (**EVERSMOK** and **SMOKNOW**). Trying a cigarette once or twice was not considered "smoking," but any period of regular smoking, no matter how brief or long ago, was considered smoking. "Now" meant within the current month or so and not necessarily whether the sample person had a cigarette, cigar or pipe tobacco on the day of the interview. Even the use of a very small amount at the present time qualified as a "yes". Stopping temporarily (as for a cold) qualified as a "yes". (**EVERSMOK** is an OSL variable)

The answers about difficulty with various tasks (**DIFSTOOP**, **DIFLIFT**, **DIFREACH**, **DIFWRITE**, **DIFWALK**) reflect whether or not the sample person usually had trouble with these tasks, even if a short-term injury made them temporarily difficult.

The questions about various conditions (**OCARTERY**, **OCHBP**, **OCMYOCAR**, **OCCHD**, **OCOTHART**, **OCSTROKE**, **OCCSKIN**, **OCCANCER**, **OCCLUNG**, **OCCOLON**, **OCCBREST**, **OCCUTER**, **OCCOROST**, **OCCCERVX**, **OCCBLAD**, **OCCOVARY**, **OCCSTOM**, **OCCCKIDNY**, **OCCBRAIN**, **OCCTHROA**, **OCCBACK**, **OCCHEAD**, **OCCFONEC**, **OCCOTHER**, **OCDIABTS**, **OCARTHHR**, **OCARTH**, **OCAARM**, **OCAFEET**, **OCABACK**, **OCANECK**, **OCAALOVR**, **OCAOTHER**, **OCMENTAL**, **OCALZHMR**, **OCPSYCH**, **OCOSTEOP**, **OCBRKHIP**, **OCPARKIN**, **OCEMPHYS**, **OCPPARAL** and **OCAMPUTE**) were coded if the sample person had at some time been diagnosed with the conditions, even if the condition had been corrected by time or treatment. Condition must have been diagnosed by a physician, and not by the sample person. Misdiagnosed conditions were not included. If the respondent was not sure about the definition of a condition, the interviewer offered no advice or information, but recorded the respondent's answer, verbatim. (OSL variables)

IADLs and ADLs

"Difficulty" in these questions has a qualified meaning. Only difficulties associated with a health or physical problem were considered. If a sample person only performed an activity with help from another person (including just needing

Notes on Using the Data

to have the other person present while performing the activity), or did not perform the activity at all, then that person was deemed to have difficulty with the activity.

Help from another person includes a range of helping behaviors. The concept encompasses personal assistance in physically doing the activity, instruction, supervision, and "standby" help.

These questions were asked in the present tense; the difficulty may have been temporary or may be chronic. Vague or ambiguous answers, such as "Sometimes I have difficulty", were coded "yes".

PRBTELE: Using the telephone includes the overall complex behavior of obtaining a phone number, dialing the number, talking and listening, and answering the telephone.

The distinction between light housework (**PRBLHWK**) and heavy housework (**PRBHHWK**) was made clear by examples. Washing dishes, straightening up and light cleaning represent light housework; scrubbing floors and washing windows represent heavy housework. The interviewer was not permitted to interpret the answer in light of the degree of cleanliness of the dwelling.

PRBMEAL: Preparing meals includes the overall complex behavior of cutting up, mixing and cooking food. The amount of food prepared is not relevant, so long as it would be sufficient to sustain a person over time. Reheating food prepared by someone else does not qualify as "preparing meals".

PRBSHOP: Shopping for personal items means going to the store, selecting the items and getting them home. Having someone accompany the sample person would qualify as help from another person.

PRBBILS: Managing money refers to the overall complex process of paying bills, handling simple cash transactions, and generally keeping track of money coming in and money going out. It does not include managing investments, preparing tax forms, or handling other financial activities for which members of the general population often seek professional advice.

Notes on Using the Data

HPPDBATH: Those who have difficulty bathing or showering without help met at least one of the following criteria:

- someone else washes at least one part of the body;
- someone else helps the person get in or out of the tub or shower, or helps get water for a sponge bath;
- someone else gives verbal instruction, supervision, or stand-by help;
- the person uses special equipment such as hand rails or a seat in the shower stall;
- the person never bathes at all (a highly unlikely possibility); or,
- the person receives no help, uses no special equipment or aids, but acknowledges having difficulty.

HPPDDRES: Dressing is the overall complex behavior of getting clothes from closets and drawers and then putting the clothes on. Tying shoelaces is not considered part of dressing, but putting on socks or hose is. Special dressing equipment includes items such as button hooks, zipper pulls, long-handled shoe horns, tools for reaching, and any clothing made especially for accommodate a person's limitations in dressing, such as Velcro fasteners or snaps.

HPPDEAT: A person eats without help if he or she can get food from the plate into the mouth. A person who does not ingest food by mouth (i.e., is fed by tube or intravenously) is not considered to eat at all. Special eating equipment includes such items as a special spoon that guides food into the mouth, a forked knife, a plate guard, or a hand splint.

HPPDCHAR: Getting in and out of chairs includes getting into and out of wheelchairs. If the sample person holds onto walls or furniture for support, this is considered "help from special equipment or aids," since the general population does not use such objects in getting in and out of chairs. Special equipment includes mechanical lift chairs and railings.

HPPDWALK: Walking means using one's legs for locomotion, without the help of another person or special equipment or aids such as a cane, walker or crutches. Leaning on another person, having someone stand nearby in case help is needed, and using walls or furniture for support all count as help. Orthopedic shoes and braces are special equipment.

Notes on Using the Data

HPPDTOIL: Using the toilet is the overall complex behavior of going to the bathroom for bowel and bladder function, transferring on and off the toilet, cleaning after elimination, and arranging clothes. Elimination itself, and consequently incontinence, are not included in this activity, but were asked as a separate question, discussed next.

LOSTURIN: "More than once a week" was coded if the sample person could not control urination at all. Leaking urine, especially when the person laughs, strains or coughs, does not qualify as incontinence.

Survey Access to Care Record (RIC 3)

Definitions applied to medical providers

Doctor - Medical doctors (M.D.) and doctors of osteopathy (D.O.). Chiropractors, nurses, technicians, optometrists, podiatrists, physician's assistants, physical therapists, psychologists, mental health counselors and social workers are not included. Generic specialties shown in parenthesis following one of the specialties were coded as the specialty. For example, if the respondent mentioned a "heart" doctor, cardiology was coded. Generic answers not listed were not converted to specialties.

Doctor's office or group practice - an office maintained by a doctor or a group of doctors practicing together; generally, the patient makes an appointment to see a particular physician.

Doctor's clinic - A group of doctors who have organized their practice in a clinic setting and work cooperatively; generally, patients either come in without an appointment or make an appointment and see whatever doctor is available.

HMO - An organization that provides a full range of health care coverage in exchange for a fixed fee.

Neighborhood/family health center - A non-hospital facility which provides diagnostic and treatment services, frequently maintained by government agencies or private organizations.

Notes on Using the Data

Free-standing surgical center - A facility performing minor surgical procedures on an outpatient basis, and not physically connected to a hospital.

Rural health clinic - provides outpatient services, routine diagnostic services for individuals residing in an area that is not urbanized and is designated as a health staff shortage area or an area with a shortage of personal health services. These services are provided for a nominal co-payment and deductible.

Company clinic - A company doctor's office or clinic, which is operated principally for the employees (and sometimes their dependents).

Other clinic - a non-hospital facility such as a drug abuse clinic, a "free" clinic, a family planning clinic or military base clinic.

Walk-in urgent center - a facility not affiliated with a nearby hospital, offering services for acute conditions. Typically, people are seen without appointments.

Home (doctor comes to sample person's home) - home is anywhere the sample person is staying; it may be his or her home, the home of a friend, a hotel room, etc.

Hospital emergency room - means the emergency room of a hospital. "Urgent care" centers are not included. (NOTE: All hospital emergency room visits were included, even if the sample person went there for a "non-emergency" condition such as a cold, flu or intestinal disorder.)

Hospital outpatient department - unit of a hospital, or a facility connected with a hospital, providing health and medical services to individuals who receive services from the hospital but do not require hospitalization.

Open-ended questions

Respondents were asked a number of open-ended questions (reasons for dissatisfaction with care, kinds of problems experienced in getting health care, etc.). The respondents answered these questions in their own words, and interviewers recorded the responses, verbatim. The interviewer was prohibited from paraphrasing or summarizing the respondents'

answer.

This file contains no verbatim responses. We have supplied, instead, codes that summarize the answer. Often there will be more than one code because the answer included several specific topics.

Other variables

The questions about satisfaction with care represent the respondent's general opinion of all medical care received in the year preceding the interview.

MCDRNSEE: If a respondent mentioned any health problem that was not cared for, it was recorded without discrimination; the respondent might have referred to a small ache or pain, or to a serious illness or symptom.

USMCCHK: The distinction in question US12 is between the doctor or doctor's office and the sample person or family. For example, if the check usually goes to the daughter, the answer would be coded "to the sample person".

USFINDMC: "Ever tried to find a doctor ..." refers to some type of active search. It does not refer to simply thinking or talking about it.

USHOWLNG: If the sample person had an actual visit with the doctor listed in **USUALDOC** by the time of the interview, "less than one year" was coded.

Survey Health Insurance Record (RIC 4)

To help the respondent answer the questions about Medicaid, the interviewers used the name of the Medicaid program in the state where the sample person was living.

A health insurance plan is one that covers any part of hospital bills, doctor bills, or surgeon bills. It does not include any of the following:

- Public plans, including Medicare and Medicaid, mentioned elsewhere in the questionnaire.
- Disability insurance which pays only on the basis of the number of days missed from work.
- Veterans' benefits.

Notes on Using the Data

- "Income maintenance" insurance, which pays a fixed amount of money to persons both in and out of the hospital or "Extra Cash" policies. These plans pay a specified amount of cash for each day or week that a person is hospitalized, and the cash payment is not related in any way to the person's hospital or medical bills.
- Workers' Compensation.
- Any insurance plans which are specifically for contact lenses or glasses only. Any insurance plans or maintenance plans for hearing aids only.
- Army Health Plan and plans with similar names (e.g., CHAMPUS, CHAMPVA, Air Force Health Plan).
- Dread disease plans, which are limited to certain illnesses or diseases such as cancer, stroke or heart attacks.
- Policies which cover students only during the hours they are in school, such as accident plans offered in elementary or secondary schools.
- Care received through research programs such as the National Institutes of Health.

D_PHREL1 - D_PHREL5: The "Policy Holder or "Main insured person" is the member of the group or union or the employee of the company that provides the insurance plans. It would also be the name on the policy, if the respondent had it available.

D_ANAMT1 - D_ANAMT5: A premium amount was recorded even if the sample person did not directly pay the premium (if, for example, a son or daughter paid the premium). Premium amounts have been annualized, even though the sample person may not have held the policy for the full 12 months. Premium amounts include cents.

Survey Enumeration Record (RIC 5)

A household is defined as the group of individuals either related or unrelated who live together and share one kitchen facility. This may be one person living alone, a head of household and relatives only, or may include head of household, relatives, boarders and any other non-related individual living in the same dwelling unit.

Household membership includes all persons who currently live at the household or who normally live there but are away temporarily. Unmarried students away at school, family

Notes on Using the Data

members away receiving medical care, etc., are included. Visitors in the household who will be returning to a different home at the end of the visit are not included.

Generally, if there was any question about the composition of the household, the respondent's perception was accepted.

Because the date of birth or exact relationship of a household member was sometimes unknown (perhaps because a proxy provided the information), the sum of the variables "number related"/"number not related" (**D_HHREL/D_HHUNREL**) or "number under 50" /"number 50 or older" (**D_HHLT50/D_HHGE50**) may not equal the total number of people in the household (**D_HHTOT**).

D_WRKBEN and **D_WRKSPO**: Any work, whether part time or full time, is included. Working includes working for pay or working on a family farm or business. Self-employed persons are included as working. Whether or not the person is working outside the home is not important; however, homemakers are not included as working.

If the respondent stated that the individual was not working due to illness, the interviewer probed to find out if it was a long-term illness or disability before entering a response. A probe such as "is the job being held for you" would be used; a "yes" response would have been coded as working. An individual who had a temporary illness would have been coded as working if it was clear that he or she would be going back to work.

Survey Facility Identification Record (RIC 7)

The "number of beds" (**FACTLBED** and **FACTOBED**) items will be missing when either there were no beds of that type in the facility, or the question was skipped.

Survey Interview Description Record (RIC 8)

This is a new record, but most of the material in it was included in the Survey Identification record in the 1991 MCBS Access to Care public use release.

Multiple Interviews

Some sample people had more than one interview in this round. To avoid duplication of data, the information in this file represents the last interview conducted with the sample person in Round 4. The variable **INTERVU** indicates which type of interview was conducted. Please see the description of the KEY record in this section for a more detailed description of multiple interviews and of this variable.

Proxy rules

Wherever possible, the community interviews were conducted directly with the sample person. In most cases, the sample person was able to respond to the interview unassisted. In a few cases, the sample person was assisted with the interview by a friend or relative, and in some cases the sample person was too ill or otherwise incapacitated to be interviewed. The variables **PROXY**, **D_PROXR**, **RRECHLP** and **D_IHLPR** provide information about who was interviewed, and how those respondents are related to the sample person.

People who were too ill, or who could not complete the community interview for other reasons were asked to designate a proxy, someone very knowledgeable about the sample person's health and living habits. In many cases, the proxy was a close relative such as the spouse, a son or daughter. In other cases, the proxy was a non-relative like a close friend or caregiver. The variable **PROXY** indicates whether or not a proxy was interviewed in a community interview, and the variable **D_PROXR** indicates the relationship of the proxy to the sample person. (Since all facility interviews are conducted with proxy respondents, this variable is "missing" for facility cases.)

If the sample person appeared confused or disoriented at the time of the interview, and no proxy could be identified, the interviewer was instructed to complete the questionnaire as well as possible. If the interviewer felt that the respondent was not able to supply reasonably accurate data, this perception was recorded in the interviewer remarks questionnaire and appears in this record as the variable **RINFOSAT**. (NOTE: Interviewer remarks questionnaires are missing for 750 of the 11,421 community interviews).

"Sample person language problem" was given as a reason for the use of a proxy in 91 cases. More often, language

Notes on Using the Data

problems were addressed without the use of a proxy. Interpreters were used in some cases, and Spanish-language versions of the questionnaires were used by bilingual interviewers when the respondent preferred to be interviewed in Spanish. There are both English and Spanish versions of the CAPI survey instrument; the variable **LANG** indicates which version was used.

Proxy respondents were always used in nursing homes, homes for the mentally retarded, and psychiatric hospitals. Sample persons were interviewed directly in prisons when that was permitted. The need for a proxy when interviewing respondents in other institutions was evaluated on a case-by-case basis.

In long-term care facilities, the proxy respondents were members of the staff at the facility, identified by the administrator. Usually, more than one respondent was used; for example, a nurse may have answered the questions about health status and functioning, while someone in the business office handled questions about financial arrangements.

Other variables

Several questionnaires are administered in the facility interview: a facility screener, and personal baseline, core and supplement questionnaires. The facility screener was administered in every case; the variable **QUEXTYPE** indicates which of the personal questionnaires was administered in the interview. Please see section 5 for copies of all of the instruments, and for a more detailed description of when each is administered.

Two variables are supplied to further characterize the interview: **LENGTH** contains the length of the interview, in hours and minutes, and **RESTART** indicates whether or not the interview was interrupted. Community interviews are sometimes interrupted to accommodate the respondent's schedule or for other reasons. We did not calculate the duration of the community interview if the interview was interrupted. Facility interviews are conducted with several instruments and often involve a number of respondents. Since nearly all of the facility interviews are interrupted and total duration is difficult to capture (and interpret), **LENGTH** and **RESTART** are always missing for facility interviews.

**Survey Cross-sectional Weights Record (RIC X)
Survey Longitudinal Weights Record (RIC X2)**

Both cross-sectional and longitudinal weights are provided. Cross-sectional weights apply to entire file of 12,383 people. These weights are supplied in the RIC X. Longitudinal weights apply to 10,388 people who appear in both the CY 1991 (Round 1) and CY 1992 Access to Care (Round 4) release. Longitudinal weights appear in the RIC X2

Please see Section 6 for a further discussion about weights and estimation using these files.

Claims Records (DME,HHA,HSP,INP,OTP,PHY,SNF)

The following rules were used to select bill and claims records for this file.

- Inpatient bills were included if the **discharge or "through" date** fell on or after January 1, 1992 and on or before December 31, 1992.
- Skilled nursing facility bills were included if the **admission or "from" date** fell on or after January 1, 1992 and on or before December 31, 1992.
- Home health agency and outpatient facility bills were included if the **"through" date** fell on or after January 1, 1992 and on or before December 31, 1992.
- Hospice bills were included if the **admission or "from" date** fell on or after January 1, 1992 and on or before December 31, 1992.
- Physician or supplier claims were included if the **latest "service thru" date** fell on or after January 1, 1992 and on or before December 31, 1992.

About 17 percent of the sample people did not use Medicare benefits in 1992; consequently, there are no bill records for them in this file. For other individuals in the sample, we have captured any and all bills meeting the date criteria and processed by CMS through June 30, 1993.

Medicare Current Beneficiary Survey
CY 1992 Access to Care

Edits

The use of Computer Assisted Person Interviewing (CAPI) significantly affects the data editing process. Many of the edits are performed as the responses are collected. Often, problems arising from miscommunications or data entry errors can be detected and corrected immediately. Also, since the computer software structures the interview, it prevents most "skip pattern" errors.

As survey information is collected, it is put into a database management system built into the CAPI software. During the interview and subsequent in-house review, the data in the database are subjected to two types of edits. First, logical relationship edits are performed between various segments of the database to ensure the integrity of the whole. Second, subject matter edits are performed to ensure the internal consistency of the data.

Logical relationship edits ensure that the database is sound by checking the links between segments. For example, every medical provider record in the provider segment must be linked to at least one respondent. The provider record is useless if the linkage does not exist.

Subject matter edits ensure the internal consistency of the data. These edits are of two types: those that result in changes to the database, and those that do not. Edits that result in changes to the database are not described in this document. The second group of consistency edits are the "no fix" edits. These edits serve as a warning that certain data are not consistent and cannot be made consistent with only the data and interviewers' notes for guides. These edits are described in Table 4.1. A list of the interviews that failed each edit follows the edit description.

Table 4.1: "No Fix" Internal Consistency Edits

NF04001 The number of children given in response to question IN14: "Including natural, adopted and stepchildren, how many living children do you have?" (Community component, Introduction); is less than the total number of people listed by name in the roster and identified as "son" or "daughter". (14 cases)

00030952	00159165	00163136	00173264
00154819	00160634	00164301	00175808
00158279	00162228	00167198	00177577
00162563	00172635		

NF04002 The sample person has indicated that he or she has trouble doing light housework, but has indicated no problem with heavy housework. (Community component, Instrumental Activities of Daily Living) (43 cases)

00007473	00055163	00103439	00151339
00014673	00066836	00116592	00152162
00016477	00073575	00124042	00154308
00020705	00074455	00124058	00160628
00020783	00077565	00127635	00168012
00024278	00084931	00132774	00168357
00024820	00087947	00139385	00174207
00038910	00093383	00140666	00176697
00040347	00096829	00140967	00177486
00043792	00097282	00141386	00179810
00043855	00102424	00145213	

NF04003 The "wait" time during an emergency room visit is reported to be longer than the total time of the visit. (Community component, Provider Probes/Access to Care. Questions AC5: "From the time you arrived until the time you left, about how long did the visit to the hospital emergency room take altogether?" and AC6: "How much of that time was spent waiting before you saw a doctor or some other medical person?")(0 cases)

Section 4: Edits

NF04004 The "wait" time during an outpatient department visit is reported to be longer than the total time of the visit. (Community component, Provider Probes/Access to Care. Questions AC15: "From the time you arrived until the time you left, about how long did the visit to the hospital clinic or outpatient department take altogether?" and AC16: "How much of that time was spent waiting before you saw a doctor or some other medical person?") (0 cases)

NF04005 The "wait" time during an office visit is reported to be longer than the total time of the visit. (Community component, Provider Probes/Access to Care. Questions AC27: "From the time you arrived until the time you left, about how long did the visit to the medical doctor take altogether?"; and AC28: "How much of that time was spent waiting before you saw the doctor or some other medical person?") (0 cases)

NF04006 No reason was given for an outpatient visit. (Community component, Provider Probes/Access to Care. Questions AC8: "Since (REF.DATE) did you go to a hospital clinic or outpatient department?" and AC9: "...What was the reason you went to the hospital clinic or outpatient department?") (1 case).

00178827

NF04007 No reason was given for a medical doctor visit. (Community component, Provider Probes/Access to Care. Questions AC19: "...Have you seen a doctor since (REF.DATE)?" and AC21: "What was the reason you saw the doctor?") (3 cases).

00158003 00173242 00176001

Medicare Current Beneficiary Survey
CY 1992 Access to Care

Questionnaires

This section contains copies of the community and facility questionnaires that were administered during Round 4 of the Medicare Current Beneficiary Survey. Round 4 includes the first annual update of information on Medicare beneficiaries' access to care. The questionnaires are similar in content and sequence of events; however, they differ in how they are administered and the location in which they are administered.

Questions in all of the questionnaires are preceded by a number, which is cross-referred to variables in the codebook (Section 2). Since more than one variable may be collected in response to one question, each question has also been annotated with all of the variable names associated with it. Variable names are also indexed in the codebook.

Community Component

The community component is conducted in the home of the respondent. Since the community component of the survey was conducted using CAPI, the questionnaire actually exists only as a computer program, and it is impossible to replicate it exactly in hard copy. The version represented here lists the questions, verbatim, and shows the skip patterns. It also displays instructions to the programmers (enclosed in boxes), to the program, and to the interviewer. Although these instructions would be hidden from the respondent, they have been retained in this copy because they are important for understanding the flow of the questionnaire and for establishing logical links between questions.

Components of the Community Questionnaire

The community instrument consists of the following components:

Initial interview questionnaire
Core questionnaire
Supplement to the core questionnaire
Interviewer remarks questionnaire

Section 5: Questionnaire

Initial interview questionnaire

This baseline questionnaire is used for the first interview when a sample person is added to the survey, that is, Round 1 for the original sample, Round 4 for the 1992 supplement, Round 7 for the 1993 supplement, Round 10 for the 1994 supplement, etc. In the initial interview, we collect information about the national origin, age, education and income of the sample person. The interviewer also verifies the sample person's address and telephone number and obtains the names and addresses of people who might be willing to serve as proxy respondents. The interviewer also uses this opportunity to acquaint the respondent with the intent of the survey and to familiarize him or her with the MCBS calendar, and to emphasize the importance of keeping accurate records of medical care and expenses.

In subsequent interviews, some of the information collected in the initial interview will need to be updated. For example, the sample person's designation of his or her race is not likely to change, and will not be asked about again. On the other hand, the sample person's address or telephone number may change, so this information is verified in every interview, and updated when necessary.

Core questionnaire (community)

NOTE: This release does not include any cost or utilization information from the core questionnaire.

The core questionnaire is the major component of the community instrument. The questions focus on the use of medical services and the resulting costs, and are asked in essentially the same way each and every time the sample person is interviewed (after the first time). In each interview, the sample person is asked about new encounters, and to complete any partial information that was collected in the last interview. For example, the sample person may mention a doctor visit during the "utilization" part of the interview. In the "cost" section, the interviewer will ask if the sample person has any receipts or statements from the visit. If the answer is "yes", the interviewer will record information about costs from the statements, but if the answer is "no," the question will be stored until the next interview.

Section 5: Questionnaire

In Round 4, only persons in the longitudinal (that is, the original) sample were interviewed with this questionnaire.

Supplement to the core questionnaire (community)

Supplemental questions are added to the core questionnaire to gather information about specific topics. The Round 4 supplement focuses on health status and access to care. It includes questions about the sample persons' general health (including standard measures such as IADLs and ADLs), their sources of medical care, and their satisfaction with that care.

Interviewer remarks questionnaire

This questionnaire is completed by the interviewer after every interview with the sample person. The interviewer is asked to evaluate the sample person's ability to respond to the questionnaire, and to provide some information about the interview (for example, if the questionnaire was answered by proxy, the interviewer provides reasons why the proxy was necessary). The interviewer is also encouraged to provide comments that will assist the interviewer in remembering unique facts about the sample person, such as hearing or vision impairments, or that the sample person cannot read.

Facility Questionnaire

The facility questionnaire is conducted conventionally using pen and paper in the facility where the respondent is residing at the time of the interview. Information is obtained from facility records; therefore, the beneficiary is never interviewed directly. It was decided early in the design of the MCBS not to attempt interviews with sample persons in facilities, or with their family members. For that reason, the facility questionnaires do not ask about attitudes or other subjective items.

If an institutionalized person returns to the community, a community interview is conducted. If the sample person spent part of the reference period in the community and part in an institution, then a separate interview is conducted for each period of time. In this way, a beneficiary is followed in and out of facilities and a continuous record is maintained regardless of the location of the respondent.

Section 5: Questionnaire

The CY 1992 Access to Care release is intended to serve as a "snapshot" of the sample person at one point in time during Round 4. For this reason, we have selected the latest interview in the round to represent the entire round whenever the sample person was encountered in more than one setting in Round 4.

Components of the Facility Questionnaire

The facility instrument consists of the following components:

- Facility eligibility screener
- Initial (baseline) questionnaire
- Core questionnaire
- Supplement to the core questionnaire

Facility eligibility screener

This questionnaire gathers information about the facility to determine the facility type. The initial interview is conducted with the facility administrator. All other interviews are conducted with the staff designated by the director. A facility screener is administered upon the sample person's admission to a new facility, and once a year thereafter (in Rounds 4, 7, 10, etc.) to capture any changes in the facility's size or composition. The screener is not administered if the sample person simply re-enters the same facility.

Initial (baseline) questionnaire (facility)

This questionnaire gathers information on the health status, insurance coverage, residence history and demographics of the sample person. This questionnaire is administered the first time the sample person is admitted to a facility.

Core questionnaire (facility)

This questionnaire parallels the core questionnaire for the community, collecting information about use of medical services and their associated costs, including the facility cost. Like its community counterpart, this questionnaire is administered in each and every interview after the first one, as long as the sample person continues to reside in the facility.

Section 5: Questionnaire

Supplement to the core questionnaire (facility)

This questionnaire is asked once a year (in Rounds 4, 7, 10, etc.) to update our information about the sample person's health status. It includes questions about the sample person's general health (including standard measures such as IADLs and ADLs), but excludes the questions about access and the subjective questions about satisfaction with care.

Table 5.1 - Components of the Community Questionnaire

NOTE: This release contains information from only those sections marked with an arrow (-->).

UPD	NAME/ADDRESS UPDATE
IN	INTRODUCTION
ENS*	ENUMERATION
--> EN	ENUMERATION
--> HI	HEALTH INSURANCE
UTS*	UTILIZATION SUMMARY
DU	DENTAL UTILIZATION AND EVENTS
ER	EMERGENCY ROOM UTILIZATION AND EVENTS
IP	INPATIENT HOSPITAL UTILIZATION AND EVENTS
IU	INSTITUTIONAL UTILIZATION
OP	OUTPATIENT HOSPITAL UTILIZATION AND EVENTS
HHS*	HOME HEALTH UTILIZATION SUMMARY
HH	HOME HEALTH UTILIZATION AND EVENTS
MP	MEDICAL PROVIDER UTILIZATION AND EVENTS
OM	OTHER MEDICAL EXPENSES UTILIZATION
PMS*	PRESCRIBED MEDICINE SUMMARY
PM	PRESCRIBED MEDICINE UTILIZATION
ST	CHARGE QUESTIONS (STATEMENT SERIES)
NS	CHARGE QUESTIONS (NO STATEMENT SERIES)
CPS*	CHARGE/PAYMENT SUMMARY
--> AC	PROVIDER PROBES/ACCESS TO CARE
--> SC	SATISFACTION WITH CARE
--> HS	HEALTH STATUS AND FUNCTIONING
--> US	USUAL SOURCE OF CARE
--> DI	DEMOGRAPHICS/INCOME (FOR SUPPLEMENTAL SAMPLE PEOPLE ONLY)
CL	CLOSING MATERIALS
--> IR	INTERVIEWER REMARKS

* Summary sections - Updates and corrections are collected through the summaries. The respondent is handed a hard copy summary of information gathered in previous interviews, and is asked to verify the material. Changes are recorded if the respondent notices information that is not accurate.

Section 5: Questionnaire

Table 5.2 - Components of the Facility Questionnaire

NOTE: This release contains information from only those sections marked with an arrow (-->).

Facility Eligibility Screener

--> FQ Facility questions

Initial interview (facility)

--> A Demographic/Income
--> B Residence History
--> C Health Status and Functioning
--> D Health Insurance
L Tracing and Closing

Core questionnaire (facility)

--> A Residence History
B Provider Probes
C Medicine Summary
D Inpatient Hospital Stays
E Medical Charges
F Tracing and Closing

Supplement to the core (facility)

--> C Health Status and Functioning
--> D Health Insurance

Medicare Current Beneficiary Survey
CY 1992 Access to Care

Sample Design and Guidelines for Preparing Statistics

This section opens with a general discussion of the statistical methodology used to draw the MCBS sample, including a brief discussion of response rates for Rounds 1 and 4. We also provide guidelines for using sampling weights (included in this release) to prepare population statistics, and for estimating sampling errors.

Sample selection

A sample of 15,411 beneficiaries was selected in 1991 for Round 1 of the MCBS. This initial sample was representative of beneficiaries who were entitled on January 1, 1991. Round 1 interviews started in September of 1991, and the sample beneficiaries have been re-interviewed roughly every four months since then.

A supplementary sample of 2,410 beneficiaries was added to the sample for Round 4. The 1992 supplementary sample included newly enrolled beneficiaries, as well as previously enrolled beneficiaries who were included for a coverage improvement component or to maintain the desired sample size in spite of the cumulative effects of deaths, emigration, and response rate losses.

The 1992 Access to Care questions were administered September through December 1992 as part of the Round 4 interview for the continuing sample, and as part of the initial interview of the supplemental sample.

The MCBS sample is spread across 107 primary sampling units (PSUs) which are metropolitan areas and clusters of non-metropolitan counties. Within the PSUs, the initial sample was concentrated in 1,163 clusters of ZIP code areas (5 digit). With the introduction of the 1992 supplement, the number of sample ZIP code clusters totals 1,344. Both samples were selected from CMS's master file of beneficiaries enrolled in Medicare, using the beneficiary's address recorded in that file.

Targeted population and sample sizes

The targeted population for Round 1 of the MCBS consisted of persons enrolled in either or both Medicare Part A (Hospital Insurance) or Part B (Supplemental Medical Insurance) as of January 1, 1991, and whose address on the Medicare files was in one of the 50 states, the District of Columbia, or Puerto Rico. For Round 4, the targeted population was those enrolled as of January 1, 1992.¹

Sampling and Estimation

The targeted universe is divided into seven sampling strata based on age. The age categories are: 0 to 44, 45 to 64, 65 to 69, 70 to 74, 75 to 79, 80 to 84, and 85 or older. The goal of the sample design is to obtain complete annual data on 12,000 beneficiaries per year, with 2,000 for each of the elderly strata and 1,000 for each of the disabled strata. Uncertainties in the projection of death and response rates have led to slight shortfalls, but the completed sample sizes are relatively close to the targets.

Table 6.1 MCBS Round 4 completed interviews for the
continuing and supplemental samples

Age group	- Round 4 Completed Interviews -			Target
	Continuing	Supplemental	Total	
0 - 44	917	123	1,040	1,000
45 - 64	948	212	1,160	1,000
65 - 69	1,795	736	2,531	2,000
70 - 74	1,718	229	1,947	2,000
75 - 79	1,720	328	2,048	2,000
80 - 84	1,699	296	1,995	2,000
85 +	1,591	71	1,662	2,000

Beneficiaries are selected within the sample ZIP clusters from the standard 5-percent sample of CMS's Enrollment Data Base (EDB). The decision to select the MCBS sample from within the standard 5 percent CMS sample was based mostly on considerations of convenience. The MCBS sample is designed to be nearly self-weighting within the age strata. A systematic sampling scheme with random starts is employed.

Response Rates

Eighty-two percent (10,388) of the 12,674 initial sample people for whom access to care information is available from round 1, completed the round 4 interview. This means that data are available on rounds 1 and 4 for 71.5 percent of the original sample. (This is 4.5 percent less than the cumulative response rate through round 4 since some of the round 1 completers died prior to the round 4 interview.) The 1992 supplemental sample was interviewed for the first time at Round 4. It had a response rate of 86 percent.

Item Nonresponse

As in any other survey, the respondents could not, or would not, supply answers to some questions. "Item non-response" rates are low in the CY 1992 Access to Care release, but the analyst still needs to be aware of the missing data.

Table 6.2 shows the non-response rates for seven demographic variables. The data on these items are fairly complete: on average, the non-response rate is very low, less than 1 percent. Education has the highest missing rate, 3.4 percent. This high missing rate is partly attributable to the fact that some of the community interviews and all of the facility interviews are conducted by proxy. Income is also frequently missing from the survey data (as is typical of most surveys). We have reduced the number of cases where income is missing by supplying an imputed figure. When the respondent did not, or could not, supply a total income amount, we provided the amount which was imputed for the 1991 Income and Assets release.

Since data for other variables are fairly complete, there are no imputed variables other than income in either the CY 1992 or CY 1991 Access to Care releases.

 Table 6.2 Missing rates for demographic variables,
 CY 1992 Access to Care

Variable		Missing	
		Number	Percent
D_RACE	Race	12	0.1 %
D_ETHNIC	Ethnicity	42	0.3 %
SPHIGRAD	Education	424	3.4 %
INCOME	Income	347	2.8 %
SPMARSTA	Marital status	22	0.2 %
ROSTSEX	Gender	0	0.0 %
D_DOB	Age (date of birth)	7	0.1 %

Each user can decide for themselves how to handle the missing data. One simple approach is to delete records with missing data. The cumulative effect of deleting each record with any missing data can significantly reduce the data available for analysis. Another approach is to create an "unknown" or "missing" category within each variable distribution. This approach retains more data than the first approach, but causes grand totals across variables to differ.

There are other more complicated alternatives for handling cases with missing data. One is to impute the missing data. This can be done fairly easily in such a way as to improve univariate tabulations, but techniques to avoid attenuation of association in multivariate analyses are extremely complex. For more discussion of imputation, the user is referred to Kalton and Kasprzyk (1986). The other alternative is model-based estimation where a joint mechanism is hypothesized that underlies both the substantive data and

the missing data structure. For a discussion of this technique, see Little and Rubin (1987).

Preparing Statistics (Using the Full Sample Weights)

Two sets of final "full sample" Round 4 weights have been provided for different types of statistics. (The term full sample is used to distinguish these weights from the replicate weights discussed in the next section). One weight is labeled **R4CFWGT**. This weight is intended for use in cross-sectional statistics involving Round 4 by itself. The other weight is labeled **R1X4LWGT**.

It is intended for use in longitudinal statistics involving both Round 1 and Round 4.

The cross-sectional weight, **R4CFWGT**, applies to both the initial sample and to the supplemental sample which was fielded for the first time in Round 4. This weight is greater than zero for all 12,383 beneficiaries on the file.

R4CFWGT should be used to make estimates of the levels of access to care for the Medicare population alive in the Fall of 1992.

The longitudinal weight, **R1X4LWGT**, does not apply to the supplemental sample cases. This weight should only be used when the CY 1991 (Round 1) and CY 1992 Access to Care releases have been merged together. Records must be merged at the beneficiary level, and only those beneficiaries who completed both interviews should be included in the final file. This weight can then be used to make estimates of population statistics such as the number of persons who went from being very satisfied with their care to being dissatisfied with their care. R1X4LWGT is only greater than zero for persons in the initial sample; it is zero for the supplemental sample. There are 10,388 beneficiaries who completed both interviews; these beneficiaries are identified as **D_SMPTYP='L'** (RIC K, Key record).

Although it is possible to create some cross-sectional estimates using R1X4LWGT and longitudinal estimates using R4CFWGT, neither of these actions is recommended. In general, estimates of the same population statistic produced using the two weights will not agree.

Variance Estimation (Using the Replicate Weights)

In many statistical packages, including SAS, the procedures for calculating variances assume that the data were collected in a simple random sample. Procedures of this type are not appropriate for calculating the variance for statistics based upon a stratified unequal-probability multi-stage sample such as the MCBS.

The replicate weights associated with the MCBS data can be used to create estimated standard errors for MCBS variables. Just as there are two full sample weights for Round 4, one for cross-sectional analyses and one for

longitudinal analyses, there are two corresponding sets of replicate weights. The replicate cross-sectional weights are labeled **R4CWT1** through **R4CWT100** and may be found in the Cross-sectional Weights record (RIC X). The replicate longitudinal weights are labeled **R4WT1** through **R4WT100** and may be found on the Longitudinal Weights record (RIC X2).

These replicate weights should be used for variance estimation. The user has three options for using the replicate weights. The first option is to use a software package called WesVar PC® that is available from Westat at no charge. The program can be downloaded from Westat's home page on the World Wide Web at: **WWW.WESTAT.COM**. Additional documentation is available from Westat and can be obtained by submitting a request to: **WESVAR@WESTAT.COM**.

Identification of weight variable and variables for analysis can be done using the WesVar PC® menus. To run WesVar PC® with MCBS data and weights, the method should be specified as Fay's method with a factor of 0.3.

The second option is for the user to write a small custom program using a very simple algorithm. Let X_0 be an estimate of a statistic of interest formed using one of the full sample weights. Let X_1 through X_{100} be estimates (calculated by the user) of the exact same statistic of interest formed using the corresponding 100 replicate weights. The estimated variance of X_0 is then simply:

$$Var(X_0) = \frac{2.04}{100} \sum_{i=1}^{100} (X_i - X_0)^2$$

The third option is for users who prefer to use alternate software such as SUDAAN® (Professional Software for SURvey DATA ANalysis for Multi-stage Sample Designs) to compute population estimates and the associated variance estimates. Two variables, SUDSTRAT and SUDUNIT, have been included in the cross sectional and longitudinal weight records to allow use of SUDAAN.

Medicare population covered by the 1992 public use data

The calendar year 1992 MCBS public use data are focused on Medicare beneficiaries residing in the United States or Puerto Rico who were enrolled in one or both parts of the program throughout calendar 1992. This "always enrolled" population includes individuals enrolled on January 1, 1992 who remained enrolled through the end of December. Excluded are the following categories of Medicare enrollees: 1) residents of foreign counties and U.S. possessions and territories other than Puerto Rico; 2) persons who became enrolled after January 1, 1992²; and 3) persons who disenrolled or died prior to the end of December 1992.

The "always enrolled" population concept was used for the CY 1991 MCBS Access to Care release for operational considerations, and is carried forth

into this release for the same reasons. While it differs from other views of the Medicare population commonly generated from CMS files or encountered in CMS publications such as "ever enrolled" or "mid-point enrollment," the concept of "always enrolled" is consistent with the familiar concept of being exposed or "at risk" for using services for the entire 12-month period.

Table 6.3 shows data from CMS's 5 percent HISKEW file (health insurance skeleton write-off), which contains selected demographic and coverage information on a 5 percent sample of Medicare enrollees. Data for the targeted population are arrayed by age, gender race using these three views: person "ever-enrolled," persons enrolled as of the "mid-point of the year" (July 1), and persons "always enrolled." We have included this comparison to allow users to compare the population represented by this release to the more frequently used views of the Medicare population.

Consistency with Medicare Program Statistics

In general, MCBS estimates are not consistent with Medicare program statistics such as tabulations of the HISKEW. There are several reasons for the inconsistencies. The most important reason is that the HISKEW includes people who, unknown to CMS, are no longer alive. When field staff try to locate these beneficiaries for interviews, they establish the fact of these deaths.

However, for cross-sectional estimates of Access to Care, special weighting procedures were used to force some MCBS estimates to agree with HISKEW tabulations. Specifically, post-stratification was used in the creation of R4CFWGT so that weighted estimates of the 1992 continuously enrolled population will agree with universe counts from the March 1993 HISKEW. Tabulations on gender, metropolitan status, and region agree. Also, tabulations on race agree if the only two categories of race are black versus not black. Tabulations on age agree provided that the standard age strata are used, based on age calculated as of July 1, 1992.

Table 6.3 1992 Medicare population, by gender, race and age

Gender	Race	Age	Always Enrolled	July 1 Midpoint	Ever Enrolled
Females	Black	0-44	76,420	83,100	89,400
		45-64	143,840	155,740	167,760
		65-69	376,500	421,360	456,340
		70-74	357,220	363,420	369,780
		75-79	273,400	280,260	286,540
		80-84	184,500	191,060	197,080
		85+	183,000	193,600	204,760
	Not black	0-44	355,580	386,440	416,680
		45-64	687,740	747,620	804,920
		65-69	4,426,080	4,940,160	5,356,300
		70-74	4,289,520	4,343,920	4,399,300
		75-79	3,393,120	3,457,780	3,524,720
		80-84	2,393,140	2,467,000	2,545,360
		85+	2,150,500	2,292,600	2,453,880
Males	Black	0-44	139,020	150,040	160,900
		45-64	182,420	197,320	211,620
		65-69	286,060	321,900	350,940
		70-74	244,860	252,400	260,000
		75-79	155,420	162,040	169,320
		80-84	92,200	97,280	102,240
		85+	71,100	76,840	82,440
	Not black	0-44	614,040	668,140	717,240
		45-64	1,092,280	1,187,220	1,275,500
		65-69	3,634,560	4,076,680	4,442,600
		70-74	3,230,840	3,301,580	3,373,620
		75-79	2,222,700	2,294,720	2,369,320
		80-84	1,262,980	1,326,820	1,392,860
		85+	789,260	861,260	942,820
Total			33,308,300	35,298,300	37,124,240

Based on March 1993 HISKEW files, inflated to 100 percent

References

Kalton, G. and Kasprzyk, D. (1986), "The Treatment of Missing Survey Data," *Survey Methodology*, **12**, 1-16.

Little, R.J.A. and Rubin, D.B. (1987), *Statistical Analysis with Missing Data*, New York: John Wiley and Sons.

Notes

1. Because people often "pre-enroll for Medicare before eligibility actually begins, the Round 4 supplement also includes some beneficiaries who became eligible in February 1992 and later. The sample is not representative of all 1992 new enrollees, and users may wish to exclude these new 1992 program entrants from their analyses.

2. See note 1