

**MEPS HC-190  
2016 Medical Conditions  
August 2018**

**Agency for Healthcare Research and Quality  
Center for Financing, Access, and Cost Trends  
5600 Fishers Lane  
Rockville, MD 20857  
(301) 427-1406**

## Table of Contents

A.	Data Use Agreement .....	A-1
B.	Background .....	B-1
	1.0 Household Component.....	B-1
	2.0 Medical Provider Component.....	B-1
	3.0 Survey Management and Data Collection .....	B-2
C.	Technical and Programming Information.....	C-1
	1.0 General Information.....	C-1
	2.0 Data File Information.....	C-1
	2.1 Codebook Structure .....	C-2
	2.2 Reserved Codes .....	C-3
	2.3 Codebook Format .....	C-3
	2.4 Variable Naming .....	C-3
	2.5 File Contents.....	C-4
	2.5.1 Identifier Variables (DUID-CONDRN).....	C-4
	2.5.2 Medical Condition Variables (AGEDIAG--ICD10CDX).....	C-4
	2.5.2.1 Priority Conditions and Injuries.....	C-4
	2.5.2.2 Age Priority Condition Began .....	C-5
	2.5.2.3 Follow-up Questions for Injuries and Priority Conditions.....	C-5
	2.5.2.4 Sources for Conditions on the MEPS Conditions File.....	C-5
	2.5.2.5 Treatment of Data from Rounds Not Occurring in 2016 .....	C-5
	2.5.2.6 Rounds in Which Conditions Were Reported/Selected (CRND1 – CRND5) .....	C-6
	2.5.2.7 Diagnosis and Condition Codes.....	C-6
	2.5.2.8 Clinical Classification Codes.....	C-8
	2.5.3 Utilization Variables (OBNUM – RXNUM)	C-8
	3.0 Survey Sample Information .....	C-8
	3.1 Overview .....	C-8
	3.2 Details on Person Weight Construction .....	C-9

**Table of Contents (continued)**

3.2.1	MEPS Panel 20 Weight Development Process	C-10
3.2.2	MEPS Panel 21 Weight Development Process	C-10
3.2.3	The Final Weight for 2016.....	C-10
3.2.4	Coverage .....	C-11
3.3	Using MEPS Data for Trend Analysis .....	C-11
4.0	Merging/Linking MEPS Data Files .....	C-12
4.1	National Health Interview Survey (NHIS).....	C-12
4.2	Longitudinal Analysis .....	C-13
	References.....	C-14
	Appendix 1: Variable-Source Crosswalk.....	A1-1
	Appendix 2: Condition Code Frequencies .....	A2-1
	Appendix 3: List of Conditions Asked in Priority Conditions Enumeration Section	A3-1

## **A. Data Use Agreement**

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

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

1. No one is to use the data in this data set in any way except for statistical reporting and analysis; and
2. If the identity of any person or establishment should be discovered inadvertently, then (a) no use will be made of this knowledge, (b) the Director Office of Management AHRQ will be advised of this incident, (c) the information that would identify any individual or establishment will be safeguarded or destroyed, as requested by AHRQ, and (d) no one else will be informed of the discovered identity; and
3. No one will attempt to link this data set with individually identifiable records from any data sets other than the Medical Expenditure Panel Survey or the National Health Interview Survey. Furthermore, linkage of the Medical Expenditure Panel Survey and the National Health Interview Survey may not occur outside the AHRQ Data Center, NCHS Research Data Center (RDC) or the U.S. Census RDC network.

By using these data you signify your agreement to comply with the above stated statutorily based requirements with the knowledge that deliberately making a false statement in any matter within the jurisdiction of any department or agency of the Federal Government violates Title 18 part 1 Chapter 47 Section 1001 and is punishable by a fine of up to \$10,000 or up to 5 years in prison.

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

## **B. Background**

### **1.0 Household Component**

The Medical Expenditure Panel Survey (MEPS) provides nationally representative estimates of health care use, expenditures, sources of payment, and health insurance coverage for the U.S. civilian noninstitutionalized population. The MEPS Household Component (HC) also provides estimates of respondents' health status, demographic and socio-economic characteristics, employment, access to care, and satisfaction with health care. Estimates can be produced for individuals, families, and selected population subgroups. The panel design of the survey, which includes 5 Rounds of interviews covering 2 full calendar years, provides data for examining person level changes in selected variables such as expenditures, health insurance coverage, and health status. Using computer assisted personal interviewing (CAPI) technology, information about each household member is collected, and the survey builds on this information from interview to interview. All data for a sampled household are reported by a single household respondent.

The MEPS-HC was initiated in 1996. Each year a new panel of sample households is selected. Because the data collected are comparable to those from earlier medical expenditure surveys conducted in 1977 and 1987, it is possible to analyze long-term trends. Each annual MEPS-HC sample size is about 15,000 households. Data can be analyzed at either the person or event level. Data must be weighted to produce national estimates.

The set of households selected for each panel of the MEPS HC is a subsample of households participating in the previous year's National Health Interview Survey (NHIS) conducted by the National Center for Health Statistics. The NHIS sampling frame provides a nationally representative sample of the U.S. civilian noninstitutionalized population and reflects an oversample of Blacks and Hispanics. In 2006, the NHIS implemented a new sample design, which included Asian persons in addition to households with Black and Hispanic persons in the oversampling of minority populations. NHIS introduced a new sample design in 2016 that discontinued oversampling of these minority groups. The linkage of the MEPS to the previous year's NHIS provides additional data for longitudinal analytic purposes.

### **2.0 Medical Provider Component**

Upon completion of the household CAPI interview and obtaining permission from the household survey respondents, a sample of medical providers are contacted by telephone to obtain information that household respondents can not accurately provide. This part of the MEPS is called the Medical Provider Component (MPC) and information is collected on dates of visits, diagnosis and procedure codes, charges and payments. The Pharmacy Component (PC), a subcomponent of the MPC, does not collect charges or diagnosis and procedure codes but does collect drug detail information, including National Drug Code (NDC) and medicine name, as well as date filled and sources and amounts of payment. The MPC is not designed to yield national estimates. It is primarily used as an imputation source to supplement/replace household reported expenditure information.

### **3.0 Survey Management and Data Collection**

MEPS HC and MPC data are collected under the authority of the Public Health Service Act. Data are collected under contract with Westat, Inc. (MEPS HC) and Research Triangle Institute (MEPS MPC). Data sets and summary statistics are edited and published in accordance with the confidentiality provisions of the Public Health Service Act and the Privacy Act. The National Center for Health Statistics (NCHS) provides consultation and technical assistance.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports, micro data files, and tables via the [MEPS website](#). Selected data can be analyzed through MEPSnet, an on-line interactive tool designed to give data users the capability to statistically analyze MEPS data in a menu-driven environment.

Additional information on MEPS is available from the MEPS project manager or the MEPS public use data manager at the Center for Financing, Access, and Cost Trends, Agency for Healthcare Research and Quality, 5600 Fishers Lane, Rockville, MD 20857 (301-427-1406).

## C. Technical and Programming Information

### 1.0 General Information

This documentation describes the data contained in MEPS Public Use Release HC-190, which is one in a series of public use data files to be released from the 2016 Medical Expenditure Panel Survey Household Component (MEPS HC). Released in ASCII (with related SAS, SPSS, and Stata programming statements and data user information) and SAS formats, this public use file provides information on household-reported medical conditions collected on a nationally representative sample of the civilian noninstitutionalized population of the United States for calendar year 2016 MEPS HC. The file contains 25 variables and has a logical record length of 81 with an additional 2-byte carriage return/line feed at the end of each record.

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

- Data File Information
- Survey Sample Information
- Merging/Linking MEPS Data Files
- Appendices
  - Variable-Source Crosswalk
  - Detailed ICD-10-CM Condition Code Frequencies
  - List of Conditions Asked in Priority Conditions Enumeration Section

A codebook of all the variables included in the 2016 Medical Conditions File is provided in an accompanying file.

For more information on MEPS survey design, see T. Ezzati-Rice, et al., 1998-2007 and S. Cohen, 1996. A copy of the survey instrument used to collect the information on this file is available on the [MEPS website](#).

### 2.0 Data File Information

This file contains 123,100 records. Each record represents one *current* medical condition reported for a household survey member who resides in an eligible responding household and who has a positive person or family weight. A condition is defined as *current* if it is linked to an event or a condition the person reported as experiencing during the year (i.e., a condition selected in the Condition Enumeration (CE) section).

Conditions created in the Priority Condition Enumeration (PE) section were asked in the context of “has person ever been told by a doctor or other health care professional that they have (condition)?” except joint pain and chronic bronchitis, which ask only about the last 12 months. Persons with a response of Yes (1) to a priority condition question for whom the condition is not *current* as defined above will not have a record for that condition in this file.

Records meeting one of the following criteria are included on the file:

In Panel 21:

- Round 1 and Round 2 records that are current conditions. A current condition is defined as a condition linked to a 2016 event or a condition the person is currently experiencing (i.e., a condition selected in the CE section);
- Round 3 conditions that were linked to a 2016 event;
- Round 3 current conditions that were due to an accident or injury;
- Round 3 priority condition records that are current and the age of diagnosis is less than or equal to the person's age as of 12/31/2016, the age of diagnosis is refused, don't know, or not ascertained, or the age of diagnosis is set to -1 (inapplicable);
- Any other current Round 3 conditions where 50 percent or more of person's reference period occurred in 2016.

In Panel 20:

- Round 3, Round 4, and Round 5 records that are current conditions. A current condition is defined as a condition linked to a 2016 event or a condition the person is currently experiencing (i.e., a condition selected in the CE section);
- Round 1 and Round 2 condition records that are linked to a 2016 event or a condition the person is currently experiencing in 2016 (i.e., a condition selected in the CE section).

For most variables on the file, the codebook provides both weighted and unweighted frequencies. The exceptions to this are weight variables and variance estimation variables. Only unweighted frequencies of these variables are included in the accompanying codebook file. See the Weights Variables list in Appendix 1, Variable-Source Crosswalk.

Data from this file can be merged with 2016 MEPS person-level data to append person-level characteristics such as demographic or health insurance characteristics to each record by using DUPERSID (see Section 4.0 for details). Since each record represents a single condition reported by a household respondent, some household members may have multiple medical conditions and thus will be represented by multiple records on this file. Other household members may have had no reported medical conditions and thus will have no records on this file. Still other household members may have had a reported medical condition that did not meet the criteria above and thus will have no records on this file. Data from this file also can be merged to 2016 MEPS Event Files (HC-188A, and HC-188D through HC-188H) by using the link files provided in HC-188I. (See HC-188I documentation for details.)

## **2.1 Codebook Structure**

The codebook and data file list variables in the following order:

- Unique person identifiers
- Unique condition identifiers
- Medical condition variables
- Utilization variables
- Weight and variance estimation variables



Note that the person identifier is unique within this data year.

## 2.2 Reserved Codes

The following reserved code values are used:

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

## 2.3 Codebook Format

This codebook describes an ASCII data set and provides the following programming identifiers for each variable:

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

## 2.4 Variable Naming

In general, variable names reflect the content of the variable, with an 8-character limitation. Edited variables end in an “X” and are so noted in the variable label. (CONDIDX, which is an encrypted identifier variable, also ends in an “X”.)

Variables contained in this delivery were derived either from the questionnaire itself or from the CAPI. The source of each variable is identified in Appendix 1, Variable-Source Crosswalk. Sources for each variable are indicated in one of three ways: (1) variables derived from CAPI or assigned in sampling are so indicated; (2) variables collected at one or more specific questions have those numbers and questionnaire sections indicated in the “SOURCE” column; and (3) variables constructed from multiple questions using complex algorithms are labeled “Constructed” in the “SOURCE” column.

## **2.5 File Contents**

### **2.5.1 Identifier Variables (DUID-CONDRN)**

The definitions of Dwelling Units (DUs) in the MEPS HC are generally consistent with the definitions employed for the National Health Interview Survey (NHIS). The dwelling unit ID (DUID) is a 5-digit random number assigned after the case was sampled for MEPS. The person number (PID) uniquely identifies each person within the dwelling unit.

The variable DUPERSID uniquely identifies each person represented on the file and is the combination of the variables DUID and PID.

CONDN is the condition number and uniquely identifies each condition reported for an individual. The range on this file for CONDN is 11-581 and the range of total records for any one person on the file is 1-53.

The variable CONDIDX uniquely identifies each condition (i.e., each record on the file) and is the combination of DUPERSID and CONDN. CONDIDX is always a length of 12 with DUPERSID (8) and CONDN (4) combined. For CONDIDX, the condition number is padded with leading zeroes to ensure consistent length.

PANEL is a constructed variable used to specify the panel number for the interview in which the condition was reported. PANEL will indicate either Panel 20 or Panel 21.

CONDRN indicates the round in which the condition was first *reported*. For a small number of cases, conditions that actually began in an earlier round were not reported by respondents until subsequent rounds of data collection. During file construction, editing was performed for these cases in order to reconcile the round in which a condition began and the round in which the condition was first reported.

### **2.5.2 Medical Condition Variables (AGEDIAG-ICD10CDX)**

This file contains variables describing medical conditions reported by respondents in several sections of the MEPS questionnaire, including the Condition Enumeration section, and all questionnaire sections collecting information about health provider visits and/or prescription medications (see Variable-Source Crosswalk in Appendix 1 for details).

#### **2.5.2.1 Priority Conditions and Injuries**

Certain conditions were *a priori* designated as “priority conditions” due to their prevalence, expense, or relevance to policy. Some of these are long-term, life-threatening conditions, such as cancer, diabetes, emphysema, high cholesterol, hypertension, ischemic heart disease, and stroke. Others are chronic manageable conditions, including arthritis and asthma. The only mental health condition on the priority conditions list is attention deficit hyperactivity disorder/attention deficit disorder.

When a condition was first mentioned, respondents were asked whether it was due to an accident or injury (INJURY=1). Only non-priority conditions (i.e., conditions reported in a section other

than PE) are eligible to be injuries. The interviewer is prevented from selecting priority conditions as injuries.

### **2.5.2.2 Age Priority Condition Began**

The age of diagnosis (AGEDIAG) was collected for all priority conditions, except joint pain. For confidentiality reasons, AGEDIAG is set to Inapplicable (-1) for cancer conditions.

To ensure confidentiality, age of diagnosis was top-coded to 85. This corresponds with the age top-coding in person-level PUFs.

### **2.5.2.3 Follow-up Questions for Injuries and Priority Conditions**

When a respondent reported that a condition resulted from an accident or injury (INJURY=1), respondents were asked during the round in which the injury was first reported whether the accident/injury occurred at work (ACCDNWRK). This question was not asked about persons aged 15 and younger; the condition had ACCDNWRK coded to inapplicable (-1) for those persons.

### **2.5.2.4 Sources for Conditions on the MEPS Conditions File**

The records on this file correspond with medical condition records collected by CAPI and stored on a person's MEPS conditions roster. Conditions can be added to the MEPS conditions roster in several ways. A condition can be reported in the Priority Condition Enumeration (PE) section in which persons are asked if they have been diagnosed with specific conditions. The condition can be identified as the reason reported by the household respondent for a particular medical event (hospital stay, outpatient visit, emergency room visit, home health episode, prescribed medication purchase, or medical provider visit). Some condition information is collected in the Medical Provider Component of MEPS. However, since it is not available for everyone in the sample, it is not used to supplement, replace, or verify household-reported condition data.

Finally, the condition may be reported by the household-level respondent as a condition "bothering" the person during the reference period (see question CE03). Conditions reported in the PE section that are not current are not included on this file.

### **2.5.2.5 Treatment of Data from Rounds Not Occurring in 2016**

Prior to the 2008 file, priority conditions reported during Rounds 1 and 2 of the second year panel were included on the file even if the conditions were not related to an event or reported as a serious condition occurring in the second year of the panel. Beginning in 2008, priority conditions are included on the file only if they are current conditions. A current condition is defined as a condition linked to an event or a condition the person is currently experiencing (i.e., a condition selected in the Condition Enumeration (CE) section). Conditions from Rounds 1 and 2 that are not included in the 2016 file are available in the 2015 Medical Conditions File. Note that, for some Rounds 1 and 2 records, data may not be available on the previous year's file. There are two situations where data may not be on the previous year's file: 1) when a person does not have a positive person or family weight in the first year but is assigned a positive weight in the subsequent year, 2) if the condition is a priority condition for which no events were

reported in the first year but are reported in the second year. For 2016, 80 conditions from Panel 20 Rounds 1 and 2 are included on the 2016 Medical Conditions File for persons who did not appear on the previous year's file.

Note: Priority conditions are generally chronic conditions. Even though a person may not have reported an event in 2016 due to the condition, or reported generally experiencing the condition in 2016, analysts should consider that the person is probably still experiencing the condition. If a Panel 20 person reported a priority condition in Round 1 or 2 and did not have an event for the condition in Round 3, 4, or 5, the condition will not be included on the 2016 Medical Conditions File.

### **2.5.2.6 Rounds in Which Conditions Were Reported/Selected (CRND1 – CRND5)**

A set of constructed variables indicates the round in which the condition was first reported (CONDRN), and the subsequent round(s) in which the condition was selected (CRND1 – CRND5). The condition may be reported or selected when the person reports an event that occurred due to the condition, or the condition may be selected as a serious condition that is not linked to any events. For example, consider a condition for which CRND1 = 0, CRND2 = 1, and CRND3 = 1. For non-priority conditions, this sequence of CRND indicators on a condition record implies that the condition was not present during Round 1 (CRND1 = 0), was first mentioned during Round 2, and was selected during Round 3. For priority conditions, it is necessary to look at CONDRN rather than CRND# to determine in which round the condition was first reported. In addition to the scenario above, this sequence of CRND indicators may imply for priority conditions that the condition was reported in the PE section in Round 1 but was not connected with an event, and not selected in the CE section as a current condition until Rounds 2 and 3.

### **2.5.2.7 Diagnosis and Condition Codes**

The medical conditions and procedures reported by the Household Component respondent were recorded by the interviewer as verbatim text. Beginning FY16, ICD-9-CM codes (ICD9CODX) are no longer used and medical conditions now are coded to ICD-10-CM codes (ICD10CDX). Also beginning in FY16, condition names are no longer coded to procedure codes, and ICD9PROX has been dropped from the file.

Professional coders followed specific guidelines in coding missing values to the ICD-10-CM diagnosis condition variable. ICD10CDX was coded -9 (Not Ascertained) where the verbatim text fell into one of three categories: (1) the text indicated that the condition was unknown (e.g., DK); (2) the text indicated the condition could not be diagnosed by a doctor (e.g., doctor doesn't know); or (3) the specified condition was not codeable. If the text indicated a procedure and the condition associated with the procedure could be discerned from the text, the condition itself is coded. For example, "cataract surgery" is coded as the condition "other cataract" (ICD10CDX is set to code "H26"). If the condition could not be discerned (e.g. "outpatient surgery"), ICD10CDX is set to -9.

Through FY15, the text strings were coded by professional coders to fully-specified ICD-9-CM codes, including medical condition and V codes (see Health Care Financing Administration,

1980). Condition names were coded to ICD-9-CM diagnosis codes (ICD9CODX), and to ICD-9-CM procedure codes (ICD9PROX) when applicable (the condition name indicated a procedure/surgery). Through FY15, ICD9CODX also was coded -9 if the specified condition was not codeable and a procedure could not be discerned from the text; if the verbatim text strictly denoted a procedure and not a condition, ICD9CODX was coded -1.

In order to preserve confidentiality, all of the conditions provided on this file have been coded to 3-digit diagnosis code categories rather than the fully-specified ICD-10-CM code. For example, the ICD10CDX value of J02 “Acute pharyngitis” includes the fully-specified subclassifications J020 and J029; the value F31 “Bipolar disorder” includes the fully-specified subclassifications F3110 through F319. Table 1 in Appendix 2 provides unweighted and weighted frequencies for all ICD-10-CM condition code values reported on the file. Approximately 2 percent of the ICD-10-CM codes on this file were edited further by collapsing two or more 3-digit codes into one 3-digit code. This includes clinically rare conditions that were recoded to broader codes by clinicians. A condition is determined to be clinically rare if it appears on the [National Institutes of Health’s list of rare diseases](#).

For confidentiality purposes, approximately 6% of ICD-10-CM codes were recoded to -9 (Not Ascertained) for conditions where the frequency was less than 20 for the total unweighted population in the file or less than 200,000 for the weighted population. Additional factors used to determine recoding include age and gender.

In a small number of cases, diagnosis and condition codes were recoded to -9 (Not Ascertained) if they denoted a pregnancy for a person younger than 16 or older than 44. Less than one-tenth of 1 percent of records were recoded in this manner on the 2016 Medical Conditions File. The person’s age was determined by linking the 2016 Medical Conditions File to the 2015 and 2016 Person-Level Use PUFs. If the person’s age is under 16 or over 44 in the round in which the condition was reported, the appropriate condition code was recoded to -9 (Not Ascertained).

Users should note that because of the design of the survey, most deliveries (i.e., births) are coded as pregnancies. For more accurate estimates for deliveries, analysts should use RSNINHOS “Reason Entered Hospital” found on the Hospital Inpatient Stays Public Use File (HC-188D).

Each year, a few conditions on the final file may fall below the confidentiality threshold. This is due to the multistage file development process. The confidentiality recoding is performed on the preliminary version of the Conditions file each year. This preliminary version is used in the development of other event PUFs and, in turn, these event PUFs are used in the development of the final conditions file. During this process, some records from the preliminary file are dropped because only records that are relevant to the current data year are reflected in the final Conditions PUF.

Conditions file data can be merged with the 2016 MEPS Event Files. Because the conditions have been coded to 3-digit diagnosis code categories rather than the fully-specified ICD-10-CM code, it is possible for there to be duplicate ICD-10-CM condition codes linked to a single medical event when different fully-specified conditions are coded to the same 3-digit code. For information on merging data on this file with the 2016 MEPS Event Files (HC-188A, and HC-

188D through HC-188H) refer to the link files provided in HC-188I, and see HC-188I documentation for details.

Conditions were reported in sections of the HC questionnaire (see Variable-Source Crosswalk in Appendix 1). Labels for all values of ICD10CDX, as shown in Table 1 of Appendix 2, are provided in the SAS programming statements included in this release (see the H190SU.TXT file).

### **2.5.2.8 Clinical Classification Codes**

The 2016 Medical Conditions public use file (PUF) was the first time ICD10 codes were provided on MEPS public use files. As a consequence of the adoption of the new condition classification system, the ICD-10 mapping to CCS codes is still under review and a final mapping is not available at the time of this file release. Users can visit the [Healthcare Cost and Utilization Project \(HCUP\) website](#) for more information.

### **2.5.3 Utilization Variables (OBNUM – RXNUM)**

The variables OBNUM, OPNUM, HHNUM, IPNUM, ERNUM, and RXNUM indicate the total number of 2016 events that can be linked to each condition record on the current file, i.e., office-based, outpatient, home health, inpatient hospital stays, emergency room visits, and prescribed medicines, respectively.

These counts of events were derived from Expenditure Event Public Use Files (HC-188G, HC-188F, HC-188H, HC-188D, HC-188E, and HC-188A). Events associated with conditions include all utilization that occurred between January 1, 2016 and December 31, 2016.

Because persons can be seen for more than one condition per visit, these frequencies will not match the person or event-level utilization counts. For example, if a person had one inpatient hospital stay and was treated for a fractured hip, a fractured shoulder, and a concussion, each of these conditions has a unique record in this file and IPNUM=1 for each record. By summing IPNUM for these records, the total inpatient hospital stays would be three when actually there was only one inpatient hospital stay for that person and three conditions were treated. These variables are useful for determining the number of inpatient hospital stays for head injuries, hip fractures, etc.

## **3.0 Survey Sample Information**

### **3.1 Overview**

There is a single full year person-level weight (PERWT16F) assigned to each record for each key, in-scope person who responded to MEPS for the full period of time that he or she was in-scope during 2016. A key person was either a member of a responding NHIS household at the time of the interview or joined a family associated with such a household after being out-of-scope at the time of the NHIS (the latter circumstance includes newborns as well as those returning from military service, an institution, or residence in a foreign country). A person is in-

scope whenever he or she is a member of the civilian noninstitutionalized portion of the U.S. population.

### 3.2 Details on Person Weight Construction

The person-level weight PERWT16F was developed in several stages. First, person-level weights for Panel 20 and Panel 21 were created separately. The weighting process for each panel included adjustments for nonresponse over time and calibration to independent population totals. The calibration was initially accomplished separately for each panel by raking the corresponding sample weights to Current Population Survey (CPS) population estimates based on five variables. The five variables used in the establishment of the initial person-level control figures were: census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic; Black, non-Hispanic; Asian, non-Hispanic; and other); sex; and age. A 2016 composite weight was then formed by multiplying each weight from Panel 20 by the factor .510 and each weight from Panel 21 by the factor .490. Using such factors to form composite weights serves to limit the variance of estimates obtained from pooling the two samples. The resulting composite weight was raked to the same set of CPS-based control totals. Then, when the poverty status information (derived from the MEPS income variables) became available, another raking was undertaken, using dimensions reflecting poverty status in addition to the previously mentioned five variables. Control totals were established using poverty status (five categories: below poverty, from 100 to 125 percent of poverty, from 125 to 200 percent of poverty, from 200 to 400 percent of poverty, at least 400 percent of poverty) as well as the other five variables previously used in the weight calibration. Thus, the raking for the final weight reflected poverty status as well as the other five variables previously used in the weight calibration.

In developing the final person-level weight for 2016 (PERWT16F), an additional raking dimension was included beyond those based on the usual six variables. This dimension was added to adjust the distribution of inpatient hospital utilization among the elderly to reflect trends in other data sources. The table below shows ratios of weighted numbers for those 65 and older that were used to establish this additional raking dimension, modifying the corresponding estimates obtained without the additional dimension.

#### Ratio of Adjusted to Unadjusted Weights (Cases where AGE16X>=65 and INSC1231=1)

# of Inpatient Discharges (IPDIS16)	# of Nights in Hospital for Discharges (IPNGTD16)	Ratio
0	0	0.9746
1+	0-4	1.1227
1+	5-9	1.1548
1+	10+	1.3597

### **3.2.1 MEPS Panel 20 Weight Development Process**

The person-level weight for an individual in MEPS Panel 20 was developed using the 2015 full year weight as a “base” weight for each survey participant present in 2015. For key, in-scope members who joined an RU some time in 2016 after being out-of-scope in 2015, the initially assigned person-level weight was the corresponding 2015 family weight. The weighting process included an adjustment for person-level nonresponse over Rounds 4 and 5 as well as raking to population control figures for December 2016 for key, responding persons in-scope on December 31, 2016. These control figures were derived by scaling back the population distribution obtained from the March 2017 CPS to reflect the December 31, 2016 estimated population total (estimated based on Census projections for January 1, 2017). Variables used for person-level raking included: census region (Northeast, Midwest, South, West); MSA status (MSA, non-MSA); race/ethnicity (Hispanic; Black, non-Hispanic; Asian, non-Hispanic; and other); sex; and age. The final weight for key, responding persons who were not in-scope on December 31, 2016 but were in-scope earlier in the year was the person weight after the nonresponse adjustment.

### **3.2.2 MEPS Panel 21 Weight Development Process**

The person-level weight for an individual in MEPS Panel 21 was developed using the 2016 MEPS Round 1 person-level weight as a “base” weight. For key, in-scope members who joined an RU after Round 1, the Round 1 family weight served as a “base” weight. The weighting process included an adjustment for nonresponse over the remaining data collection rounds in 2016 as well as raking to the same population control figures for December 2016 used for the MEPS Panel 20 weights for key, responding persons in-scope on December 31, 2016. The same five variables employed for Panel 20 raking (census region, MSA status, race/ethnicity, sex, and age) were used for Panel 21 raking. Again, the final weight for key, responding persons who were not in-scope on December 31, 2016 but were in-scope earlier in the year was the person weight after the nonresponse adjustment.

Note that the MEPS Round 1 weights for both panels incorporated the following components: a weight reflecting the original household probability of selection for the NHIS and an adjustment for NHIS nonresponse; a factor representing the proportion of the 16 NHIS panel-quarter combinations eligible for MEPS; the oversampling of certain subgroups for MEPS among the NHIS household respondents eligible for MEPS; ratio-adjustment to NHIS-based national population estimates at the household (occupied DU) level; adjustment for nonresponse at the DU level for Round 1; and poststratification to U.S. civilian noninstitutionalized population estimates at the family and person level obtained from the corresponding March CPS databases.

### **3.2.3 The Final Weight for 2016**

The final raking of those in-scope at the end of the year has been described above. In addition, the composite weights of two groups of persons who were out-of-scope on December 31, 2016 were poststratified. Specifically, the weights of those who were in-scope some time during the year, out-of-scope on December 31, and entered a nursing home during the year were poststratified to a corresponding control total obtained from the 1996 MEPS Nursing Home Component. The weights of persons who died while in-scope during 2016 were poststratified to



corresponding estimates derived using data obtained from the Medicare Current Beneficiary Survey (MCBS) and Vital Statistics information provided by the National Center for Health Statistics (NCHS). Separate decedent control totals were developed for the “65 and older” and “under 65” civilian noninstitutionalized populations.

Overall, the weighted population estimate for the civilian noninstitutionalized population for December 31, 2016 is 319,197,609 (PERWT16F>0 and INSC1231=1). The sum of the person-level weights across all persons assigned a positive person-level weight is 323,141,687.

### **3.2.4 Coverage**

The target population for MEPS in this file is the 2016 U.S. civilian noninstitutionalized population. However, the MEPS sampled households are a subsample of the NHIS households interviewed in 2014 (Panel 20) and 2015 (Panel 21). New households created after the NHIS interviews for the respective panels and consisting exclusively of persons who entered the target population after 2014 (Panel 20) or after 2015 (Panel 21) are not covered by MEPS. Neither are previously out-of-scope persons who join an existing household but are unrelated to the current household residents. Persons not covered by a given MEPS panel thus include some members of the following groups: immigrants, persons leaving the military, U.S. citizens returning from residence in another country, and persons leaving institutions. The set of uncovered persons constitutes only a small segment of the MEPS target population.

### **3.3 Using MEPS Data for Trend Analysis**

MEPS began in 1996, and the utility of the survey for analyzing health care trends expands with each additional year of data; however, there are a variety of methodological and statistical considerations when examining trends over time using MEPS. Examining changes over longer periods of time can provide a more complete picture of underlying trends. In particular, large shifts in survey estimates over short periods of time (e.g. from one year to the next) that are statistically significant should be interpreted with caution unless they are attributable to known factors such as changes in public policy, economic conditions, or survey methodology.

In 2013 MEPS survey operations introduced an effort to obtain more complete information about health care utilization from MEPS respondents with full implementation in 2014. This effort resulted in improved data quality and a reduction in underreporting in the second half of 2013 and throughout 2014. Respondents tended to report more visits, especially non-physician visits, by sample members and the new approach appeared particularly effective among those subgroups with relatively large numbers of visits, such as the elderly, Medicare beneficiaries, and people with multiple chronic conditions, disabilities, or poor health. Reported spending on visits also tended to increase, especially for such subgroups.

Changes to the MEPS survey instrument should also be considered when analyzing trends. For example, as a result of improved methods for collecting priority conditions data implemented in 2007, prevalence measures prior to 2007 are not comparable to those from 2007 and beyond for many of these conditions. Data users should review relevant sections of the documentation for descriptions of these types of changes before undertaking trend analyses.

Analysts may also wish to consider using statistical techniques to smooth or stabilize analyses of trends using MEPS data such as comparing pooled time periods (e.g. 1996-97 versus 2011-12), working with moving averages or using modeling techniques with several consecutive years of MEPS data to test the fit of specified patterns over time.

Finally, statistical significance tests should be conducted to assess the likelihood that observed trends are not attributable to sampling variation. In addition, researchers should be aware of the impact of multiple comparisons on Type I error. Without making appropriate allowance for multiple comparisons, undertaking numerous statistical significance tests of trends increases the likelihood of concluding that a change has taken place when one has not.

#### **4.0 Merging/Linking MEPS Data Files**

Data from the current file can be used alone or in conjunction with other files. Merging characteristics of interest from person-level files expands the scope of potential estimates. See HC-188I for instructions on merging the Conditions File to the Medical Event Files. Person-level characteristics can be merged to this Conditions File using the following procedure:

1. Sort the person-level file by person identifier, DUPERSID. Keep only DUPERSID and the variables to be merged onto the Conditions File.
2. Sort the Conditions File by person identifier, DUPERSID.
3. Merge both files by DUPERSID, and output all records in the Conditions File.
4. If PERS contains the person-level variables, and COND is the Conditions File, the following code can be used to add person-level variables to the person's conditions in the Condition-level file.

```
PROC SORT DATA=PERS(KEEP=DUPERSID AGE SEX EDUCYR HIDEQ)  
OUT=PERX; BY DUPERSID;  
RUN;
```

```
PROC SORT DATA=COND; BY DUPERSID;  
RUN;
```

```
DATA COND;  
MERGE COND (IN=A) PERX(IN=B); BY DUPERSID;  
IF A;  
RUN;
```

#### **4.1 National Health Interview Survey (NHIS)**

Data from this file can be used alone or in conjunction with other files for different analytic purposes. Each MEPS panel can also be linked back to the previous years' National Health Interview Survey public use data files. For information on MEPS/NHIS link files please see the [AHRQ website](#).

## 4.2 Longitudinal Analysis

Panel-specific longitudinal files are available for downloading in the data section of the MEPS website. For each panel, the longitudinal file comprises MEPS survey data obtained in Rounds 1 through 5 of the panel and can be used to analyze changes over a two-year period. Variables in the file pertaining to survey administration, demographics, employment, health status, disability days, quality of care, patient satisfaction, health insurance, and medical care use and expenditures were obtained from the MEPS full-year Consolidated files from the two years covered by that panel.

For more details or to download the data files, please see Longitudinal Data Files at the [AHRQ website](#).

## References

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

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

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

Ezzati-Rice, T.M., Rohde, F., Greenblatt, J., Sample Design of the Medical Expenditure Panel Survey Household Component, 1998–2007. *Methodology Report No. 22*. March 2008. Agency for Healthcare Research and Quality, Rockville, MD.

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

Johnson, Ayah E., and Sanchez, Maria Elena. (1993), “Household and Medical Reports on Medical Conditions: National Medical Expenditure Survey.” *Journal of Economic and Social Measurement*, 19, 199-223.

**Appendix 1**  
**Variable-Source Crosswalk**

**Appendix 1 – Variable-Source Crosswalk**  
**FOR MEPS HC-190: 2016 MEDICAL CONDITIONS**  
**UNIQUE IDENTIFIER VARIABLES**

<b>VARIABLE</b>	<b>LABEL</b>	<b>SOURCE<sup>1</sup></b>
DUID	Dwelling Unit ID	Assigned In Sampling
PID	Person Number	Assigned In Sampling
DUPERSID	Person ID (DUID + PID)	Assigned In Sampling
CONDN	Condition Number	CAPI Derived
CONDIDX	Condition ID	CAPI Derived
PANEL	Panel Number	Constructed
CONDRN	Condition Round Number	CAPI Derived

**MEDICAL CONDITION VARIABLES**

<b>VARIABLE</b>	<b>LABEL</b>	<b>SOURCE<sup>1</sup></b>
AGEDIAG	Age When Diagnosed	PE section
CRND1	Has Condition Information In Round 1	Constructed
CRND2	Has Condition Information In Round 2	Constructed
CRND3	Has Condition Information In Round 3	Constructed
CRND4	Has Condition Information In Round 4	Constructed
CRND5	Has Condition Information In Round 5	Constructed
INJURY	Was Condition Due To Accident/Injury	CN01A
ACCDNWRK	Did Accident Occur At Work	CN07
ICD10CDX	ICD-10-CM Code For Condition - Edited	CE05, HS04, ER04, OP09, MV09, HH05, PM09 (Edited)

**UTILIZATION VARIABLES**

<b>VARIABLE</b>	<b>LABEL</b>	<b>SOURCE<sup>1</sup></b>
HHNUM	# Home Health Events Assoc. w/ Condition	Constructed
IPNUM	# Inpatient Events Assoc. w/ Condition	Constructed
OPNUM	# Outpatient Events Assoc. w/ Condition	Constructed
OBNUM	# Office-Based Events Assoc. w/ Condition	Constructed
ERNUM	# ER Events Assoc. w/ Condition	Constructed
RXNUM	# Prescribed Medicines Assoc. w/ Cond.	Constructed

<sup>1</sup> See the Household Component section under Survey Questionnaires on the MEPS home page for information on the MEPS HC questionnaire sections shown in the Source column (e.g., CN, PE).

## WEIGHTS AND VARIANCE ESTIMATION VARIABLES

<b>VARIABLE</b>	<b>LABEL</b>	<b>SOURCE<sup>1</sup></b>
PERWT16F	Expenditure File Person Weight, 2016	Constructed
VARSTR	Variance Estimation Stratum, 2016	Constructed
VARPSU	Variance Estimation PSU, 2016	Constructed

<sup>1</sup> See the Household Component section under Survey Questionnaires on the MEPS home page for information on the MEPS HC questionnaire sections shown in the Source column (e.g., CN, PE).

**Appendix 2**  
**Condition Code Frequencies**



TABLE 1  
UNWEIGHTED AND WEIGHTED COUNT OF RECORDS FOR EACH VALUE OF ICD10CDX

ICD10CDX VALUE	LABEL	UNWEIGHTED	WEIGHTED BY perwt16f
-9	NOT ASCERTAINED	8,343	89,014,136
A04	OTHER BACTERIAL INTESTINAL INFECTION	36	448,384
A08	VIRAL AND OTHER SPECIFIED INTEST INF	622	6,456,575
A09	INFECT GASTROENTERIT AND COLITIS, UN	61	532,890
A49	BACTERIAL INFECTION OF UNSPECIFIED S	263	3,405,298
B00	HERPESVIRAL [HERPES SIMPLEX] INFECTI	142	1,780,509
B02	ZOSTER [HERPES ZOSTER]	142	1,533,941
B07	VIRAL WARTS	145	1,750,094
B08	OTH VIR INFECTION SKIN AND MUC MEMB LES,	74	929,808
B19	UNSPECIFIED VIRAL HEPATITIS	74	649,673
B27	INFECTIOUS MONONUCLEOSIS	35	581,090
B34	VIRAL INFECTION OF UNSPECIFIED SITE	372	4,098,730
B35	DERMATOPHYTOSIS	219	2,291,072
B37	CANDIDIASIS	224	2,567,969
B49	UNSPECIFIED MYCOSIS	36	353,158
C34	MALIGNANT NEOPLASM OF BRONCHUS AND L	74	927,039
C44	OTHER AND UNSPEC MALIGNANT NEOPLASM	442	6,719,730
C53	MALIGNANT NEOPLASM OF CERVIX UTERI	31	314,001
C55	MAL NEO OF UTERUS, PART UNSPECIFIED	28	242,417
C56	MALIGNANT NEOPLASM OF OVARY	22	216,377
C61	MALIGNANT NEOPLASM OF PROSTATE	168	1,808,897
C64	MAL NEO KIDNEY, EXCEPT RENAL PELVIS	39	450,473
C71	MALIGNANT NEOPLASM OF BRAIN	20	265,357
C76	MAL NEO OTHER AND ILL-DEFINED SITES	234	2,770,970
C80	MALIGN NEO W/O SPECIFICATION OF SITE	41	472,411
C85	OTHER SPEC AND UNSPEC NON-HODGK LYMP	49	572,994
C95	LEUKEMIA OF UNSPECIFIED CELL TYPE	25	311,815
D04	CARCINOMA IN SITU OF SKIN	48	680,181
D17	BENIGN LIPOMATOUS NEOPLASM	30	374,384
D21	OTH BEN NEO CONNECT AND OTHER SOFT T	48	390,696
D22	MELANOCYTIC NEVI	167	2,383,139
D36	BENIGN NEOPLASM OTHER AND UNSPEC SIT	23	344,092
D48	NEO UNCERT BEHAV OTH AND UNSPECI SIT	24	333,534
D49	NEOPLASMS OF UNSPECIFIED BEHAVIOR	382	5,053,532
D64	OTHER ANEMIAS	409	3,508,941
D72	OTHER DISORDERS OF WHITE BLOOD CELLS	27	314,109
E03	OTHER HYPOTHYROIDISM	666	8,701,362
E04	OTHER NONTOXIC GOITER	55	718,946
E05	THYROTOXICOSIS [HYPERTHYROIDISM]	141	1,448,448
E06	THYROIDITIS	30	479,761
E07	OTHER DISORDERS OF THYROID	1,041	11,701,987
E11	TYPE 2 DIABETES MELLITUS	3,127	27,922,436
E16	OTH DISORD PANCREATIC INTERNAL SECRE	44	475,429
E28	OVARIAN DYSFUNCTION	82	975,602
E34	OTHER ENDOCRINE DISORDERS	136	1,823,316
E53	DEFICIENCY OF OTHER B GROUP VITAMINS	76	888,021
E56	OTHER VITAMIN DEFICIENCIES	51	434,909
E58	DIETARY CALCIUM DEFICIENCY	34	234,550
E61	DEFICIENCY OF OTHER NUTRIENT ELEMENT	86	738,564
E63	OTHER NUTRITIONAL DEFICIENCIES	372	3,612,569
E66	OVERWEIGHT AND OBESITY	165	1,674,388
E78	DISORD LIPOPROTEIN METAB AND OTH LIP	5,239	55,621,474
E83	DISORDERS OF MINERAL METABOLISM	33	480,043
E86	VOLUME DEPLETION	138	1,679,013
E87	OTH DISORD FLUID, ELECTROL ACID-BASE	306	3,486,074
F03	UNSPECIFIED DEMENTIA	122	1,437,958
F06	OTH MENT DISORD DUE TO KNOWN PHYSIO	80	854,461
F11	OPIOID RELATED DISORDERS	25	324,455
F17	NICOTINE DEPENDENCE	32	386,680
F31	BIPOLAR DISORDER	282	2,697,212
F32	MAJ DEPRESSIVE DISORDER, SINGLE EPIS	2,658	27,820,334
F34	PERSISTENT MOOD [AFFECTIVE] DISORDER	54	487,554

TABLE 1  
UNWEIGHTED AND WEIGHTED COUNT OF RECORDS FOR EACH VALUE OF ICD10CDX

ICD10CDX VALUE	LABEL	UNWEIGHTED	WEIGHTED BY perwt16f
F39	UNSPECIFIED MOOD [AFFECTIVE] DISORDE	87	1,118,478
F40	PHOBIC ANXIETY DISORDERS	43	615,677
F41	OTHER ANXIETY DISORDERS	2,688	30,730,336
F42	OBSESSIVE-COMPULSIVE DISORDER	29	326,913
F43	REACTION SEVER STRESS, AND ADJUST DI	974	9,664,982
F48	OTHER NONPSYCHOTIC MENTAL DISORDERS	23	198,649
F51	SLEEP DIS NOT DUE TO SUB OR KNOW PHY	29	261,438
F53	PUERPERAL PSYCHOSIS	25	342,129
F84	PERVASIVE DEVELOPMENTAL DISORDERS	134	1,186,669
F90	ATTENTION-DEFICIT HYPERACTIVITY DISO	831	8,588,759
F91	CONDUCT DISORDERS	80	808,446
F99	MENTAL DISORDER, NOT OTHERWISE SPECI	85	764,109
G20	PARKINSON'S DISEASE	49	592,504
G24	DYSTONIA	20	253,896
G25	OTHER EXTRAPYRAMIDAL AND MOVEMENT DI	155	2,023,919
G30	ALZHEIMER'S DISEASE	68	815,379
G40	EPILEPSY AND RECURRENT SEIZURES	114	1,003,029
G43	MIGRAINE	667	7,248,594
G44	OTHER HEADACHE SYNDROMES	27	292,745
G45	TRANSNT CEREB ISCHEM ATTACK AND REL	427	4,291,727
G51	FACIAL NERVE DISORDERS	23	246,877
G56	MONONEUROPATHIES OF UPPER LIMB	217	2,240,150
G57	MONONEUROPATHIES OF LOWER LIMB	143	1,595,919
G58	OTHER MONONEUROPATHIES	89	1,071,024
G62	OTHER AND UNSPECIFIED POLYNEUROPATHI	273	2,993,645
G83	OTHER PARALYTIC SYNDROMES	57	492,391
G89	PAIN, NOT ELSEWHERE CLASSIFIED	575	6,120,743
G93	OTHER DISORDERS OF BRAIN	31	274,138
G98	OTHER DISORDERS OF NERVOUS SYSTEM NE	1,799	19,795,664
H00	HORDEOLUM AND CHALAZION	53	549,716
H02	OTHER DISORDERS OF EYELID	62	880,565
H04	DISORDERS OF LACRIMAL SYSTEM	296	3,176,254
H10	CONJUNCTIVITIS	269	2,845,943
H18	OTHER DISORDERS OF CORNEA	35	522,809
H33	RETINAL DETACHMENTS AND BREAKS	46	708,063
H35	OTHER RETINAL DISORDERS	196	2,482,661
H40	GLAUCOMA	496	4,950,217
H43	DISORDERS OF VITREOUS BODY	42	644,938
H44	DISORDERS OF GLOBE	196	2,014,236
H47	OTH DIS OPTIC NERVE AND VISUAL PATHW	20	277,100
H52	DISORDERS REFRACTION AND ACCOMMODATI	923	10,168,442
H53	VISUAL DISTURBANCES	324	3,235,874
H54	BLINDNESS AND LOW VISION	164	1,801,994
H57	OTHER DISORDERS OF EYE AND ADNEXA	366	3,269,907
H60	OTITIS EXTERNA	46	554,084
H61	OTHER DISORDERS OF EXTERNAL EAR	157	2,032,457
H65	NONSUPPURATIVE OTITIS MEDIA	43	489,465
H66	SUPPURATIVE AND UNSPECIFIED OTITIS M	987	10,999,190
H81	DISORDERS OF VESTIBULAR FUNCTION	26	316,866
H91	OTHER AND UNSPECIFIED HEARING LOSS	360	4,392,750
H92	OTALGIA AND EFFUSION OF EAR	172	1,624,782
H93	OTHER DISORDERS OF EAR, NEC	132	1,377,030
I10	ESSENTIAL (PRIMARY) HYPERTENSION	6,884	69,242,189
I20	ANGINA PECTORIS	251	2,780,653
I21	ST ELEVATION AND NON-ST ELEVATION MI	580	6,158,046
I25	CHRONIC ISCHEMIC HEART DISEASE	1,031	10,982,571
I26	PULMONARY EMBOLISM	27	236,648
I34	NONRHEUMATIC MITRAL VALVE DISORDERS	81	1,128,987
I35	NONRHEUMATIC AORTIC VALVE DISORDERS	20	318,992
I38	ENDOCARDITIS, VALVE UNSPECIFIED	70	896,962
I42	CARDIOMYOPATHY	25	276,422
I47	PAROXYSMAL TACHYCARDIA	27	296,835

TABLE 1  
UNWEIGHTED AND WEIGHTED COUNT OF RECORDS FOR EACH VALUE OF ICD10CDX

ICD10CDX VALUE	LABEL	UNWEIGHTED	WEIGHTED BY perwt16f
I48	ATRIAL FIBRILLATION AND FLUTTER	275	3,742,221
I49	OTHER CARDIAC ARRHYTHMIAS	275	3,221,894
I50	HEART FAILURE	187	1,832,230
I63	CEREBRAL INFARCTION	59	597,063
I70	ATHEROSCLEROSIS	24	287,036
I71	AORTIC ANEURYSM AND DISSECTION	24	268,633
I72	OTHER ANEURYSM	20	244,015
I73	OTHER PERIPHERAL VASCULAR DISEASES	70	990,726
I74	ARTERIAL EMBOLISM AND THROMBOSIS	167	1,792,173
I77	OTH DISORDERS OF ARTERIES AND ARTERI	72	827,343
I82	OTHER VENOUS EMBOLISM AND THROMBOSIS	28	283,090
I83	VARICOSE VEINS OF LOWER EXTREMITIES	83	875,614
I87	OTHER DISORDERS OF VEINS	33	381,671
I89	OTH NONINF DISOR LYMPH VESSEL LYMPH	24	328,599
I99	OTH AND UNSPEC DISORD CIRCULATORY SY	69	574,083
J00	ACUTE NASOPHARYNGITIS [COMMON COLD]	3,748	37,065,809
J01	ACUTE SINUSITIS	21	280,997
J02	ACUTE PHARYNGITIS	1,104	11,485,493
J03	ACUTE TONSILLITIS	69	614,081
J04	ACUTE LARYNGITIS AND TRACHEITIS	40	524,099
J05	ACUTE OBSTR LARYNG [CROUP] EPIGLOTTI	59	664,325
J06	ACUTE UP RESP INFEC MULT AND UNSPEC	335	4,197,641
J11	INFLU DUE TO UNIDENTIFIED INFLU VIR	1,811	17,441,773
J12	VIRAL PNEUMONIA, NEC	34	426,992
J18	PNEUMONIA, UNSPECIFIED ORGANISM	470	5,348,706
J20	ACUTE BRONCHITIS	55	730,694
J30	VASOMOTOR AND ALLERGIC RHINITIS	534	5,804,325
J32	CHRONIC SINUSITIS	1,046	14,105,506
J34	OTHER AND UNSPEC DIS NOSE, NASAL SIN	422	4,583,025
J35	CHRONIC DISEASES OF TONSILS AND ADEN	99	1,111,699
J38	DISEASES OF VOCAL CORDS AND LARYNX,	24	327,878
J39	OTHER DISEASE OF UPPER RESPIRATORY T	133	1,591,286
J40	BRONCHITIS, NOT SPEC AS ACUTE OR CHR	666	7,878,168
J42	UNSPECIFIED CHRONIC BRONCHITIS	425	4,414,279
J43	EMPHYSEMA	272	3,256,358
J44	OTH CHRONIC OBSTRUCTIVE PULMON DISEA	326	3,914,419
J45	ASTHMA	2,288	21,423,216
J81	PULMONARY EDEMA	22	290,633
J98	OTHER RESPIRATORY DISORDERS	281	3,237,460
K00	DISORDERS TOOTH DEVELOPMENT AND ERUP	31	334,651
K01	EMBEDDED AND IMPACTED TEETH	122	1,630,145
K02	DENTAL CARIES	96	1,014,884
K03	OTHER DISEASES OF HARD TISSUES OF TE	35	481,799
K04	DISEASES OF PULP AND PERIAPICAL TISS	347	3,610,514
K05	GINGIVITIS AND PERIODONTAL DISEASES	119	1,183,459
K06	OTH DIS GING AND EDENTULOUS ALVEO RI	23	255,766
K08	OTH DISORD TEETH AND SUPPORT STRUCTU	835	8,441,657
K11	DISEASES OF SALIVARY GLANDS	34	372,238
K13	OTHER DISEASES OF LIP AND ORAL MUCOS	61	494,516
K14	DISEASES OF TONGUE	26	340,442
K21	GASTRO-ESOPHAGEAL REFLUX DISEASE	1,862	20,509,657
K22	OTHER DISEASES OF ESOPHAGUS	74	1,041,116
K29	GASTRITIS AND DUODENITIS	179	1,266,028
K30	FUNCTIONAL DYSPEPSIA	250	2,600,689
K31	OTHER DISEASES OF STOMACH AND DUODEN	375	3,489,548
K37	UNSPECIFIED APPENDICITIS	30	397,830
K44	DIAPHRAGMATIC HERNIA	70	751,469
K46	UNSPECIFIED ABDOMINAL HERNIA	180	1,925,126
K50	CROHN'S DISEASE [REGIONAL ENTERITIS]	47	554,888
K51	ULCERATIVE COLITIS	27	319,334
K52	OTH/UNSPEC NONINFECT GASTROENT, COLI	63	685,148
K56	PARALYT ILEUS INTEST OBST W/O HERNIA	39	529,938

TABLE 1  
UNWEIGHTED AND WEIGHTED COUNT OF RECORDS FOR EACH VALUE OF ICD10CDX

ICD10CDX VALUE	LABEL	UNWEIGHTED	WEIGHTED BY perwt16f
K57	DIVERTICULAR DISEASE OF INTESTINE	107	1,319,549
K58	IRRITABLE BOWEL SYNDROME	155	1,771,478
K59	OTHER FUNCTIONAL INTESTINAL DISORDER	465	4,148,426
K62	OTHER DISEASES OF ANUS AND RECTUM	28	241,756
K63	OTHER DISEASES OF INTESTINE	149	1,589,339
K64	HEMORRHOIDS PERIANAL VENOUS THROMBOS	117	1,221,425
K74	FIBROSIS AND CIRRHOSIS OF LIVER	43	467,888
K76	OTHER DISEASES OF LIVER	121	1,150,485
K80	CHOLELITHIASIS	75	740,924
K82	OTHER DISEASES OF GALLBLADDER	127	1,102,850
K85	ACUTE PANCREATITIS	44	378,819
K86	OTHER DISEASES OF PANCREAS	23	239,365
K90	INTESTINAL MALABSORPTION	23	304,542
K92	OTHER DISEASES OF DIGESTIVE SYSTEM	148	1,537,451
L02	CUTAN ABSCESS, FURUNCLE AND CARBUNCL	109	981,662
L03	CELLULITIS AND ACUTE LYMPHANGITIS	88	1,273,927
L08	OTH LOCAL INFEC SKIN AND SUBCUTAN TI	241	2,735,367
L21	SEBORRHEIC DERMATITIS	43	485,640
L22	DIAPER DERMATITIS	26	255,266
L23	ALLERGIC CONTACT DERMATITIS	156	1,672,767
L25	UNSPECIFIED CONTACT DERMATITIS	57	652,101
L29	PRURITUS	99	946,493
L30	OTHER AND UNSPECIFIED DERMATITIS	359	3,596,406
L40	PSORIASIS	130	1,542,201
L50	URTICARIA	66	578,914
L57	SKIN CHANGE CHRON EXPOS NONIONIZ RAD	25	331,487
L60	NAIL DISORDERS	180	1,749,937
L65	OTHER NONSCARRING HAIR LOSS	42	477,648
L70	ACNE	341	4,718,771
L71	ROSACEA	55	750,652
L72	FOLLIC CYSTS SKIN AND SUBCUTANEOUS T	136	1,517,291
L81	OTHER DISORDERS OF PIGMENTATION	51	655,069
L84	CORNS AND CALLOSITIES	75	855,202
L90	ATROPHIC DISORDERS OF SKIN	32	393,160
L91	HYPERTROPHIC DISORDERS OF SKIN	68	809,905
L98	OTH DISORD SKIN SUBCUTANEOUS TISS, N	483	5,630,322
M10	GOUT	345	3,893,179
M12	OTHER AND UNSPECIFIED ARTHROPATHY	37	427,628
M16	OSTEOARTHRITIS OF HIP	27	358,608
M17	OSTEOARTHRITIS OF KNEE	98	1,175,462
M19	OTHER AND UNSPECIFIED OSTEOARTHRITIS	3,140	34,018,736
M20	ACQUIRED DEFORMITIES OF FINGERS AND	28	449,591
M21	OTHER ACQUIRED DEFORMITIES OF LIMBS	88	984,527
M23	INTERNAL DERANGEMENT OF KNEE	43	542,045
M24	OTHER SPECIFIC JOINT DERANGEMENTS	24	361,575
M25	OTHER JOINT DISORDER, NEC	4,898	52,257,076
M26	DENTOFACIAL ANOMALIES [INCLUDING MAL	46	500,705
M32	SYSTEMIC LUPUS ERYTHEMATOSUS (SLE)	65	661,900
M41	SCOLIOSIS	120	1,440,441
M43	OTHER DEFORMING DORSOPATHIES	77	1,025,149
M46	OTHER INFLAMMATORY SPONDYLOPATHIES	57	670,348
M47	SPONDYLOSIS	27	273,692
M48	OTHER SPONDYLOPATHIES	89	1,103,610
M50	CERVICAL DISC DISORDERS	46	591,025
M51	THOR, THORACO, LUMBOS INTERV DISC DI	477	5,337,590
M53	OTHER AND UNSPEC DORSOPATHIES, NEC	351	4,112,778
M54	DORSALGIA	2,457	26,059,340
M62	OTHER DISORDERS OF MUSCLE	423	4,379,083
M65	SYNOVITIS AND TENOSYNOVITIS	88	1,125,457
M67	OTHER DISORDERS OF SYNOVIUM AND TEND	40	546,198
M70	SOFT TISS DISOR REL TO USE/OVERUS/PR	34	415,339
M71	OTHER BURSOPATHIES	62	720,378

TABLE 1  
UNWEIGHTED AND WEIGHTED COUNT OF RECORDS FOR EACH VALUE OF ICD10CDX

ICD10CDX VALUE	LABEL	UNWEIGHTED	WEIGHTED BY perwt16f
M72	FIBROBLASTIC DISORDERS	181	2,226,607
M75	SHOULDER LESIONS	211	2,589,960
M76	ENTHESOPATHIES, LOWER LIMB, EXCLUDI	54	708,484
M77	OTHER ENTHESOPATHIES	245	2,707,889
M79	OTH AND UNSPEC SOFT TISSUE DISORDER,	1,642	15,610,551
M81	OSTEOPOROSIS W/O CURR PATHOL FRACTUR	209	2,285,831
M85	OTH DISORD OF BONE DENSITY AND STRUC	94	1,220,036
M89	OTHER DISORDERS OF BONE	80	682,661
N15	OTHER RENAL TUBULO-INTERSTITIAL DISE	83	804,012
N18	CHRONIC KIDNEY DISEASE (CKD)	69	753,761
N19	UNSPECIFIED KIDNEY FAILURE	68	641,050
N28	OTHER DISORDER OF KIDNEY AND URETER,	299	2,879,348
N30	CYSTITIS	167	1,934,121
N32	OTHER DISORDERS OF BLADDER	167	1,721,202
N39	OTHER DISORDERS OF URINARY SYSTEM	859	9,559,189
N40	ENLARGED PROSTATE	212	2,651,472
N42	OTHER AND UNSPECI DISORDERS OF PROST	278	2,934,542
N50	OTH AND UNSPEC DISORDER MALE GEN ORG	36	330,956
N52	MALE ERECTILE DYSFUNCTION	38	440,528
N60	BENIGN MAMMARY DYSPLASIA	68	668,486
N61	INFLAMMATORY DISORDERS OF BREAST	19	195,468
N63	UNSPECIFIED LUMP IN BREAST	88	963,657
N64	OTHER DISORDERS OF BREAST	66	502,878
N76	OTHER INFLAMMATION OF VAGINA AND VUL	65	699,221
N80	ENDOMETRIOSIS	52	647,859
N81	FEMALE GENITAL PROLAPSE	45	510,865
N83	NONINFLAM DISOR OVA, FALLO TUB BROAD	125	1,284,690
N85	OTH NONINFLAM DISOR UTERUS, EXCEP CE	51	543,846
N89	OTHER NONINFLAM DISORDERS OF VAGINA	50	604,775
N92	EXCESS, FREQUENT, IRREGULAR MENSTRUA	135	1,512,899
N93	OTH ABNRM UTERINE AND VAGINAL BLEEDI	47	427,431
N94	PAIN OTH COND ASSOC WITH FEM ORG MEN	151	1,567,572
N95	MENOPAUSAL AND OTH PERIMENOPAUSAL DI	195	2,401,107
O03	SPONTANEOUS ABORTION	82	812,736
O24	DIAB MELLITUS IN PREG, BIRTH, AND PU	37	391,521
O80	ENCOUNT FULL-TERM UNCOMPLICATED DELI	95	710,141
R00	ABNORMALITIES OF HEART BEAT	222	2,480,322
R01	CARDIAC MURMURS AND OTHER CARDIAC SO	197	2,169,220
R03	ABNORMAL BLOOD-PRESS READ, W/O DIAGN	86	1,129,983
R04	HEMORRHAGE FROM RESPIRATORY PASSAGES	84	681,922
R05	COUGH	914	8,038,801
R06	ABNORMALITIES OF BREATHING	462	4,803,626
R07	PAIN IN THROAT AND CHEST	385	3,781,450
R09	OTH SYMP AND SIGNS INVOLV CIRC RESP	230	2,400,160
R10	ABDOMINAL AND PELVIC PAIN	672	5,701,422
R11	NAUSEA AND VOMITING	533	4,976,366
R12	HEARTBURN	261	2,824,548
R13	APHAGIA AND DYSPHAGIA	47	504,260
R14	FLATULENCE AND RELATED CONDITIONS	36	385,462
R17	UNSPECIFIED JAUNDICE	34	323,395
R19	OTH SYMP AND SIGNS DIGEST SYST AND A	236	2,294,191
R20	DISTURBANCES OF SKIN SENSATION	198	2,108,901
R21	RASH AND OTHER NONSPECIFIC SKIN ERUP	638	6,547,047
R22	LOC SWELL, MASS AND LUMP SKIN SUBCU	154	1,679,323
R25	ABNORMAL INVOLUNTARY MOVEMENTS	220	2,243,665
R26	ABNORMALITIES OF GAIT AND MOBILITY	109	1,245,261
R29	OTH SYM SIGNS INVOLV NERV MUSCULOSK	90	894,646
R31	HEMATURIA	64	637,033
R32	UNSPECIFIED URINARY INCONTINENCE	170	1,819,210
R33	RETENTION OF URINE	20	211,778
R35	POLYURIA	51	608,254
R39	OTH UNSP SYMP SIGNS INVOLV GENITOUR	55	711,838

TABLE 1  
UNWEIGHTED AND WEIGHTED COUNT OF RECORDS FOR EACH VALUE OF ICD10CDX

ICD10CDX VALUE	LABEL	UNWEIGHTED	WEIGHTED BY perwt16f
R41	OTH SYMP SIGNS INVOLV COG FUNC AND A	227	2,357,220
R42	DIZZINESS AND GIDDINESS	442	4,485,413
R45	SYMPT AND SIGNS INVOLV EMOTIONAL STA	125	1,229,814
R47	SPEECH DISTURBANCES, NEC	46	362,322
R50	FEVER OF OTHER AND UNKNOWN ORIGIN	540	4,417,187
R51	HEADACHE	710	6,257,529
R52	PAIN, UNSPECIFIED	913	8,468,072
R53	MALAISE AND FATIGUE	286	3,006,130
R54	AGE-RELATED PHYSICAL DEBILITY	73	576,418
R55	SYNCOPE AND COLLAPSE	119	1,603,639
R56	CONVULSIONS, NOT ELSEWHERE CLASSIFIE	298	2,677,635
R58	HEMORRHAGE, NOT ELSEWHERE CLASSIFIED	60	767,535
R59	ENLARGED LYMPH NODES	53	698,341
R60	EDEMA, NOT ELSEWHERE CLASSIFIED	476	4,784,658
R63	SYMPT AND SIGN CONCERN FOOD FLUID INT	194	2,163,895
R68	OTHER GENERAL SYMPTOMS AND SIGNS	49	529,301
R69	ILLNESS, UNSPECIFIED	94	1,008,694
R73	ELEVATED BLOOD GLUCOSE LEVEL	250	2,405,648
R79	OTH ABNORMAL FINDINGS OF BLOOD CHEMI	204	2,071,433
R87	ABNORM FIND SPECIMEN FEMALE GENITAL	33	439,817
R91	ABNORM FIND DIAGNOSTIC IMAGING OF LU	46	563,701
R94	ABNORMAL RESULTS OF FUNCTION STUDIES	60	708,909
S00	SUPERFICIAL INJURY OF HEAD	74	704,836
S01	OPEN WOUND OF HEAD	57	708,395
S02	FRACTURE OF SKULL AND FACIAL BONES	97	1,119,579
S05	INJURY OF EYE AND ORBIT	71	833,287
S09	OTHER AND UNSPECIFIED INJURIES OF HE	162	1,509,470
S13	DISLOCAT SPRAIN JOINT LIGAMENT NECK	53	660,392
S19	OTH SPEC AND UNSPEC INJURIES OF NECK	34	333,570
S20	SUPERFICIAL INJURY OF THORAX	66	944,468
S22	FRACTURE RIB(S), STERNUM THORACIC SP	66	685,861
S30	SUPERF INJ ABD, LOW BACK, PELV EXT G	23	212,992
S32	FRACTURE OF LUMBAR SPINE AND PELVIS	54	605,215
S39	OTH UNS INJUR ABD/LOW BACK/PEL/EXT G	315	3,385,674
S40	SUPERFIC INJURY SHOULDER AND UPPER A	47	586,341
S41	OPEN WOUND OF SHOULDER AND UPPER ARM	31	370,578
S42	FRACTURE OF SHOULDER AND UPPER ARM	140	1,430,103
S43	DISLOC SPRAIN JOINT LIG SHOULDER GIR	79	775,430
S46	INJ MUSCL/FASCIA/TENDN SHOULDER/UPPR	101	1,216,970
S49	OTH AND UNSPEC INJ SHOULDER AND UPR	137	1,377,732
S59	OTH AND UNSPEC INJUR ELBOW AND FOREA	21	252,402
S60	SUPERFIC INJURY WRIST, HAND AND FING	48	622,863
S61	OPEN WOUND OF WRIST, HAND AND FINGER	222	2,530,261
S62	FRACTURE AT WRIST AND HAND LEVEL	202	2,022,607
S63	DISLOCN/SPRAIN JOINTS/LIGAMTS WRIST/	107	1,162,077
S69	OTH/UNSPEC INJ WRIST, HAND, FINGER(S)	148	1,754,049
S70	SUPERFICIAL INJURY OF HIP AND THIGH	23	238,322
S72	FRACTURE OF FEMUR	43	478,006
S76	MUSCL/FASCIA/TENDN INJ HIP AND THIGH	34	541,065
S80	SUPERFICIAL INJURY OF KNEE AND LOWER	90	1,012,082
S81	OPEN WOUND OF KNEE AND LOWER LEG	60	643,359
S82	FRACTURE OF LOWER LEG, INCLUDING ANK	120	1,352,011
S83	DISLOCAT SPRAIN JOINTS LIGAMENTS KNE	238	3,200,178
S86	INJ OF MUSCLE, FASCIA, TENDON LOWER	81	987,721
S89	OTH AND UNSPEC INJURIES OF LOWER LEG	202	2,029,825
S90	SUPERFICIAL INJURY ANKLE, FOOT AND T	42	498,279
S91	OPEN WOUND OF ANKLE, FOOT AND TOES	54	616,533
S92	FRACTURE OF FOOT AND TOE, EXCEPT ANK	152	1,724,616
S93	DISLOC SPRAIN JOINT LIG ANKLE, FOOT	332	3,618,777
S96	INJ OF MUSCLE, TENDON AT ANKLE, FOOT	21	245,451
S99	OTH AND UNSPEC INJUR OF ANKLE AND FO	170	1,890,799
T07	UNSPECIFIED MULTIPLE INJURIES	90	970,225

TABLE 1  
UNWEIGHTED AND WEIGHTED COUNT OF RECORDS FOR EACH VALUE OF ICD10CDX

ICD10CDX VALUE	LABEL	UNWEIGHTED	WEIGHTED BY perwt16f
T14	INJURY OF UNSPECIFIED BODY REGION	860	9,580,635
T15	FOREIGN BODY ON EXTERNAL EYE	37	500,086
T22	BURN/CORROSION SHOULDER AND UPPER LI	21	199,531
T23	BURN AND CORROSION OF WRIST AND HAND	33	366,279
T30	BURN AND CORROSION, BODY REGION UNSP	30	339,940
T62	TOX EFF OTH NOXIOUS SUBS EATEN AS FO	66	719,973
T63	TOX CONTACT W/ VENOMOUS ANIMALS/PLAN	61	719,772
T78	ADVERSE EFFECTS, NEC	2,152	21,457,058
T81	COMPLICATIONS OF PROCEDURES, NEC	39	320,161
T88	OTH COMPLICNS OF SURG AND MED CARE,	79	966,697
Z00	GEN EXAM W/O COMP, SUSPEC OR REPORT	865	8,170,226
Z01	SPEC EXAM W/O COMPLAINT/SUSP/REP DIA	616	7,096,958
Z02	ENCOUNTER FOR ADMINISTRATIVE EXAMINA	41	446,307
Z04	EXAM AND OBSERVATION FOR OTHER REASO	220	2,123,783
Z09	F/U EXAM AFT TREAT COND OTH THAN MAL	123	1,300,814
Z11	SCREENING INFECTIOUS PARASITIC DISEA	44	385,072
Z12	SCREENING FOR MALIGNANT NEOPLASMS	366	4,302,061
Z13	SCREENING FOR OTH DISEASES AND DISOR	757	8,040,504
Z21	ASYMPTOMATIC HIV INFECTION STATUS	55	346,970
Z23	ENCOUNTER FOR IMMUNIZATION	98	1,247,323
Z29	ENCOUNTER FOR OTH PROPHYLACTIC MEASU	128	1,252,366
Z30	ENCOUNTER FOR CONTRACEPTIVE MANAGEME	524	6,735,823
Z31	ENCOUNTER FOR PROCREATIVE MANAGEMENT	57	718,495
Z34	ENCOUNTER FOR SUPERVISION OF NORMAL	650	5,505,220
Z38	LIVE INFANTS PLACE BIRTH TYPE OF DEL	140	1,380,588
Z39	MATERNAL POSTPARTUM CARE AND EXAMINA	35	390,481
Z41	PROCED PURP OTH THAN REMEDY HEALTH S	77	762,287
Z45	ADJUST AND MANAGE IMPLANTED DEVICE	28	428,957
Z46	FITTING AND ADJUSTMENT OF OTHER DEVI	82	923,831
Z47	ORTHOPEDIC AFTERCARE	23	228,348
Z48	OTHER POSTPROCEDURAL AFTERCARE	111	1,161,416
Z51	ENCOUNTER FOR OTHER AFTERCARE	150	1,703,850
Z56	PROBS REL TO EMPLOYMENT AND UNEMPLOY	19	223,683
Z63	OTH PROB PRIM SUPP GRP, INCLUD FAM C	75	904,957
Z71	OTH COUNSELING AND MEDICAL ADVICE, N	280	2,870,921
Z73	PROBS REL TO LIFE MANAGEMENT DIFFICU	36	422,573
Z76	PERSON ENCOUNT HEALTH SERVIC OTH CIR	628	6,765,622
Z79	LONG TERM (CURRENT) DRUG THERAPY	347	3,807,994
Z87	PERSONAL HISTORY OTH DISEASES CONDIT	21	200,956
Z89	ACQUIRED ABSENCE OF LIMB	29	292,928
Z90	ACQUIRED ABSENCE OF ORGANS, NEC	65	797,062
Z91	PERSONAL RISK FACTORS, NEC	97	1,063,544
Z95	PRESENCE CARD AND VASC IMPLANTS GRAF	139	1,781,450
Z96	PRESENCE OF OTHER FUNCTIONAL IMPLANT	163	2,129,116
Z97	PRESENCE OF OTHER DEVICES	41	509,625
	TOTAL	123,100	1,308,355,962

**Appendix 3**  
**List of Conditions Asked**  
**in Priority Conditions Enumeration Section**



**LIST OF CONDITIONS ASKED IN  
PRIORITY CONDITIONS ENUMERATION SECTION**

Angina/Angina Pectoris  
Arthritis  
Asthma  
Attention Deficit Hyperactivity Disorder (ADHD)/Attention Deficit Disorder (ADD)  
Cancer/Malignancy  
Chronic Bronchitis  
Coronary Heart Disease  
Diabetes/Sugar Diabetes  
Emphysema  
Heart Attack/Myocardial Infarction (MI)  
High Cholesterol  
Hypertension/High Blood Pressure  
Joint Pain  
Other Heart Disease (not coronary heart disease, angina, or heart attack)  
Stroke/Transient Ischemic Attack (TIA)/Mini-stroke