**MEPS HC-168A:  
2014 Prescribed Medicines**

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**Agency for Healthcare Research and Quality**

**Center for Financing, Access, and Cost Trends**

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Table of Contents

A. Data Use Agreement A-1

B. Background B-1

1.0 Household Component (HC) B-1

2.0 Medical Provider Component (MPC) B-1

3.0 Survey Management and Data Collection B-2

C. Technical Information C-1

1.0 General Information C-1

2.0 Data File Information C-2

2.1 Codebook Structure C-3

2.2 Reserved Codes C-4

2.3 Codebook Format C-4

2.4 Variable Naming Conventions C-5

2.4.1 General C-5

2.4.2 Expenditure and Source of Payment   
Variables C-5

2.5 Data Collection C-6

2.5.1 Methodology for Collecting Household-  
Reported Variables C-6

2.5.2 Methodology for Collecting Pharmacy-  
Reported Variables C-7

2.6 File Contents C-7

2.6.1 Survey Administration Variables C-7

2.6.1.1 Person Identifier Variables (DUID,   
PID, DUPERSID) C-7

2.6.1.2 Record Identifier Variables   
(RXRECIDX, LINKIDX,

DRUGIDX) C-7

2.6.1.3 Panel Variable (PANEL) C-8

2.6.1.4 Round Variable (PURCHRD) C-8

Table of Contents (continued)

2.6.2 Characteristics of Prescribed Medicine   
Events C-8

2.6.2.1 Date When Prescribed Medicine   
Was First Taken (RXBEGMM-  
RXBEGYRX) C-8

2.6.2.2 Prescribed Medicine Attributes   
(RXNAME-RXDAYSUP) C-9

2.6.2.3 Type of Pharmacy (PHARTP1-  
PHARTP8) C-10

2.6.2.4 Analytic Flag Variables   
(RXFLG-INPCFLG) C-11

2.6.2.5 Free Sample Variable (SAMPLE) C-11

2.6.2.6 Clinical   
Classification Codes (RXCCC1X-  
RXCCC3X) C-12

2.6.3 Multum Lexicon Variables from Cerner   
Multum, Inc. C-12

2.6.4 Expenditure Variables (RXSF14X-  
RXXP14X) C-14

2.6.4.1 Definition of Expenditures C-14

2.6.4.2 Sources of Payment C-14

3.0 Sample Weight (PERWT14F) C-15

3.1 Overview C-15

3.2 Details on Person Weight Construction C-15

3.2.1 MEPS Panel 18 Weight Development Process C-16

3.2.2 MEPS Panel 19 Weight Development Process C-16

3.2.3 The Final Weight for 2014 C-17

3.3 Coverage C-17

3.4 Using MEPS Data for Trend Analysis C-17

4.0 General Data Editing and Imputation Methodology C-18

4.1 Rounding C-20

4.2 Edited/Imputed Expenditure Variables   
(RXSF14X-RXXP14X) C-21

5.0 Strategies for Estimation C-21

Table of Contents (continued)

5.1 Developing Event-Level Estimates C-21

5.2 Person-Based Estimates for Prescribed   
Medicine Purchases C-22

5.3 Variables with Missing Values C-22

5.4 Variance Estimation (VARSTR, VARPSU) C-23

6.0 Merging/Linking MEPS Data Files C-24

6.1 Linking to the Person-Level File C-24

6.2 Linking to the Medical Conditions File C-25

6.3 Longitudinal Analysis C-25

References C-26

D. Variable-Source Crosswalk D-1

Appendix 1: Definitions for RXFORM, Dosage Form A1-1

Appendix 2: Definitions for RXFRMUNT, Quantity Unit of Medication A2-1

Appendix 3: Definitions for RXSTRUNT, Unit of Medication A3-1

Appendix 4: Definitions of Therapeutic Class Code A4-1

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.

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 (HC)

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 non-institutionalized 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 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 non-institutionalized 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. The linkage of the MEPS to the previous year's NHIS provides additional data for longitudinal analytic purposes.

# 2.0 Medical Provider Component (MPC)

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 visit, 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 web site: [meps.ahrq.gov](http://meps.ahrq.gov/mepsweb/) . 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 Information

# 1.0 General Information

This documentation describes one in a series of public use event files from the 2014 Medical Expenditure Panel Survey (MEPS) Household Component (HC) and Medical Provider Component (MPC). Released as an ASCII data file (with related SAS, SPSS, and Stata programming statements) and SAS transport file, the 2014 Prescribed Medicines public use file provides detailed information on household-reported prescribed medicines for a nationally representative sample of the civilian noninstitutionalized population of the United States. Data from the Prescribed Medicines event file can be used to make estimates of prescribed medicine utilization and expenditures for calendar year 2014. The file contains 69 variables and has a logical record length of 585 with an additional 2-byte carriage return/line feed at the end of each record. As illustrated below, this file consists of MEPS survey data obtained in the 2014 portion of Round 3 and Rounds 4 and 5 for Panel 18, as well as Rounds 1, 2 and the 2014 portion of Round 3 for Panel 19 (i.e., the rounds for the MEPS panels covering calendar year 2014).

**2015**

**2014**

**2013**

Jan

Dec

Jan

Jan

Panel 18

2013-2014

*Round 2*

Round 5

Round 4

Round 3

*Round 1*

Panel 19

2014-2015

Round *3*

Round 2

Round 1

Each record on this event file represents a unique prescribed medicine event; that is, a prescribed medicine reported as being purchased by the household respondent. In addition to expenditures related to the prescribed medicine, each record contains household-reported characteristics and medical conditions associated with the prescribed medicine.

Data from this event file can be merged with other 2014 MEPS-HC data files, for purposes of appending person characteristics such as demographic or health insurance coverage to each prescribed medicine record.

Counts of prescribed medicine utilization are based entirely on household reports. Information from the Pharmacy Component (PC) (within the MEPS-MPC, see Section B 2.0 for more details on the MPC) was used to provide expenditure and payment data, as well as details of the medication (e.g., strength, quantity, etc.).

The file can be used to construct summary variables of expenditures, sources of payment, and other aspects of utilization of prescribed medicines. Aggregate annual person-level information on the use of prescribed medicines and other health services use is provided on the 2014   
Full Year Consolidated Data File, where each record represents a MEPS sampled person.

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

Data File Information

Sample Weight

General Data Editing and Imputation Methodology

Strategies for Estimation

Merging/Linking MEPS Data Files

References

Variable**-**Source Crosswalk

For more information on MEPS HC survey design see T. Ezzati-Rice, et al. (1998-2007) and   
S. Cohen, 1996. For information on the MEPS MPC design, see S. Cohen, 1998.A copy of the survey instrument used to collect the information on this file is available on the MEPS Web site at the following address: [meps.ahrq.gov](http://meps.ahrq.gov/mepsweb/).

# 2.0 Data File Information

The 2014 Prescribed Medicines public use data set contains 319,467 prescribed medicine records. Each record represents one household-reported prescribed medicine that was purchased during calendar year 2014. Of the 319,467 prescribed medicine records, 313,123 records are associated with persons having a positive person-level weight (PERWT14F). The persons represented on this file had to meet either criterion a) or b) below:

a) Be classified as a key in-scope person who responded for his or her entire period of 2014 eligibility (i.e., persons with a positive 2014 full-year person-level sampling weight (PERWT14F > 0)), or

b) Be an eligible member of a family all of whose key in-scope members have a positive person-level weight (PERWT14F > 0). (Such a family consists of all persons with the same value for FAMIDYR.) That is, the person must have a positive   
full-year family-level weight (FAMWT14F > 0). Note that FAMIDYR and FAMWT14F are variables on the 2014 Full Year Consolidated Data File.

Persons with no prescribed medicine use for 2014 are not included on this file (but are represented on MEPS person-level files). A codebook for the data file is provided (in file H168acb.pdf).

This file includes prescribed medicine records for all household members who resided in eligible responding households and for whom at least one prescribed medicine was reported. Only prescribed medicines that were purchased in calendar year 2014 are represented on this file. This file includes prescribed medicines identified in the Prescribed Medicines (PM) section of the HC survey instrument, as well as those prescribed medicines identified in association with other medical events. Each record on this file represents a single acquisition of a prescribed medicine reported by household respondents. Some household members may have multiple acquisitions of prescribed medicines and thus will be represented in multiple records on this file. Other household members may have no reported acquisitions of prescribed medicines and thus will have no records on this file.

When diabetic supplies, such as syringes and insulin, were mentioned in the Other Medical Expenses (OM) section of the MEPS-HC, the interviewer was directed to collect information on these items in the Prescribed Medicines section of the MEPS questionnaire. (Prior to 2014, the respondent was also asked the questions in the Charge Payment (CP) section of the HC.) To the extent that these items are purchased without a prescription, they represent a non-prescription addition to the MEPS prescription drug expenditure and utilization data. Although these items may be purchased without a prescription, a prescription purchase may be required to obtain third party payments. Analysts are free to code and define diabetic supply/equipment and insulin events utilizing their own coding mechanism. If desired, this would enable analysts to subset the Prescribed Medicines file to exclude these types of events.

It should also be noted that refills are included on this file. The HC obtains information on the name of the prescribed medicine and the number of times the medicine was obtained. The data collection design for the HC does not allow separate records to be created for multiple acquisitions of the same prescribed medicine. However, in the PC, each original purchase, as well as any refill, is considered a unique prescribed medicine event. Therefore, for the purposes of editing, imputation, and analysis, all records in the HC were “unfolded” to create separate records for each original purchase and each refill. Please note that for multiple acquisitions of the same drug, MEPS did not collect information in the HC to distinguish between the original purchase and refills. The survey only collected data on the number of times a prescribed medicine was acquired during a round. In some cases, all purchases may have been refills of an original purchase in a prior round or prior to the survey year. The file also includes a variable, SAMPLE, which indicates whether or not the household reported receiving a free sample of that drug in that round. (To obtain more details on free samples, please see Section 2.6.2.5.)

Each record on this file includes the following: an identifier for each unique prescribed medicine; detailed characteristics associated with the event (e.g., national drug code (NDC), medicine name, selected Multum Lexicon variables [see Section 2.6.3 for more information on the Multum Lexicon variables included on this file], etc.); conditions, if any, associated with the medicine; the date on which the person first used the medicine; total expenditure and sources of payments; types of pharmacies that filled the household’s prescriptions; whether the prescription is one of which the household received a free sample during the round; and a full-year person-level weight.

Data from this file can be merged with previously released MEPS-HC person-level data using the unique person identifier, DUPERSID, to append person characteristics such as demographic or health insurance coverage to each record. Data from this file can also be merged with the 2014 Full Year Consolidated Data File to estimate expenditures for persons with prescribed medicines. The Prescribed Medicines event file can also be linked to the MEPS 2014 Medical Conditions File and additional MEPS 2014 event files. Please see the 2014 Appendix File for details on how to link MEPS data files.

## 2.1 Codebook Structure

For most variables on the file, both weighted and unweighted frequencies are provided. 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 section D, Variable-Source Crosswalk. The codebook and data file sequence list variables in the following order:

Unique person identifiers

Unique prescribed medicine identifiers

Other survey administration variables

Prescribed medicine characteristics variables

Clinical Classification Software codes for medical conditions

Multum Lexicon variables

Expenditure variables

Weight and variance estimation variables

## 2.2 Reserved Codes

The following reserved code values are used:

|  |  |
| --- | --- |
| **Value** | **Definition** |
| -1 INAPPLICABLE | Question was not asked due to skip pattern |
| -7 REFUSED | Question was asked and respondent refused to answer question |
| -8 DK | Question was asked and respondent did not know answer |
| -9 NOT ASCERTAINED | Interviewer did not record the data |
| -14 NOT YET TAKEN/USED | Respondent answered that the medicine has not yet been used |

Generally, values of -1, -7, -8 and -9 have not been edited on this file. However, this is not true if a prescription drug name was determined to be a confidentiality risk. In these instances, the corresponding NDC was replaced with -9, the Multum Lexicon therapeutic class replaced the RXDRGNAM (Multum drug name) determined to be a confidentiality risk, and RXNAME (pharmacy drug name) was set to -9. The values of -1 and -9 can be edited by analysts by following the skip patterns in the questionnaire. The value -14 was a valid value only for the variable representing the year the household member first used the medicine (RXBEGYRX). RXBEGYRX = -14 means that when the interviewer asked the respondent the year the household member first started using the medicine, he/she responded that the household member had not yet started using the medicine (See section C, 2.6.2.1).

A copy of the Household Component questionnaire can be found at [meps.ahrq.gov/survey\_comp/survey\_questionnaires.jsp](http://meps.ahrq.gov/mepsweb/survey_comp/survey_questionnaires.jsp) by selecting Prescribed Medicines (PM) from the questionnaire section.

## 2.3 Codebook Format

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

|  |  |
| --- | --- |
| **Identifier** | **Description** |
| Name | Variable name (maximum of 8 characters) |
| Description | Variable descriptor (maximum 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 Conventions

In general, variable names reflect the content of the variable, with an eight-character limitation. Generally, all imputed/edited variables end with an “X.”

### 2.4.1 General

Variables contained on this file were derived from the HC questionnaire itself, the MPC data collection instrument, the CAPI, or from the Multum Lexicon database from Cerner Multum, Inc. The source of each variable is identified in Section D, entitled “Variable-Source Crosswalk.” Sources for each variable are indicated in one of five ways:

1. Variables which are derived from CAPI or assigned in sampling are so indicated as “CAPI derived” or “Assigned in sampling,” respectively;
2. Variables which come from one or more specific questions have those numbers and the questionnaire section indicated in the “Source” column;
3. Variables constructed from multiple questions using complex algorithms are labeled “Constructed” in the “Source” column;
4. Variables which have been imputed are so indicated; and
5. Variables derived from the Multum Lexicon database are so indicated.

### 2.4.2 Expenditure and Source of Payment Variables

Only imputed/edited versions of the expenditure variables are provided on the file. Expenditure variables on this event file follow a standard naming convention and are 7 characters in length.

The 12 source of payment variables and one sum of payments variable are named consistently in the following way:

The first two characters indicate the type of event:

IP - inpatient stay OB - office-based visit

ER - emergency room visit OP - outpatient visit

HH - home health visit DV - dental visit

OM - other medical equipment RX - prescribed medicine

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

SF - self or family OF - other federal government

MR - Medicare SL - state/local government

MD - Medicaid WC - Workers’ Compensation

PV - private insurance OT - other insurance

VA - Veterans Administration/CHAMPVA OR - other private

TR - TRICARE OU - other public

XP - sum of payments

The fifth and sixth characters indicate the year (14). The seventh character, “X”, indicates the variable is edited/imputed.

For example, RXSF14X is the edited/imputed amount paid by self or family for the 2014 prescribed medicine expenditure.

## 2.5 Data Collection

Data regarding prescription drugs were obtained through the HC questionnaire and a pharmacy follow-back component(within the Medical Provider Component).

### 2.5.1 Methodology for Collecting Household-Reported Variables

During each round of the MEPS-HC, respondents were asked to supply the name of any prescribed medicine they or their family members purchased or otherwise obtained during that round. For each medicine in each round, the following information was collected: whether any free samples of the medicine were received; the name(s) of any health problems the medicine was prescribed for; the number of times the prescription medicine was obtained or purchased; the yearand month inwhich the person first used the medicine; and a list of the names, addresses, and types of pharmacies that filled the household’s prescriptions.In the HC, respondents were asked if they send in claim forms for their prescriptions or if their pharmacy providers do this automatically for them at the point of purchase. For those who said their pharmacy providers automatically send in claims for them at the point of purchase, charge and payment information was collected in the pharmacy follow-back component. However, charge and payment information was collected in the HC for those who said they send in their own prescription claim forms, because it is thought that payments by private third-party payers for those who filed their own claim forms for prescription purchases would not be available from pharmacies. Uninsured persons were treated in the same manner as those whose pharmacies filed their prescription claims at the point of purchase. Persons who said they did not know if they sent in their own prescription claim forms were treated as those who said they did send in their own prescription claim forms.

In consultation with an industry expert, outlier values for the number of times a household reported purchasing or otherwise obtaining a prescription drug in a particular round were determined by comparing the number of days a person was in the round to the number of times the person was reported to have obtained the drug in the round. For these events, a new value for the number of times a drug was purchased or otherwise obtained by a person in a round was imputed. In addition, for rounds in which a household respondent did not know/remember the number of times a certain prescribed medicine was purchased or otherwise obtained, the number of fills or refills was imputed.

For those rounds that spanned two years, drugs mentioned in that round were allocated between the years based on the number of times the respondent said the drug was purchased in the respective year, the year the person started taking the drug, the length of the person’s round, the dates of the person’s round, and the number of drugs for that person in the round. In addition, a “folded” version of the PC on a drug level, as opposed to an acquisition level, was used for these types of events to assist in determining how many acquisitions of the drug should be allocated between the years.

### 2.5.2 Methodology for Collecting Pharmacy-Reported Variables

If the household member with the prescription gave written permission to release his or her pharmacy records, pharmacy providers identified by the household were contacted by telephone for the pharmacy follow-back component. Following an initial telephone contact, the signed permission forms and materials explaining the study were faxed (or mailed) to cooperating pharmacy providers. The materials informed the providers of all persons participating in the survey who had prescriptions filled at their place of business and requested a computerized printout of all prescriptions filled for each person. Pharmacies can choose to report information in computer assisted telephone interviews (CATI). The CATI instrument was also used to enter information from printouts. For each medication listed, the following information was requested: date filled; national drug code (NDC); medication name; strength of medicine (amount and unit); quantity (package size/amount dispensed); and payments by source. When an NDC was provided, often the drug name and other drug characteristics were obtained from secondary proprietary data sources.

## 2.6 File Contents

### 2.6.1 Survey Administration Variables

#### 2.6.1.1 Person Identifier Variables (DUID, PID, DUPERSID)

The dwelling unit ID (DUID) is a five-digit random number assigned after the case was sampled for MEPS. The three-digit person number (PID) uniquely identifies each person within the dwelling unit. The eight-character variable DUPERSID uniquely identifies each person represented on the file and is the combination of the variables DUID and PID. For detailed information on dwelling units and families, please refer to the documentation for the 2014   
Full Year Population Characteristics File.

#### 2.6.1.2 Record Identifier Variables (RXRECIDX, LINKIDX, DRUGIDX)

The variable RXRECIDX uniquely identifies each record on the file. This 15-character variable comprises the following components: prescribed medicine drug-round-level identifier generated through the HC (positions 1-12) + enumeration number (positions 13-15). The prescribed medicine drug-round-level ID generated through the HC (positions 1-12) can be used to link a prescribed medicine event to the conditions file and to other event files, via link files, and is provided on this file as the variable LINKIDX. For more details on linking, please refer to Section 6.2 and to the 2014 Appendix File. The prescribed medicine drug-level ID generated through the HC, DRUGIDX, can be used to link drugs across rounds. DRUGIDX was first added to the file for 2009; for 1996 through 2008, the RXNDC linked drugs across rounds.

The following hypothetical example illustrates the structure of these ID variables. This example illustrates a person in Rounds 1 and 2 of the household interview who reported having purchased Amoxicillin three times. The following example shows three acquisition-level records, all having the same DRUGIDX (00002026002), for one person (DUPERSID=00002026) in two rounds. Generally, within a round, one NDC is associated with a prescribed medicine event because matching was performed at a drug level, as opposed to an acquisition level. The LINKIDX (000020260083) remains the same for both records in Round 1 but varies across rounds. The RXRECIDX (000020260083001, 000020260083002, 000020260103001) differs for all three records.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| DUPERSID | PURCHRD | RXRECIDX | LINKIDX | DRUGIDX | RXNDC |
| 00002026 | 1 | 000020260083001 | 000020260083 | 00002026002 | 00093310905 |
| 00002026 | 1 | 000020260083002 | 000020260083 | 00002026002 | 00093310905 |
| 00002026 | 2 | 000020260103001 | 000020260103 | 00002026002 | 00003010955 |

There can be multiple RXNDCs for a LINKIDX. All the acquisitions in the LINKIDX represent the same drug (active ingredients), but the RXNDCs may represent different manufacturers.   
(For more details on matching, please see Section 4.0).

#### 2.6.1.3 Panel Variable (PANEL)

PANEL is a constructed variable used to specify the panel number for the person. Panel will indicate either Panel 18 or Panel 19 for each person on the file. Panel 18 is the panel that started in 2013, and Panel 19 is the panel that started in 2014.

#### 2.6.1.4 Round Variable (PURCHRD)

The variable PURCHRD indicates the round in which the prescribed medicine was purchased and takes on the value of 1, 2, 3, 4, or 5. Rounds 3, 4, and 5 are associated with MEPS survey data collection from Panel 18. Similarly, Rounds 1, 2, and 3 are associated with data collected from Panel 19.

### 2.6.2 Characteristics of Prescribed Medicine Events

#### 2.6.2.1 Date When Prescribed Medicine Was First Taken (RXBEGMM-RXBEGYRX)

There are two variables which indicate when a prescribed medicine was first taken (used), as reported by the household respondent. They are the following: RXBEGMM denotes the month in which a person first started taking a medication, and RXBEGYRX reflects the year in which a person first started taking a medicine. These “first taken” questions are only asked the first time a prescription is mentioned by the household respondent. These questions are not asked about refills of the prescription in subsequent rounds. Values are carried forward from prior rounds for all medications. Users should also note that the value -14 (not yet used or taken) is not relevant for refills. The variable DRUGIDX (see Section 2.6.1.2) can be used to determine whether a medication was reported in a prior round. For purposes of confidentiality, RXBEGYRX was bottom-coded at 1929, consistent with top-coding of the age variables on the 2014 Full Year Population Characteristics Public Use File (HC-165).

#### 2.6.2.2 Prescribed Medicine Attributes (RXNAME-RXDAYSUP)

For each prescribed medicine included on this file, several data items collected describe in detail the medication obtained or purchased. These data items are the following:

1. Medication name - pharmacy reported (RXNAME)
2. Medication name – Multum Lexicon (RXDRGNAM)
3. National drug code (RXNDC)
4. Quantity of the prescribed medicine dispensed (RXQUANTY), e.g., number of tablets in the prescription
5. Form of the prescribed medicine (RXFORM), e.g., powder
6. Unit of measurement for form of Rx/prescribed medicine (RXFRMUNT), e.g., oz
7. Strength of the dose of the prescribed medicine (RXSTRENG), e.g., 10
8. Unit of measurement for the strength of the dose of the prescribed medicine (RXSTRUNT), e.g., gm
9. Days supplied (RXDAYSUP)
10. Insulin or diabetic supplies/equipment (OMTYPE)

Days supplied was first collected and released to the public on the 2010 Prescribed Medicines file. Many pharmacies did not provide this information, and imputation was not attempted in these cases. A value of 999 indicates the medication is to be taken as needed. No edits were implemented to impose consistency between the quantity and days supplied, and no edits were implemented for very high values.

The 2014 file contains multiple values of RXFORM and RXFRMUNT not found in Prescribed Medicines files in prior years. There was no reconciliation of inconsistencies or duplication between RXFORM and RXFRMUNT. Please refer to Appendices 1, 2, and 3 for definitions for RXFORM, RXFRMUNT, and RXSTRUNT abbreviations, codes and symbols. Please refer to Appendix 4 for therapeutic class code definitions.

The national drug code (NDC) is an 11-digit code. The first 5 digits indicate the manufacturer of the prescribed medicine. The next 4 digits indicate the form and strength of the prescription, and the last 2 digits indicate the package size from which the prescription was dispensed. NDC values were imputed from a proprietary database to certain PC prescriptions because the NDC reported by the pharmacy provider was not valid. These records are identified by RXFLG = 3.

For the years 1996-2004, AHRQ’s licensing agreement for the proprietary database precluded the release of the imputed NDC values to the public, so for these prescriptions, the household-reported name of the prescription (RXHHNAME) and the original NDC (RXNDC) and prescription name (RXNAME) reported by the pharmacy were provided on the file to allow users to do their own imputation. In addition, for the years 1996-2004, the imputed NDC values for the RXFLG = 3 cases could be accessed through the MEPS Data Center.For those events not falling into the RXFLG = 3 category, the reserve code (-13) was assigned to the household-reported medication name (RXHHNAME). The household-reported name of the prescription (RXHHNAME) is no longer provided on this file; however, this variable may be accessed through the MEPS Data Center as can the original pharmacy-reported name and NDC. For information on accessing data through the MEPS Data Center, see the Data Center section of the MEPS Web site at: [meps.ahrq.gov/data\_stats/onsite\_datacenter.jsp](http://meps.ahrq.gov/mepsweb/data_stats/onsite_datacenter.jsp). Beginning with the 2013 data, the variable RXDRGNAM is included on the file. This drug name is the generic name of the drug most commonly used by prescribing physicians. It is supplied by the Multum Lexicon database.

The variable OMTYPE (OTHER MEDICAL EXPENSE TYPE) was added starting with the 2014 data. OMTYPE indicates that the insulin or diabetic supplies/equipment was first reported in the Other Medical Expenses section of the survey. OMTYPE, however, does not identify all insulin, supplies, and equipment, because these goods were also initially reported in other sections of the survey.

Imputed data on this event file, unlike other MEPS event files, may still have missing data. This is because imputed data on this file are imputed from the PC or from a proprietary database. These sources did not always include complete information for each variable but did include an NDC, which would typically enable an analyst to obtain any missing data items. For example, although there are a substantial number of missing values for the strength of the prescription that were not supplied by the pharmacist, these missing values were not imputed because this information is embedded in the NDC.

#### 2.6.2.3 Type of Pharmacy (PHARTP1-PHARTP8)

Household respondents were asked to list the type of pharmacy from which household members purchased their medications. A respondent could list multiple pharmacies associated with each member’s prescriptions in a given round or over the course of all rounds combined covering the survey year. All household-reported pharmacies are provided on this file, but there is no link in the survey or in the data file enabling users to know the type of pharmacy from which a specific prescription was obtained if multiple pharmacies are listed. The variables PHARTP1 through PHARTP8 identify the types of pharmacy providers from which the person’s prescribed medicines were purchased. The possible types of pharmacies include the following: (1) mail-order, (2) another store, (3) HMO/clinic/hospital, (4) drug store, and (5) on-line. A -1 value for PHARTPn indicates that the household did not report “nth” pharmacy.

#### 2.6.2.4 Analytic Flag Variables (RXFLG-INPCFLG)

There are four flag variables included on this file (RXFLG, IMPFLAG, PCIMPFLG, and INPCFLG). Starting in 2014, the variable CLMOMFLG (indication that a prescribed medicine event went through the Charge Payment (CP) section of the HC) is removed from the file.

RXFLG indicates whether or not there was any imputation performed on this record for the NDC variable, and if imputed, from what source the NDC was imputed. If no imputation was performed, RXFLG = 1. If the imputation source was another PC record, RXFLG = 2. Similarly, if the imputation source was a secondary, proprietary database and not the PC database,   
RXFLG = 3.

IMPFLAG indicates the method of creating the expenditure data: IMPFLAG = 1 indicates complete HC data, IMPFLAG = 2 indicates complete PC data, IMPFLAG = 3 indicates HC and PC data, IMPFLAG = 4 indicates fully imputed data, and IMPFLAG = 5 indicates partially imputed data.

PCIMPFLG indicates the type of match between a household-reported event and a PC-reported event. PCIMPFLG = 1 indicates an exact match for a specific event for a person between the PC and the HC. PCIMPFLG = 2 indicates not an exact match between the PC and HC for a specific person (i.e., a person’s household-reported event did not have a matched counterpart in the person’s corresponding PC records). PCIMPFLG assists analysts in determining which records have the strongest link to data reported by a pharmacy. It should be noted that whenever there are multiple purchases of a unique prescribed medication in a given round, MEPS did not collect information that would enable designating any single purchase as the “original” purchase at the time the prescription was first filled, and then designating other purchases as “refills.” The user needs to keep this in mind when the purchases of a medication are referred to as “refills” in the documentation. Because matching was performed at a drug level as opposed to an acquisition level, the values for PCIMPFLG are either 1 or 2. For more details on general data editing/imputation methodology, please see Section 4.0.

INPCFLG denotes whether or not a household member had at least one prescription drug purchase in the PC (0 = NO, 1 = YES).

#### 2.6.2.5 Free Sample Variable (SAMPLE)

SAMPLE indicates if a respondent reported the person received a free sample of the prescription medicine in the round (0 = NO, 1 = YES). Respondents were asked in each round whether or not the person received any free samples of a reported prescribed medicine during the round. However, respondents were not asked to report the number of free samples a person received, nor was it made clear that free samples were included in the count of the number of times that the respondent reported a person purchasing or otherwise obtaining the prescribed medicine during the round. It is important for analysts to note that SAMPLE is *not* a count variable of free samples; SAMPLE = 1 indicates that a person was reported getting a free sample of the prescribed medicine during the round. This flag variable simply allows individual analysts to determine for themselves how free samples should be handled in their analysis.

#### 2.6.2.6 Clinical Classification Codes (RXCCC1X-RXCCC3X)

Information on household-reported medical conditions associated with each prescribed medicine event is provided on this file. There are up to three clinical classification codes listed for each prescribed medicine event (99.74 percent of prescribed medicine events have 0-3 condition records linked). To obtain complete information associated with an event, the analyst must link to the 2014 Medical Conditions File. Details on how to link to the MEPS 2014 Medical Conditions File are provided in the 2014 Appendix File. The user should note that, for confidentiality restrictions, provider-reported condition information (for non-prescription medicines events) is not publicly available. Provider-reported condition data for non-prescription medicines events can be accessed only through the MEPS Data Center.

The medical conditions reported by the HC respondent were recorded by the interviewer as verbatim text, which were then coded to fully-specified 2014 ICD-9-CM codes, including medical condition, V-codes, and a small number of E-codes, by professional coders. Although codes were verified and error rates did not exceed 2 percent for any coder, analysts should not presume this level of precision in the data; the ability of household respondents to report condition data that can be coded accurately should not be assumed. For detailed information on conditions, please refer to the documentation on the 2014 Medical Conditions File. For frequencies of conditions by event type, please see the 2014 Appendix File, HC-168I.

The ICD-9-CM condition codes were aggregated into clinically meaningful categories. These categories, included on the file as RXCCC1X-RXCCC3X, were generated using Clinical Classification Software (CCS) (formerly known as Clinical Classifications for Health Care Policy Research (CCHPR)), which aggregates conditions and V-codes into mutually exclusive categories, most of which are clinically homogeneous. Starting with the 2013 file, the ICD-9-CM condition and procedure codes variables are omitted.

The clinical classification codes linked to each prescribed medicine event are sequenced in the order in which the conditions were reported by the household respondent, which was in chronological order of reporting and not in order of importance or severity. Analysts who use the 2014 Medical Conditions file in conjunction with this prescribed medicines event file should note that the conditions on this file are sorted differently than they appear on the Medical Conditions file.

### 2.6.3 Multum Lexicon Variables from Cerner Multum, Inc.

Each record on this file contains the following Multum Lexicon variables:

|  |  |
| --- | --- |
| RXDRGNAM | generic name of the drug most commonly used by prescribing physicians |
| PREGCAT | pregnancy category variable - identifies the FDA pregnancy category to which a particular drug has been assigned |
| TCn | therapeutic classification variable - assigns a drug to one or more therapeutic/chemical categories; can have up to three categories per drug |
| TCnSn | therapeutic sub-classification variable - assigns one or more sub-categories to a more general therapeutic class category given to a drug |
| TCnSn\_n | therapeutic sub sub-classification variable - assigns one or more sub sub-categories to a more general therapeutic class category and sub-category given to a drug |

Beginning with the 2013 data, the variable RXDRGNAM is included on the file.

Users should carefully review the data when conducting trend analyses or pooling years or panels because Multum’s therapeutic classification has changed across the years of the MEPS. The Multum variables on each year of the MEPS Prescribed Medicines files reflect the most recent classification available in the year the data were released. Since the release of the 1996 Prescribed Medicines file, the Multum classification has been changed by the addition of new classes and subclasses, and by changes in the hierarchy of classes. Three examples follow: 1) In the 1996-2004 Prescribed Medicines files, antidiabetic drugs are a subclass of the hormone class, but in subsequent files, the antidiabetic subclass is part of a class of metabolic drugs. 2) In the 1996-2004 files, antihyperlipidemic agents are categorized as a class with a number of subclasses including HMG-COA reductase inhibitors (statins). In subsequent files, antihyperlipidemic drugs are a subclass, and HMG-COA reductase inhibitors are a sub-subclass, in the metabolic class. 3) In the 1996-2004 files, the psychotherapeutic class comprises drugs from four subclasses: antidepressants, antipsychotics, anxiolytics/sedatives/hypnotics, and CNS stimulants. In subsequent files, the psychotherapeutic class comprises only antidepressants and antipsychotics. Changes may occur between any years. For additional information on these and other Multum Lexicon variables, as well as the Multum Lexicon database itself, please refer to [www.multum.com/Lexicon.html](http://www.multum.com/Lexicon.html).

Users should also be aware of a problem discovered with the linking between the MEPS Prescribed Medicines files and the Cerner Multum file that resulted in some incorrect therapeutic classes being assigned. In particular, some diagnostic tests and medical devices were inadvertently assigned to be in a therapeutic class when they should not have been. Specifically, from 1996-2002, some diabetic supplies were assigned to be in TC1S1 = 101 (sex hormone), and from 2003 through 2010 some diabetic supplies were assigned to be in TC1S1 = 37 (toxoids). In addition, starting in 2006, NDC 00169750111 should have been assigned to TC1 = 358 and TC1S1 = 99. Analysts should use caution when using the Cerner Multum therapeutic class variables for analysis and should always check for accuracy.

Researchers using the Multum Lexicon variables are requested to cite Multum Lexicon as the data source.

### 2.6.4 Expenditure Variables (RXSF14X-RXXP14X)

#### 2.6.4.1 Definition of Expenditures

Expenditures on this file refer to what is paid for health care services. More specifically, expenditures in MEPS are defined as the sum of payments for care received, including out-of-pocket payments and payments made by private insurance, Medicaid, Medicare, and other sources. The definition of expenditures used in MEPS differs slightly from its predecessors, the 1987 NMES and 1977 NMCES surveys, where “charges” rather than “sum of payments” were used to measure expenditures. This change was adopted because charges became a less appropriate proxy for medical expenditures during the 1990s because of the increasingly common practice of discounting charges. Although measuring expenditures as the sum of payments incorporates discounts in the MEPS expenditure estimates, the estimates do not incorporate any manufacturer or other rebates associated with Medicaid or other purchases. Another general change from the two prior surveys is that charges associated with uncollected liability, bad debt, and charitable care (unless provided by a public clinic or hospital) are not counted as expenditures, because there are no payments associated with those classifications. For details on expenditure definitions, please reference the following, “Informing American Health Care Policy” (Monheit, Wilson, Arnett, 1999).

If examining trends in MEPS expenditures or performing longitudinal analysis on MEPS expenditures please refer to Section C, sub-sections 3.4 and 6.3 respectivelyfor more information.

#### 2.6.4.2 Sources of Payment

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

1. Out-of-pocket by User (self) or Family,
2. Medicare,
3. Medicaid,
4. Private Insurance,
5. Veterans Administration/CHAMPVA, excluding TRICARE,
6. TRICARE,
7. Other Federal Sources – includes Indian Health Service, military treatment facilities, and other care by the federal government,
8. Other State and Local Source – includes community and neighborhood clinics, state and local health departments, and state programs other than Medicaid,
9. Workers’ Compensation, and
10. Other Unclassified Sources – includes sources such as automobile, homeowner’s, and liability insurance, and other miscellaneous or unknown sources.

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

1. Other Private – any type of private insurance payments reported for persons not reported to have any private health insurance coverage during the year as defined in MEPS, and
2. Other Public – Medicare/Medicaid payments reported for persons who were not reported to be enrolled in the Medicare/Medicaid program at any time during the year.

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

### 3.0 Sample Weight (PERWT14F)

#### 3.1 Overview

There is a single full year person-level weight (PERWT14F) 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 2014. A key person was either a member of a responding NHIS household at the time of 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 PERWT14F was developed in several stages. First, person-level weights for Panel 18 and Panel 19 were created separately. The weighting process for each panel included an adjustment 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 for those in-scope at the end of the calendar year 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 2014 composite weight was then formed by multiplying each weight from Panel 18 by the factor .500 and each weight from Panel 19 by the factor .500. The choice of factors reflected the relative sample sizes of the two panels, helping to limit the variance of estimates obtained from pooling the two samples. The composite weight was raked to the same set of CPS-based control totals. When the poverty status information derived from income variables became available, a final raking was undertaken on the previously established weight variable. 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 asthe other five variables previously used in the weight calibration.

#### 3.2.1 MEPS Panel 18 Weight Development Process

The person-level weight for MEPS Panel 18 was developed using the 2013 full year weight for an individual as a “base” weight for survey participants present in 2013. For key, in-scope members who joined an RU some time in 2014 after being out-of-scope in 2013, the initially assigned person-level weight was the corresponding 2013 family weight. The weighting process included an adjustment for person-level nonresponse over Rounds 4 and 5 as well as raking to population control totals for December 2014 for key, responding persons in-scope on December 31, 2014. These control totals were derived by scaling back the population distribution obtained from the March 2015 CPS to reflect the December 31, 2014 estimated population total (estimated based on Census projections for January 1, 2015). 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. (Poverty status is not included in this version of the MEPS full year database because of the time required to process the income data collected and then assign persons to a poverty status category). The final weight for key, responding persons who were not in-scope on December 31, 2014 but were in-scope earlier in the year was the person weight after the nonresponse adjustment.

#### 3.2.2 MEPS Panel 19 Weight Development Process

The person-level weight for MEPS Panel 19 was developed using the 2014 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 2014 as well as raking to the same population control figures for December 2014 used for the MEPS Panel 18 weights for key, responding persons in-scope on December 31, 2014. The same five variables employed for Panel 18 raking (census region, MSA status, race/ethnicity, sex, and age) were used for Panel 19 raking. Again, the final weight for key, responding persons who were not in-scope on December 31, 2014 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 2014

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, 2014 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 2014 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 decedent populations.

Overall, the weighted population estimate for the civilian noninstitutionalized population for December 31, 2014 is 314,906,436 (PERWT14F>0 and INSC1231=1). The sum of the person-level weights across all persons assigned a positive person-level weight is 318,440,423.

#### 3.3 Coverage

The target population for MEPS in this file is the 2014 U.S. civilian noninstitutionalized population. However, the MEPS sampled households are a subsample of the NHIS households interviewed in 2012 (Panel 18) and 2013 (Panel 19). New households created after the NHIS interviews for the respective panels and consisting exclusively of persons who entered the target population after 2012 (Panel 18) or after 2013 (Panel 19) 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.

## 3.4 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, it is important to consider a variety of factors when examining trends over time using MEPS. Statistical significance tests should be conducted to assess the likelihood that observed trends may be attributable to sampling variation. The length of time being analyzed should also be considered. 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 MEPS survey methodology.

With respect to methodological considerations, beginning with the 2007 data, the rules MEPS uses to identify outlier prices for prescription medications became much less stringent than in prior years. Starting with the 2007 Prescribed Medicines file, there was: less editing of prices and quantities reported by pharmacies, more variation in prices for generics, lower mean prices for generics, higher mean prices for brand name drugs, greater differences in prices between generic and brand name drugs, and a somewhat lower proportion of spending on drugs by families, as opposed to third-party payers. Starting with the 2008 Prescribed Medicines file, improvements in the data editing changed the distribution of payments by source: (1) more spending on Medicare beneficiaries is by private insurance, rather than Medicare, and (2) less out-of-pocket payments and more Medicaid payments among Medicaid enrollees. Starting with the 2009 data, additional improvements increased public program amounts and reduced out-of-pocket payments and, for Medicare beneficiaries with both Part D and Medicaid, decreased Medicare payments and increased Medicaid and other state and local government payments. Therefore, users should be cautious in the types of comparisons they make about prescription drug spending before and after 2007, 2008, and 2009. In addition, some therapeutic class codes have changed over time.

In 2013 MEPS introduced an effort to obtain more complete information about health care utilization from MEPS respondents with full implementation in 2014. This effort likely improved data quality and reduced underreporting in 2014 and could modestly affect analyses involving trends in utilization across years.

There are also statistical factors to consider in interpreting trend analyses. Looking at changes over longer periods of time can provide a more complete picture of underlying trends. Analysts may wish to consider techniques to evaluate, smooth, or stabilize analyses of trends such as comparing pooled time periods (e.g. 1996-97 versus 2013-14), 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, 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 General Data Editing and Imputation Methodology

The general approach to preparing the household prescription data for this file was to utilize the PC prescription data to impute information collected from pharmacy providers to the household drug mentions. For events that went through the Charge Payment (CP) section of the HC (events where the person filed their own prescription claim forms with their insurance company, and events for persons for whom the respondent did not know if they filed their own prescription claim forms with their insurance company), information on payment sources was retained to the extent that these data were reported by the household respondent in the CP section of the HC. A matching program was adopted to link PC drugs and the corresponding drug information to household drug mentions. To improve the quality of these matches, all drugs on the household and pharmacy files were coded using a proprietary database on the basis of the medication names provided by the household respondent and pharmacy, and, when available, the NDC provided in the pharmacy follow-back component. The matching process was done at a drug (active ingredient) level, as opposed to an acquisition level. Considerable editing was done prior to the matching to correct data inconsistencies in both data sets and to fill in missing data and correct outliers on the pharmacy file.

Drug price-per-unit outliers were analyzed on the pharmacy file by first identifying the average wholesale unit price (AWUP) of the drug by linkage through the NDC to a secondary data file. In general, prescription drug unit prices were deemed to be outliers by comparing unit prices reported in the pharmacy database to the AWUP reported in the secondary data file and were edited, as necessary.

Beginning with the 2007 data, the rules used to identify outlier prices for prescription medications in the PC changed. New outlier thresholds were established based on the distribution of the ratio of retail unit prices relative to the AWUP in the 2006 MarketScan Outpatient Pharmaceutical Claims database. The new thresholds vary by patent status, whereas in prior years they did not. These changes improve data quality in three ways: (1) the distribution of prices in the MEPS better benchmarks to MarketScan, overall and by patent status (Zodet et al. 2010), (2) fewer pharmacy-reported payments and quantities (for example, number of pills) are edited, and (3) imputed prices reflect prices paid, rather than AWUPs. As a result, compared with earlier years of the MEPS, starting with 2007 there is more variation in prices for generics, lower mean prices for generics, higher mean prices for brand name drugs, greater differences in prices between generic and brand name drugs, and a somewhat lower proportion of spending on drugs by families, as opposed to third-party payers. Pharmacy reports of free antibiotics were not edited as if they were outliers. Beginning with the 2010 data, some additional free drugs obtained through commercial pharmacies were not edited.

Beginning with the 2009 data, three changes in editing sources of payment data were made to improve data quality, based on a validation study (Hill et al., 2011). Two changes were made in editing fills for which pharmacies reported partial payment data. First, if the third party amount was missing and the third party payer was a public payer, then pharmacy reports of zero   
out-of-pocket amounts were preserved rather than imputed. Second, somewhat tighter outlier thresholds were implemented for the fills with partial payment data, and somewhat looser outlier thresholds were implemented for fills with complete payment data. Another change affected Medicare beneficiaries with both Part D and Medicaid coverage--reported Medicaid and other state and local program payments were no longer edited to be Medicare payments.

Beginning with the 2010 data, improvements in the payment imputation methods for pharmacy data (1) better utilize pharmacy-reported quantities to impute missing payment amounts, and   
(2) preserve within-NDC variation in the prices on the records for which third party payment amounts are imputed.

Beginning with the 2011 data, the imputation of the number of fills for a drug was improved. In the 2011 data, for 10% of household-reported drugs the respondent did not know or remember the number of times the drug was obtained during the round. For missing and implausible values, a hot-deck procedure imputed a new number of acquisitions, drawing from the donor pool of drugs with valid values. Prior to 2011, the imputation method gave greater weight to donors with more acquisitions in the round. The new method conditions on insurance status, age, and geography, as well as drug.

Drug matches between household drug mentions and pharmacy drug events for a person in the PC were based on drug code, medication name, and the round in which the drug was reported. The matching of household drug mentions to pharmacy drugs was performed so that the most detailed and accurate information for each prescribed medicine event was obtained. Beginning with the 2008 Prescribed Medicines file, the criteria for matching were changed to allow multiple NDCs for the same drug reported by pharmacies (for example, different manufacturers) to match to one drug reported by the household. Beginning with the 2010 data, the matching process was improved for diabetic supplies to better utilize pharmacy reports of the diversity of supplies individuals purchased. Exact dates of purchase were only available from the   
follow-back component. The matching program assigned scores to potential matches. Numeric variables required exact matches to receive a high score, while partial scores could be assigned to matches between character variables, such as prescription name, depending on the degree of similarity in the spelling and sound of the medication names. Household drug mentions that were deemed exact matches to PC drugs for the same person in the same round required sufficiently high scores to reflect a high quality match. Initially, exact matches were used only once and were taken out of the donor pool from that point on (i.e., these matches were made without replacement). For remaining persons with pharmacy data from any round and unmatched household drugs, additional matches are made with replacement across rounds. Any refill of a household drug mention that had been matched to a pharmacy drug event was matched to the same pharmacy drug event. All remaining unmatched household drug mentions for persons either in or out of the PC were statistically matched to the entire pharmacy donor base with replacement by medication name, drug code, type of third party coverage, health conditions, age, sex, and other characteristics of the individual. PC records containing an NDC imputed without an exact match on a generic code were omitted from the donor pool. Some matches have inconsistencies between the PC donor’s potential sources of payment and those of the HC recipient, and these were resolved. Beginning with the 2008 data, the method used to resolve inconsistencies in potential payers was changed to better reflect the distribution of sources of payment among the acquisitions with consistent sources of payment. This change (1) reduced Medicare payments and increased private payments among Medicare beneficiaries, and   
(2) reduced out-of-pocket payments and increased Medicaid payments among Medicaid enrollees. In addition, Medicare, Medicaid, and private drug expenditures better benchmark totals in the National Health Expenditure Accounts.

Also beginning with the 2011 data, many aspects of the specifications were modified so that imputations and edits better reflect Medicare Part D donut hole rules and Medicare Part B coverage of a few medications and diabetic supplies.

For more information on the MEPS Prescribed Medicines editing and imputation procedures, please see Hill et al, 2014. [www.meps.ahrq.gov/data\_files/publications/mr29/mr29.shtml](http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr29/mr29.shtml)

## 4.1 Rounding

Expenditure variables on the 2014 Prescribed Medicines file have been rounded to the nearest penny. Person-level expenditure variables released on the 2014 Full Year Consolidated Data File were rounded to the nearest dollar. It should be noted that using the 2014 MEPS event files to create person-level totals will yield slightly different totals than those found on the 2014 Full Year Consolidated data file. These differences are due to rounding only. Moreover, in some instances, the number of persons having expenditures on the 2014 event files for a particular source of payment may differ from the number of persons with expenditures on the 2014 Full Year Consolidated data file for that source of payment. This difference is also an artifact of rounding only.

## 4.2 Edited/Imputed Expenditure Variables (RXSF14X-RXXP14X)

There are 13 expenditure variables included on this event file. All of these expenditures have gone through an editing and imputation process and have been rounded to the second decimal place. There is a sum of payments variable (RXXP14X) which, for each prescribed medicine event, sums all the expenditures from the various sources of payment. The 12 sources of payment expenditure variables for each prescribed medicine event are the following: amount paid by self or family (RXSF14X), amount paid by Medicare (RXMR14X), amount paid by Medicaid (RXMD14X), amount paid by private insurance (RXPV14X), amount paid by the Veterans Administration/CHAMPVA (RXVA14X), amount paid by TRICARE (RXTR14X), amount paid by other federal sources (RXOF14X), amount paid by state and local (non-federal) government sources (RXSL14X), amount paid by Worker’s Compensation (RXWC14X), and amount paid by some other source of insurance (RXOT14X). As mentioned previously, there are two additional expenditure variables called RXOR14X and RXOU14X (other private and other public, respectively). These two expenditure variables were created to maintain consistency between what the household respondent reported as a person’s private and public insurance status for hospitalization and physician coverage and third party prescription payments from other private and public sources (such as a separate private prescription policy or prescription coverage from the Veterans Administration, the Indian Health Service, or a state assistance program other than Medicaid). Users should exercise caution when interpreting the expenditures associated with these two additional sources of payment. While these payments stem from apparent inconsistent responses to health insurance and source of payment questions in the survey, some of these inconsistencies may have logical explanations. Please see Section 2.6.4 for details on these and all other source of payment variables.

# 5.0 Strategies for Estimation

## 5.1 Developing Event-Level Estimates

The data in this file can be used to develop national 2014 event-level estimates for the U.S. civilian noninstitutionalized population on prescribed medicine purchases (events) as well as expenditures, and sources of payment for these purchases. Estimates of total number of purchases are the sum of the weight variable (PERWT14F) across relevant event records while estimates of other variables must be weighted by PERWT14F to be nationally representative. The tables below contain event-level estimates for selected variables.

**Selected Event (Purchase) Level Estimates**

**All Prescribed Medicine Purchases**

| **Estimate of Interest** | **Variable Name** | **Estimate (SE)** |
| --- | --- | --- |
| Number of purchases  (in millions) | PERWT14F | 3421.2 (97.80) |
| Mean total payments per purchase | RXXP14X | $102 (4.5) |
| Mean out-of-pocket payment per purchase | RXSF14X | $14 (0.4) |
| Mean proportion of expenditures paid by private insurance per purchase | RXPV14X /RXXP14X | 0.158 (0.0051) |

**Example by Drug Type: Statins (TC1S1\_1 = 173 or TC1S1\_2 = 173 or TC1S2\_1 = 173 or TC1S3\_1 = 173 or TC2S1\_1 = 173 or TC2S1\_2 = 173)**

| **Estimate of Interest** | **Variable Name** | **Estimate (SE)** |
| --- | --- | --- |
| Number of purchases  (in millions) | PERWT14F | 224.2 (7.63) |
| Mean total payments per purchase | RXXP14X | $76 (2.9) |
| Mean annual total payments per person | RXXP14X (aggregated across purchases within person) | $409 (16.3) |

## 5.2 Person-Based Estimates for Prescribed Medicine Purchases

To enhance analyses of prescribed medicine purchases, analysts may link information about prescribed medicine purchases to the annual full year consolidated file (which has data for all MEPS sample persons), or conversely, link person-level information from the full year consolidated file to this event-level file (see Section 6 below for more details). Both this file and the full year consolidated file may be used to derive estimates for persons with prescribed medicine purchases and annual estimates of total expenditures for these purchases; however, if the estimate relates to the entire population, this file cannot be used to calculate the denominator, as only those persons with at least one prescribed medicine purchase are represented on this data file. Therefore, the full year consolidated file must be used for person-level analyses that include both persons with and without prescribed medicine events.

## 5.3 Variables with Missing Values

It is essential that the analyst examine all variables for the presence of negative values used to represent missing values. For continuous or discrete variables, whose means or totals may be calculated, the analyst should either impute a value or set the value such that it will be interpreted as missing by the software package used. For categorical and dichotomous variables, the analyst may want to consider whether to recode or impute a value for cases with negative values or whether to exclude or include such cases in the numerator and/or denominator when calculating proportions.

Methodologies used for the editing/imputation of expenditure variables (e.g., total expenditures and sources of payment) are described in Section 4.2.

## 5.4 Variance Estimation (VARSTR, VARPSU)

The MEPS is based on a complex sample design. To obtain estimates of variability (such as the standard error of sample estimates or corresponding confidence intervals) for MEPS estimates, analysts need to take into account the complex sample design of MEPS for both person-level and family-level analyses. Several methodologies have been developed for estimating standard errors for surveys with a complex sample design, including the Taylor-series linearization method, balanced repeated replication, and jackknife replication. Various software packages provide analysts with the capability of implementing these methodologies. Replicate weights have not been developed for the MEPS data. Instead, the variables needed to calculate appropriate standard errors based on the Taylor-series linearization method are included on this file (as well as all other MEPS public use files). Software packages that permit the use of the Taylor-series linearization method include SUDAAN, Stata, SAS (version 8.2 and higher), and SPSS (version 12.0 and higher). For complete information on the capabilities of each package, analysts should refer to the corresponding software user documentation.

Using the Taylor-series linearization method, variance estimation strata and the variance estimation PSUs within these strata must be specified. The variance strata variable is named VARSTR, while the variance PSU variable is named VARPSU. Specifying a “with replacement” design in one of the previously mentioned computer software packages will provide estimated standard errors appropriate for assessing the variability of MEPS survey estimates. It should be noted that the number of degrees of freedom associated with estimates of variability indicated by such a package may not appropriately reflect the number available. For variables of interest distributed throughout the country (and thus the MEPS sample PSUs), one can generally expect to have at least 100 degrees of freedom associated with the estimated standard errors for national estimates based on this MEPS database.

Prior to 2002, MEPS variance strata and PSUs were developed independently from year to year, and the last two characters of the strata and PSU variable names denoted the year. However, beginning with the 2002 Point-in-Time PUF, the variance strata and PSUs were developed to be compatible with MEPS data associated with the NHIS sample design used through 2006. Such data can be pooled and the variance strata and PSU variables provided can be used without modification for variance estimation purposes for estimates covering multiple years of data.

As a result of the change in the NHIS sample design in 2006, a new set of variance strata and PSUs have been established for variance estimation purposes for use with MEPS Panel 12 and subsequent MEPS panels. There were 165 variance strata associated with both MEPS Panel 18 and Panel 19, providing a substantial number of degrees of freedom for subgroups as well as the nation as a whole. Each variance stratum contains either two or three variance estimation PSUs.

# 6.0 Merging/Linking MEPS Data Files

Data from this file can be used alone or in conjunction with other files for different analytic purposes. This section summarizes various scenarios for merging/linking MEPS files. Each MEPS panel can also be linked back to the previous year’s National Health Interview Survey public use data files. For information on obtaining MEPS/NHIS link files please see [meps.ahrq.gov/data\_stats/more\_info\_download\_data\_files.jsp](http://meps.ahrq.gov/mepsweb/data_stats/more_info_download_data_files.jsp).

## 6.1 Linking to the Person-Level File

Merging characteristics of interest from the person-level file (e.g., MEPS 2014 Full Year Consolidated File) expands the scope of potential estimates. For example, to estimate the total number of prescribed medicine purchases of persons with specific demographic characteristics (such as age, race, sex, and education), population characteristics from a person-level file need to be merged onto the prescribed medicines file. This procedure is illustrated below. The MEPS 2014 Appendix File, HC-168I, provides additional detail on how to merge MEPS data files.

1. Create data set PERSX by sorting the 2014 Full Year Consolidated File by the person identifier, DUPERSID. Keep only variables to be merged onto the prescribed medicines file and DUPERSID.
2. Create data set PMEDS by sorting the 2014 Prescribed Medicines File by person identifier, DUPERSID.
3. Create final data set NEWPMEDS by merging these two files by DUPERSID, keeping only records on the prescribed medicines file.

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

PROC SORT DATA=IN.HCXXX (KEEP=DUPERSID AGE31X AGE42X AGE53X SEX RACEV1X EDRECODE EDUYRDG)

OUT=PERSX;

BY DUPERSID;

RUN;

PROC SORT DATA=IN.HCXXXA

OUT=PMEDS;

BY DUPERSID;

RUN;

DATA NEWPMEDS;

MERGE PMEDS (IN=A) PERSX (IN=B);

BY DUPERSID;

IF A;

RUN;

## 6.2 Linking to the Medical Conditions File

The condition-event link file (CLNK) provides a link from MEPS event files to the 2014 Medical Conditions File. When using the CLNK, data users/analysts should keep in mind that   
(1) conditions are self-reported, (2) there may be multiple conditions associated with a prescribed medicine purchase, and (3) a condition may link to more than one prescribed medicine purchase or any other type of purchase. Users should also note that not all prescribed medicine purchases link to the condition file.

## 6.3 Longitudinal Analysis

Panel-specific longitudinal files are available for downloading in the data section of the MEPS Web site. 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 Weight Files at [meps.ahrq.gov/data\_stats/more\_info\_download\_data\_files.jsp](http://meps.ahrq.gov/mepsweb/data_stats/more_info_download_data_files.jsp).

References

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

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

Cox, B.G. and Cohen, S.B. (1985). Imputation Procedures to Compensate for Missing Responses to Data Items. In D.B. Owen and R.G.Cornell (Eds.), *Methodological Issues for Health Care Surveys* (pp. 214-234). New York, NY: Marcel Dekker.

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

Hill, S.C., Roemer, M., and Stagnitti, M.N. (2014). *Outpatient Prescription Drugs: Data Collection and Editing in the 2011 Medical Expenditure Panel Survey*. (Methodology Report No. 29). Rockville, MD: Agency for Healthcare Research and Quality.

Hill, S.C., Zuvekas, S.H., and Zodet, M.W. (2011). Implications of the Accuracy of MEPS Prescription Drug Data for Health Services Research. *Inquiry* 48(3).

Moeller J.F., Stagnitti, M., Horan, E., et al. (2001). *Outpatient Prescription Drugs: Data Collection and Editing in the 1996 Medical Expenditure Panel Survey (HC-010A)* (MEPS Methodology Report No. 12, AHRQ Pub. No. 01-0002). Rockville, MD: Agency for Healthcare Research and Quality.

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

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

Zodet, M.W., Hill, S.C., and Miller, E. Comparison of Retail Drug Prices in the MEPS and MarketScan: Implications for MEPS Editing Rules. Agency for Healthcare Research and Quality Working Paper No. 10001, February 2010.

D. Variable-Source Crosswalk

VARIABLE-SOURCE CROSSWALK

FOR MEPS HC-168A: 2014 Prescribed Medicines Events

Survey Administration Variables

|  |  |  |
| --- | --- | --- |
| **Variable** | **Description** | **Source** |
| DUID | Dwelling unit ID | Assigned in sampling |
| PID | Person number | Assigned in sampling |
| DUPERSID | Sample person ID (DUID + PID) | Assigned in sampling |
| RXRECIDX | Record ID – Unique Prescribed Medicine Identifier | Constructed |
| LINKIDX | Link to condition and other event files | CAPI derived |
| DRUGIDX | Link to drugs across rounds | CAPI derived |
| PANEL | Panel indicator | Assigned in sampling |
| PURCHRD | Round in which the Rx/prescribed medicine was obtained/purchased | CAPI derived |

Prescribed Medicines Events Variables

| **Variable** | **Description** | **Source** |
| --- | --- | --- |
| RXBEGMM | Month person first used medicine | PM12OV1 |
| RXBEGYRX | Year person first used medicine | PM12 |
| RXNAME | Medicine name (Imputed) | Imputed |
| RXDRGNAM | Multum medicine name (Imputed) | Imputed |
| RXNDC | NDC (Imputed) | Imputed |
| RXQUANTY | Quantity of Rx/prescribed medicine (Imputed) | Imputed |
| RXFORM | Dosage form (Imputed) | Imputed |
| RXFRMUNT | Quantity unit of medication (Imputed) | Imputed |
| RXSTRENG | Strength of medication (Imputed) | Imputed |
| RXSTRUNT | Unit of medication (Imputed) | Imputed |
| RXDAYSUP | Days supplied of prescribed med(Imputed) | Imputed |
| PHARTP1-PHARTP8 | Type of pharmacy prov – (1st-8th) | PM16 |
| RXFLG | Flag variable indicating imputation source for NDC on pharmacy donor record | Constructed |
| IMPFLAG | Method of expenditure data creation | Constructed |
| PCIMPFLG | Flag indicating type of household to pharmacy prescription match | Constructed |
| OMTYPE | Other medical expense type | CAPI derived |
| INPCFLG | Flag indicating if the person has at least one record in the pharmacy component | Constructed |
| SAMPLE | Flag indicating if a person received a free sample of this drug in the round | CAPI derived |
| RXCCC1X | Modified clinical classification code | Constructed/Edited |
| RXCCC2X | Modified clinical classification code | Constructed/Edited |
| RXCCC3X | Modified clinical classification code | Constructed/Edited |
| PREGCAT | Multum pregnancy category | Cerner Multum, Inc. |
| TC1 | Multum therapeutic class #1 | Cerner Multum, Inc. |
| TC1S1 | Multum therapeutic sub-class #1 for TC1 | Cerner Multum, Inc. |
| TC1S1\_1 | Multum therapeutic sub-sub-class for TC1S1 | Cerner Multum, Inc. |
| TC1S1\_2 | Multum therapeutic sub-sub-class for TC1S1 | Cerner Multum, Inc. |
| TC1S2 | Multum therapeutic sub-class #2 for TC1 | Cerner Multum, Inc. |
| TC1S2\_1 | Multum therapeutic sub-sub-class for TC1S2 | Cerner Multum, Inc. |
| TC1S3 | Multum therapeutic sub-class #3 for TC1 | Cerner Multum, Inc. |
| TC1S3\_1 | Multum therapeutic sub-sub-class for TC1S3 | Cerner Multum, Inc. |
| TC2 | Multum therapeutic class #2 | Cerner Multum, Inc. |
| TC2S1 | Multum therapeutic sub-class #1 for TC2 | Cerner Multum, Inc. |
| TC2S1\_1 | Multum therapeutic sub-sub-class for TC2S1 | Cerner Multum, Inc. |
| TC2S1\_2 | Multum therapeutic sub-sub-class for TC2S1 | Cerner Multum, Inc. |
| TC2S2 | Multum therapeutic sub-class #2 for TC2 | Cerner Multum, Inc. |
| TC3 | Multum therapeutic class #3 | Cerner Multum, Inc. |
| TC3S1 | Multum therapeutic sub-class #1 for TC3 | Cerner Multum, Inc. |
| TC3S1\_1 | Multum therapeutic sub-sub-class for TC3S1 | Cerner Multum, Inc. |
| RXSF14X | Amount paid, self or family (Imputed) | CP11/Edited/ Imputed |
| RXMR14X | Amount paid, Medicare (Imputed) | CP12/CP13/Edited/ Imputed |
| RXMD14X | Amount paid, Medicaid (Imputed) | CP12/CP13/Edited/ Imputed |
| RXPV14X | Amount paid, private insurance (Imputed) | CP12/CP13/Edited/ Imputed |
| RXVA14X | Amount paid, Veteran’s Administration/CHAMPVA (Imputed) | CP12/CP13/Edited/ Imputed |
| RXTR14X | Amount paid, TRICARE (Imputed) | CP12/CP13/Edited/ Imputed |
| RXOF14X | Amount paid, other Federal (Imputed) | CP12/CP13/Edited/ Imputed |
| RXSL14X | Amount paid, state and local government (Imputed) | CP12/CP13/Edited/ Imputed |
| RXWC14X | Amount paid, Worker’s Compensation (Imputed) | CP12/CP13/Edited/ Imputed |
| RXOT14X | Amount paid, other insurance (Imputed) | CP12/CP13/Edited/ Imputed |
| RXOR14X | Amount paid, other private (Imputed) | Constructed/Imputed |
| RXOU14X | Amount paid, other public (Imputed) | Constructed/Imputed |
| RXXP14X | Sum of payments RXSF14X – RXOU14X (Imputed) | CP12/CP13/Edited/ Imputed |

Weights

|  |  |  |
| --- | --- | --- |
| **Variable** | **Description** | **Source** |
| PERWT14F | Final person-level weight | Constructed |
| VARSTR | Variance estimation stratum, 2014 | Constructed |
| VARPSU | Variance estimation PSU, 2014 | Constructed |

Appendix 1  
Definitions for RXFORM, Dosage Form

Appendix 1

Definitions for RXFORM, Dosage Form

| **Dosage Form** | **Definition** |
| --- | --- |
| -7 | refused |
| -8 | don’t know |
| -9 | not ascertained |
| ACC | accessory |
| ACETONIDE | acetonide |
| ACT | actuation |
| ADR | acetic acid drop |
| AE | aerosol |
| AEPB | aerosol powder, breath activated |
| AER | aerosol |
| AER SPRAY | aerosol spray |
| AERA | aerosol with adapter |
| AERB | aerosol, breath activated |
| AERO | aerosol |
| AEROP | aerosol powder |
| AEROSOL | aerosol |
| AERS | aerosol, solution |
| ALM | \* |
| AMI | \* |
| AMO | \* |
| AMP | ampule |
| ARA | aerosol liquid w/adapter (inhaler) |
| ARD | aerosol solid w/adapter |
| ARO | aerosol solid |
| ASS | \* |
| AUTO INJ | auto-injection |
| BACK SUPPORT BELT | back support belt |
| BAG | bag |
| BAL | balm |
| BALM | balm |
| BAN | bandage |
| BANDAGE | bandage |
| BAR | bar |
| BATTERY | battery |
| BENCH | bench |
| BLO | block |
| BOT | bottle |
| BOTTLE | bottle |
| BOX | box |
| BOXES | boxes |
| BRACE | brace |
| BRIEF | brief |
| BUT | butterfly |
| C | capsules, or cream (varies) |
| C12 | 12 hour extended-release capsule |
| C24 | 24 hour extended-release capsule |
| CA | capsule |
| CANE | cane |
| CAP | capsule, caplets |
| CAP DR | delayed-release capsule |
| CAP ER | extended-release capsule |
| CAP SA | slow-acting capsule |
| CAPLET | caplet |
| CAPLT | caplet |
| CAPS | capsules |
| CAPSULE | capsule |
| CAPSULE SA | slow-acting capsule |
| CATHETER | catheter |
| CC | cubic centimeter |
| CER | capsule, extended-release tablet, extended-release |
| CHAMBER | chamber |
| CHEW | chewable tablet |
| CHEW TAB | chewable tablet |
| CHEW TABS | chewable tablets |
| CHEWABLE | chewable |
| CHW | chewable tablets |
| CLEANSER | cleanser |
| COLLAR | collar |
| COMBO | \* |
| COMPOUND | compound |
| CON | condom |
| CONC | concentrate |
| CONDOM | condom |
| CONTAINER | container |
| COS | \* |
| COTTON | cotton |
| CP12 | capsule, extended-release, 12 hour |
| CP24 | capsule, extended-release, 24 hour |
| CPCR | capsule, extended-release |
| CPDR | capsule, delayed release |
| CPEP | capsule, delayed release particles |
| CPSP | capsule sprinkle |
| CPSR | slow-release capsule |
| CR | cream |
| CRE | cream |
| CREA | cream |
| CREAM | cream |
| CRM | cream |
| CRY | crystal |
| CRYS | crystals |
| CRYSTAL | crystal |
| CTB | chewable tablets |
| CTG | cartridge |
| CURVE | curve |
| CUTTER | cutter |
| DEV | device |
| DEVI | device |
| DEVICE | device |
| DIA | diaper |
| DIAPER | diaper |
| DIAPHRAGM | diaphragm |
| DIHYDROCHLOR | dihydrochloride |
| DIPROPION | dipropionate |
| DIS | disk, or dermal infusion system |
| DISK | disk |
| DISKUS | diskus |
| DISPOSABLE | disposable |
| DOS PAK | dose pack |
| DPRH | diaphragm |
| DR | drop |
| DRC | delayed-release capsule |
| DRE | dressing |
| DRESSING | dressing |
| DRO | drop |
| DROP | drop |
| DROPS | drops |
| DROPS OPTH OTI | ophthalmic/otic drops |
| DROPS SUSP | drops suspension |
| DRP | drop |
| DRPS | drops |
| DSK | disk |
| DSPK | tablets in a dose pack |
| DSPT | tablet, dispersible |
| DT | tablet, disintegrating |
| EAM | \* |
| EAR DROP | ear drop |
| EAR DROPS | ear drops |
| EAR DRP | ear drop |
| EAR SUSP | ear suspension |
| EC TABS | enteric coated tablets |
| ECC | enteric coated capsules |
| ECO | \* |
| ECT | enteric coated tablets |
| ELI | elixir |
| ELIX | elixir |
| ELIXER | elixir |
| ELIXIR | elixir |
| ELX | elixir |
| EMERGENCY KIT | emergency kit |
| EMO | emollient |
| EMU | emulsion |
| EMUL | emulsion |
| EMULSION | emulsion |
| ENE | enema |
| ENEM | enema |
| ENEMA | enema |
| ER | \* |
| ERC | capsule, extended-release |
| ERSUS | suspension, extended-release |
| ERT | tablet, extended-release |
| ERTA | extended-release-tablets |
| ERTC | tablet, chewable, extended-release |
| ESI | \* |
| EST | \* |
| ETA | \* |
| EXTN CAP | extended-release capsule |
| EXTRACT | extract |
| EYE DRO | eye drop |
| EYE DROP | eye drop |
| EYE DROPS | eye drops |
| EYE DRP | eye drop |
| EYE EMU | \* |
| EYE OIN | eye ointment |
| EYE SO | eye solution |
| EYEDRO | eye drop |
| FIL | film |
| FILM | film |
| FILM ER | film, extended-release |
| FILMTAB | filmtab |
| FILMTABS | filmtabs |
| FLOWMETER | flowmeter |
| FOA | foam |
| FOAM | foam |
| GAU | gauze |
| GAUZE | gauze |
| GEF | effervescent granules |
| GEL | gel |
| GELC | \* |
| GEL CAP | gel capsule |
| GELS | gel-forming solution |
| GER | granule, extended-release |
| GFS | gel-forming solution |
| GLOVE | glove |
| GRA | granules |
| GRAN | granules |
| GRANULES | granules |
| GRAR | granules for reconstitution |
| GRR | grams |
| GTT | drops |
| GUL | \* |
| GUM | gum |
| HFA | \* |
| HOSE | medical hosiery |
| HU | capsule |
| HYDROBROMIDE | hydrobromide |
| ICR | control-release insert |
| IMPL | implant |
| IMPLANT | implant |
| IN | injectable |
| INH | inhalant, inhaler |
| INHA | inhaler |
| INH AER | inhalant aerosol |
| INHAL | inhalant |
| INHAL SOL | inhalant solution |
| INHALER | inhaler |
| INHL | inhalant |
| INJ | injectable |
| INJECTION (S) | injection (s) |
| INSERT | insert |
| INST | insert |
| INSULIN | insulin |
| IPA | \* |
| IUD | intrauterine devise |
| IV | intravenous |
| JEL | jelly |
| JELLY | jelly |
| KI | \* |
| KIT | kit |
| L | lotion |
| LAN | \* |
| LANCET | lancet |
| LANCETS | lancets |
| LI | liquid |
| LINIMENT | liniment |
| LIP | \* |
| LIQ | liquid |
| LIQD | liquid |
| LIQUID | liquid |
| LO | \* |
| LOLLIPOP | lollipop |
| LOT | lotion |
| LOTION | lotion |
| LOTN | lotion |
| LOZ | lozenge |
| LOZENGE | lozenge |
| LOZG | lozenge |
| LPOP | lollipop |
| LQCR | liquid, extended-release |
| MALEATE | maleate |
| MASK | mask |
| MCG | microgram |
| MEQ | milliequivalent |
| METER | meter |
| MG | milligram |
| MIS | miscellaneous |
| MISC | miscellaneous |
| MIST | mist |
| MONITOR | monitor |
| MONOH | \* |
| MOUTHWASH | mouthwash |
| NAS | nasal spray |
| NASAL | nasal |
| NASAL INHALER | nasal inhaler |
| NASAL POCKET HL | nasal inhaler, pocket |
| NASAL SOLN | nasal solution |
| NASAL SPR | nasal spray |
| NASAL SPRAY | nasal spray |
| NDL | needle |
| NE | nebulizer |
| NEB | nebulizer |
| NEBU | nebulization solution |
| NEBULIZER | nebulizer |
| NEEDLE | needle |
| NEEDLES | needles |
| NHL | \* |
| NMA | enema |
| NMO | nanomole, millimicromole |
| NOP | \* |
| NOS | \* |
| NOSE DROPS | nose drops |
| ODR | ophthalmic drop (ointment) |
| ODT | oral disintegrating tablet |
| OIL | oil |
| OIN | ointment |
| OINT | ointment |
| OINT TOP | topical ointment |
| OINTA | ointment with applicator |
| OINTMENT | ointment |
| OLN | \* |
| OMB | \* |
| ONT | ointment |
| OP | ophthalmic solution |
| OP DROPS | ophthalmic drops |
| OP SOL | ophthalmic solution |
| OPA | \* |
| OPH | ophthalmic |
| OPH S | ophthalmic solution or suspension |
| OPH SOL | ophthalmic solution |
| OPH SOLN | ophthalmic solution |
| OPHT SOL | ophthalmic solution |
| OPHTH DROP (S) | ophthalmic drops |
| OPHTH OINT | ophthalmic ointment |
| OPHTH SOLN | ophthalmic solution |
| OPT SLN | ophthalmic solution |
| OPT SOL | ophthalmic solution |
| OPTH | ophthalmic solution or suspension or ointment |
| OPTH S | ophthalmic solution or suspension |
| OPTH SLN | ophthalmic solution |
| OPTH SOL | ophthalmic solution |
| OPTH SUSP | ophthalmic suspension |
| OPTIC | optic |
| ORA | \* |
| ORAL | oral |
| ORAL INHL | oral inhalant |
| ORAL INHALER | oral inhaler |
| ORAL PWD | oral powder |
| ORAL RINSE | oral rinse |
| ORAL SOL | oral solution |
| ORAL SUS | oral suspension |
| ORAL SUSP | oral suspension |
| ORM | \* |
| OSE | \* |
| OTHER | other |
| OTI | otic solution |
| OTIC | otic |
| OTIC SOL | otic solution |
| OTIC SOLN | otic solution |
| OTIC SUS | otic suspension |
| OTIC SUSP | otic suspension |
| PA | tablet pack, pad or patch (varies) |
| PAC | pack |
| PACK | pack |
| PAD | pad |
| PADS | pads |
| PAK | pack |
| PAS | paste |
| PASTE | paste |
| PAT | patch |
| PATCH | patch |
| PATCHES | patches |
| PCH | patch |
| PDI | powder for injection |
| PDR | powder |
| PDS | powder for reconstitution |
| PEDIATRIC DROPS | pediatric drops |
| PEL | pellets |
| PEN | pen |
| PI1 | powder for injection, 1 month |
| PI3 | powder for injection, 3 months |
| PIH | powder for inhalation |
| PKG | package |
| PKT | packet |
| PLASTER | plaster |
| PLEDGETS | pledgets |
| PLLT | pellet |
| PO-SYRUP | syrup by mouth (oral syrup) |
| POD | POD |
| POPSICLE | popsicle |
| POUCH | pouch |
| POW | powder |
| POWD | powder |
| POWDER | powder |
| POWDER/SUSPENS | powder/suspension |
| PRO | prophylactic |
| PST | paste |
| PSTE | paste |
| PT24 | patch, 24 hour |
| PT72 | patch, 72 hour |
| PTCH | patch |
| PTTW | patch, biweekly |
| PTWK | patch, weekly |
| PULVULE | pulvule |
| PWD | powder |
| PWD F/SOL | powder for solution |
| PWDI | powder for injection |
| PWDIE | powder for injection, extended-release |
| PWDR | powder for reconstitution |
| PWDRD | powder for reconstitution, delayed-release |
| RAL | \* |
| RCTL SUPP | rectal suppository |
| RECTAL CREAM | rectal cream |
| REDITABS | reditabs |
| REF | \* |
| RIN | rinse |
| RING | ring |
| RINSE | rinse |
| RMO | \* |
| ROLL | roll |
| RTL | \* |
| S | syrup, suspension, solution (varies) |
| SA CAPS | slow-acting capsules |
| SA TAB | slow-acting tablet |
| SA TABLETS | slow-acting tablets |
| SA TABS | slow-acting tablets |
| SAL | salve |
| SALIC | \* |
| SCRUB | scrub |
| SE | \* |
| SER | extended-release suspension |
| SET | set |
| SGL | soft b23gel cap |
| SHA | shampoo |
| SHAM | shampoo |
| SHAMPOO | shampoo |
| SHMP | shampoo |
| SHOE | shoe |
| SLT | sublingual tablet |
| SL TAB | sublingual tablet |
| SO | solution |
| SOA | soap |
| SOAJ | \* |
| SOCT | \* |
| SOL | solution |
| SOLG | gel forming solution |
| SOLN | solution |
| SOLR | solution, reconstituted |
| SOLUTION | solution |
| SOLU | solution |
| SOPN | \* |
| SOSY | \* |
| SP | spray |
| SPG | sponge |
| SPN | \* |
| SPONGE | sponge |
| SPR | spray |
| SPRAY | spray |
| SQU | \* |
| SRN | syringe |
| ST | \* |
| STA | \* |
| STAT | immediately |
| STK | stick |
| STOCKING | stocking |
| STP | strip |
| STR | strip |
| STRIP | strip |
| STRIPS | strips |
| STRP | strip |
| SU | suspension, solution, suppository, powder, or granules for reconstitution (varies) |
| SUB | sublingual |
| SUBL | tablet, sublingual |
| SUBLINGUAL | sublingual |
| SUP | suppository |
| SUPN | \* |
| SUPP | suppository |
| SUPPOSITORIES | suppositories |
| SUPPOSITORY | suppository |
| SUS | suspension |
| SUS/LIQ | suspension/liquid |
| SUSP | suspension |
| SUSPEN | suspension |
| SUSPENDED RELEASE CAPLET | suspended release caplet |
| SUSPENSION | suspension |
| SUSR | suspension, reconstituted |
| SWA | swab |
| SWAB | swab |
| SWABS | swabs |
| SYG | \* |
| SYP | syrup |
| SYR | syrup |
| SYRG | syringe |
| SYRINGE | syringe |
| SYRP | syrup |
| SYRUP | syrup |
| T | tablet |
| T12 | 12 hour extended-release tablet |
| T12A | 12 hour extended-release tablet |
| T24 | 24 hour extended-release tablet |
| T24A | 24 hour extended-release tablet |
| TA | tablet |
| TAB | tablet |
| TAB CHEW | chewable tablet |
| TAB DR | delayed-release tablet |
| TAB EC | enteric coated tablet |
| TAB SL | slow-acting tablet |
| TAB SUBL | sublingual tablet |
| TABL | tablet |
| TABLET | tablet |
| TABLET CUTTER | tablet cutter |
| TABLET SPLITTER | tablet splitter |
| TABLETS | tablets |
| TABS | tablets |
| TAM | tampon |
| TAP | tape |
| TAPE | tape |
| TB | tablet |
| TB12 | tablet, extended-release 12 hour |
| TB24 | tablet, extended-release 24 hour |
| TBCH | chewable tablet |
| TBCR | tablet, extended-release |
| TBDP | tablet, dispersible |
| TBEC | tablet, delayed-release |
| TBEF | tablet effervescent |
| TBS | tablets |
| TBSL | sublingual tablet |
| TBSO | tablet, soluble |
| TBSR | slow-release tablet |
| TC | tablet, chewable |
| TCP | tablet, coated particles |
| TDM | extended-release film |
| TDR | orally disintegrating tablets |
| TDS | transdermal system |
| TEF | effervescent tablet |
| TER | extended-release tablet |
| TERF | film, extended-release |
| TES | test |
| TEST | test |
| TEST STRIP | test strip |
| TEST STRIPS | test strips |
| TIN | tincture |
| TINC | tincture |
| TOP CREAM | topical cream |
| TOP OINT | topical ointment |
| TOP SOL | topical solution |
| TOP SOLN | topical solution |
| TOPICAL | topical |
| TOPICAL CREAM | topical cream |
| TOPICAL GEL | topical gel |
| TOPICAL OINTMENT | topical ointment |
| TOPICAL SOLUTION | topical solution |
| TRO | troche |
| TROC | troche |
| TROCHE | troche |
| TTB | time release tablet |
| TUB | tube |
| TUBE | tube |
| UNDERWEAR | underwear |
| UNIT DOSE | unit dose |
| UNT | unit |
| VAGINAL CREAM | vaginal cream |
| VAPORIZER | vaporizer |
| VIA | vial |
| VIAL | vial |
| VIAL(S) | vial(s) |
| VIL | vial |
| WAB | \* |
| WAF | wafer |
| WAFR | wafer |
| WALKER | walker |
| WASH | wash |
| WIPES | wipes |
| Z-PAK | z-pak |

\* No definition for the dosage form.

Appendix 2  
Definitions for RXFRMUNT,

Quantity Unit of Medication

Appendix 2

**Definitions for RXFRMUNT, Quantity Unit of Medication**

|  |  |
| --- | --- |
| **Code** | **Description** |
| -1 | inapplicable |
| -7 | refused |
| -8 | don’t know |
| -9 | not ascertained |
| ALCOHOL PADS | alcohol pads |
| CAPLT | caplet |
| CAPS | capsule |
| CC | cubic centimeter |
| EA | each |
| G | gram |
| GELC | \* |
| GM | gram |
| GR | gram |
| INH | inhaler |
| L | liter |
| LANCETS | lancets |
| LOZ | lozenge |
| MCL | microliter |
| MCM | micrometer |
| MCN | \* |
| MG | milligram |
| ML | milliliter |
| MONITOR | monitor |
| NDL | \* |
| OTHER | other |
| PA | \* |
| PT | \* |
| SRN | \* |
| SUP | \* |
| TEST STRIPS | test strips |
| OZ | ounce |
| QT | quart |
| TAB | tablet |

\* No description for the code.

Appendix 3  
Definitions for RXSTRUNT,

Unit of Medication

Appendix 3

**Definitions for RXSTRUNT, Unit of Medication**

| **Abbreviations, Codes and Symbols** | **Definition** |
| --- | --- |
| -7 | refused |
| -8 | don't know |
| -9 | not ascertained |
| % | percent |
| 09 | compound |
| 9HR | 9hr |
| 24HR | 24hr |
| 91 | other specify |
| ACT | actuation |
| ACTIVATION | activation |
| ACTUATION | actuation |
| BLIST | blister |
| B CELL | b cell |
| CC | cubic centimeters |
| CM2 | square centimeter |
| DOSE | dose |
| DROP | drop |
| DRP | drop |
| EL | ELISA (enzyme linked immunosorbent assay) |
| G | gram |
| GM | gram |
| GR | grain |
| HR or HRS | hour, hours |
| INH | inhalation |
| IU | international unit |
| MCG | microgram |
| MEQ | milliequivalent |
| MG | milligram |
| ML | milliliter |
| MM | millimeter |
| MMU | millimass units |
| MU | \* |
| OTHER | other |
| OZ | ounce |
| PACKET | packet |
| PFU | plaque forming units |
| SPRAY | spray |
| SQ CM | square centimeter |
| U or UNIT | units |
| UNT | unit |
| VIAL | vial |

\* No definition for the abbreviations, codes and symbols.

Appendix 4  
Definitions of Therapeutic Class Code

Appendix 4

Definitions of Therapeutic Class Code

| **Therapeutic Class Code** | **Definition** |
| --- | --- |
| -9 | not ascertained |
| -1 | inapplicable |
| 1 | anti-infectives |
| 2 | amebicides |
| 3 | anthelmintics |
| 4 | antifungals |
| 5 | antimalarial agents |
| 6 | antituberculosis agents |
| 7 | antiviral agents |
| 8 | carbapenems |
| 9 | cephalosporins |
| 10 | leprostatics |
| 11 | macrolide derivatives |
| 12 | miscellaneous antibiotics |
| 13 | penicillins |
| 14 | quinolones |
| 15 | sulfonamides |
| 16 | tetracyclines |
| 17 | urinary anti-infectives |
| 18 | aminoglycosides |
| 19 | antihyperlipidemic agents |
| 20 | antineoplastics |
| 21 | alkylating agents |
| 22 | antineoplastic antibiotics |
| 23 | antimetabolites |
| 24 | antineoplastic hormones |
| 25 | miscellaneous antineoplastics |
| 26 | mitotic inhibitors |
| 27 | radiopharmaceuticals |
| 28 | biologicals |
| 30 | antitoxins and antivenins |
| 31 | bacterial vaccines |
| 32 | colony stimulating factors |
| 33 | immune globulins |
| 34 | in vivo diagnostic biologicals |
| 36 | recombinant human erythropoietins |
| 37 | toxoids |
| 38 | viral vaccines |
| 39 | miscellaneous biologicals |
| 40 | cardiovascular agents |
| 41 | agents for hypertensive emergencies |
| 42 | angiotensin converting enzyme inhibitors |
| 43 | antiadrenergic agents, peripherally acting |
| 44 | antiadrenergic agents, centrally acting |
| 45 | antianginal agents |
| 46 | antiarrhythmic agents |
| 47 | beta-adrenergic blocking agents |
| 48 | calcium channel blocking agents |
| 49 | diuretics |
| 50 | inotropic agents |
| 51 | miscellaneous cardiovascular agents |
| 52 | peripheral vasodilators |
| 53 | vasodilators |
| 54 | vasopressors |
| 55 | antihypertensive combinations |
| 56 | angiotensin II inhibitors |
| 57 | central nervous system agents |
| 58 | analgesics |
| 59 | miscellaneous analgesics |
| 60 | narcotic analgesics |
| 61 | nonsteroidal anti-inflammatory agents |
| 62 | salicylates |
| 63 | analgesic combinations |
| 64 | anticonvulsants |
| 65 | antiemetic/antivertigo agents |
| 66 | antiparkinson agents |
| 67 | anxiolytics, sedatives, and hypnotics |
| 68 | barbiturates |
| 69 | benzodiazepines |
| 70 | miscellaneous anxiolytics, sedatives and hypnotics |
| 71 | CNS stimulants |
| 72 | general anesthetics |
| 73 | muscle relaxants |
| 74 | neuromuscular blocking agents |
| 76 | miscellaneous antidepressants |
| 77 | miscellaneous antipsychotic agents |
| 79 | psychotherapeutic combinations |
| 80 | miscellaneous central nervous system agents |
| 81 | coagulation modifiers |
| 82 | anticoagulants |
| 83 | antiplatelet agents |
| 84 | heparin antagonists |
| 85 | miscellaneous coagulation modifiers |
| 86 | thrombolytics |
| 87 | gastrointestinal agents |
| 88 | antacids |
| 89 | anticholinergics/antispasmodics |
| 90 | antidiarrheals |
| 91 | digestive enzymes |
| 92 | gallstone solubilizing agents |
| 93 | GI stimulants |
| 94 | H2 antagonists |
| 95 | laxatives |
| 96 | miscellaneous GI agents |
| 97 | hormones/hormone modifiers |
| 98 | adrenal cortical steroids |
| 99 | antidiabetic agents |
| 100 | miscellaneous hormones |
| 101 | sex hormones |
| 102 | contraceptives |
| 103 | thyroid hormones |
| 104 | immunosuppressive agents |
| 105 | miscellaneous agents |
| 106 | antidotes |
| 107 | chelating agents |
| 108 | cholinergic muscle stimulants |
| 109 | local injectable anesthetics |
| 110 | miscellaneous uncategorized agents |
| 111 | psoralens |
| 112 | radiocontrast agents |
| 113 | genitourinary tract agents |
| 114 | illicit (street) drugs |
| 115 | nutritional products |
| 116 | iron products |
| 117 | minerals and electrolytes |
| 118 | oral nutritional supplements |
| 119 | vitamins |
| 120 | vitamin and mineral combinations |
| 121 | intravenous nutritional products |
| 122 | respiratory agents |
| 123 | antihistamines |
| 124 | antitussives |
| 125 | bronchodilators |
| 126 | methylxanthines |
| 127 | decongestants |
| 128 | expectorants |
| 129 | miscellaneous respiratory agents |
| 130 | respiratory inhalant products |
| 131 | antiasthmatic combinations |
| 132 | upper respiratory combinations |
| 133 | topical agents |
| 134 | anorectal preparations |
| 135 | antiseptic and germicides |
| 136 | dermatological agents |
| 137 | topical anti-infectives |
| 138 | topical steroids |
| 139 | topical anesthetics |
| 140 | miscellaneous topical agents |
| 141 | topical steroids with anti-infectives |
| 143 | topical acne agents |
| 144 | topical antipsoriatics |
| 146 | mouth and throat products |
| 147 | ophthalmic preparations |
| 148 | otic preparations |
| 149 | spermicides |
| 150 | sterile irrigating solutions |
| 151 | vaginal preparations |
| 153 | plasma expanders |
| 154 | loop diuretics |
| 155 | potassium-sparing diuretics |
| 156 | thiazide diuretics |
| 157 | carbonic anhydrase inhibitors |
| 158 | miscellaneous diuretics |
| 159 | first generation cephalosporins |
| 160 | second generation cephalosporins |
| 161 | third generation cephalosporins |
| 162 | fourth generation cephalosporins |
| 163 | ophthalmic anti-infectives |
| 164 | ophthalmic glaucoma agents |
| 165 | ophthalmic steroids |
| 166 | ophthalmic steroids with anti-infectives |
| 167 | ophthalmic anti-inflammatory agents |
| 168 | ophthalmic lubricants and irrigations |
| 169 | miscellaneous ophthalmic agents |
| 170 | otic anti-infectives |
| 171 | otic steroids with anti-infectives |
| 172 | miscellaneous otic agents |
| 173 | HMG-CoA reductase inhibitors |
| 174 | miscellaneous antihyperlipidemic agents |
| 175 | protease inhibitors |
| 176 | NRTIs |
| 177 | miscellaneous antivirals |
| 178 | skeletal muscle relaxants |
| 179 | skeletal muscle relaxant combinations |
| 180 | adrenergic bronchodilators |
| 181 | bronchodilator combinations |
| 182 | androgens and anabolic steroids |
| 183 | estrogens |
| 184 | gonadotropins |
| 185 | progestins |
| 186 | sex hormone combinations |
| 187 | miscellaneous sex hormones |
| 191 | narcotic analgesic combinations |
| 192 | antirheumatics |
| 193 | antimigraine agents |
| 194 | antigout agents |
| 195 | 5HT3 receptor antagonists |
| 196 | phenothiazine antiemetics |
| 197 | anticholinergic antiemetics |
| 198 | miscellaneous antiemetics |
| 199 | hydantoin anticonvulsants |
| 200 | succinimide anticonvulsants |
| 201 | barbiturate anticonvulsants |
| 202 | oxazolidinedione anticonvulsants |
| 203 | benzodiazepine anticonvulsants |
| 204 | miscellaneous anticonvulsants |
| 205 | anticholinergic antiparkinson agents |
| 206 | miscellaneous antiparkinson agents |
| 208 | SSRI antidepressants |
| 209 | tricyclic antidepressants |
| 210 | phenothiazine antipsychotics |
| 211 | platelet aggregation inhibitors |
| 212 | glycoprotein platelet inhibitors |
| 213 | sulfonylureas |
| 214 | biguanides |
| 215 | insulin |
| 216 | alpha-glucosidase inhibitors |
| 217 | bisphosphonates |
| 218 | alternative medicines |
| 219 | nutraceutical products |
| 220 | herbal products |
| 222 | penicillinase resistant penicillins |
| 223 | antipseudomonal penicillins |
| 224 | aminopenicillins |
| 225 | beta-lactamase inhibitors |
| 226 | natural penicillins |
| 227 | NNRTIs |
| 228 | adamantane antivirals |
| 229 | purine nucleosides |
| 230 | aminosalicylates |
| 231 | nicotinic acid derivatives |
| 232 | rifamycin derivatives |
| 233 | streptomyces derivatives |
| 234 | miscellaneous antituberculosis agents |
| 235 | polyenes |
| 236 | azole antifungals |
| 237 | miscellaneous antifungals |
| 238 | antimalarial quinolines |
| 239 | miscellaneous antimalarials |
| 240 | lincomycin derivatives |
| 241 | fibric acid derivatives |
| 242 | psychotherapeutic agents |
| 243 | leukotriene modifiers |
| 244 | nasal lubricants and irrigations |
| 245 | nasal steroids |
| 246 | nasal antihistamines and decongestants |
| 247 | nasal preparations |
| 248 | topical emollients |
| 249 | antidepressants |
| 250 | monoamine oxidase inhibitors |
| 251 | antipsychotics |
| 252 | bile acid sequestrants |
| 253 | anorexiants |
| 254 | immunologic agents |
| 256 | interferons |
| 257 | immunosuppressive monoclonal antibodies |
| 261 | heparins |
| 262 | coumarins and indandiones |
| 263 | impotence agents |
| 264 | urinary antispasmodics |
| 265 | urinary pH modifiers |
| 266 | miscellaneous genitourinary tract agents |
| 267 | ophthalmic antihistamines and decongestants |
| 268 | vaginal anti-infectives |
| 269 | miscellaneous vaginal agents |
| 270 | antipsoriatics |
| 271 | thiazolidinediones |
| 272 | proton pump inhibitors |
| 273 | lung surfactants |
| 274 | cardioselective beta blockers |
| 275 | non-cardioselective beta blockers |
| 276 | dopaminergic antiparkinsonism agents |
| 277 | 5-aminosalicylates |
| 278 | cox-2 inhibitors |
| 279 | gonadotropin-releasing hormone and analogs |
| 280 | thioxanthenes |
| 281 | neuraminidase inhibitors |
| 282 | meglitinides |
| 283 | thrombin inhibitors |
| 284 | viscosupplementation agents |
| 285 | factor Xa inhibitors |
| 286 | mydriatics |
| 287 | ophthalmic anesthetics |
| 288 | 5-alpha-reductase inhibitors |
| 289 | antihyperuricemic agents |
| 290 | topical antibiotics |
| 291 | topical antivirals |
| 292 | topical antifungals |
| 293 | glucose elevating agents |
| 295 | growth hormones |
| 296 | inhaled corticosteroids |
| 297 | mucolytics |
| 298 | mast cell stabilizers |
| 299 | anticholinergic bronchodilators |
| 300 | corticotropin |
| 301 | glucocorticoids |
| 302 | mineralocorticoids |
| 303 | agents for pulmonary hypertension |
| 304 | macrolides |
| 305 | ketolides |
| 306 | phenylpiperazine antidepressants |
| 307 | tetracyclic antidepressants |
| 308 | SSNRI antidepressants |
| 309 | miscellaneous antidiabetic agents |
| 310 | echinocandins |
| 311 | dibenzazepine anticonvulsants |
| 312 | cholinergic agonists |
| 313 | cholinesterase inhibitors |
| 314 | antidiabetic combinations |
| 315 | glycylcyclines |
| 316 | cholesterol absorption inhibitors |
| 317 | antihyperlipidemic combinations |
| 318 | insulin-like growth factor |
| 319 | vasopressin antagonists |
| 320 | smoking cessation agents |
| 321 | ophthalmic diagnostic agents |
| 322 | ophthalmic surgical agents |
| 323 | antineoplastic monoclonal antibodies |
| 324 | antineoplastic interferons |
| 325 | sclerosing agents |
| 327 | antiviral combinations |
| 328 | antimalarial combinations |
| 329 | antituberculosis combinations |
| 330 | antiviral interferons |
| 331 | radiologic agents |
| 332 | radiologic adjuncts |
| 333 | miscellaneous iodinated contrast media |
| 334 | lymphatic staining agents |
| 335 | magnetic resonance imaging contrast media |
| 336 | non-iodinated contrast media |
| 337 | ultrasound contrast media |
| 338 | diagnostic radiopharmaceuticals |
| 339 | therapeutic radiopharmaceuticals |
| 340 | aldosterone receptor antagonists |
| 341 | atypical antipsychotics |
| 342 | renin inhibitors |
| 343 | tyrosine kinase inhibitors |
| 344 | nasal anti-infectives |
| 345 | fatty acid derivative anticonvulsants |
| 346 | gamma-aminobutyric acid reuptake inhibitors |
| 347 | gamma-aminobutyric acid analogs |
| 348 | triazine anticonvulsants |
| 349 | carbamate anticonvulsants |
| 350 | pyrrolidine anticonvulsants |
| 351 | carbonic anhydrase inhibitor anticonvulsants |
| 352 | urea anticonvulsants |
| 353 | anti-angiogenic ophthalmic agents |
| 354 | H. pylori eradication agents |
| 355 | functional bowel disorder agents |
| 356 | serotoninergic neuroenteric modulators |
| 357 | growth hormone receptor blockers |
| 358 | metabolic agents |
| 359 | peripherally acting antiobesity agents |
| 360 | lysosomal enzymes |
| 361 | miscellaneous metabolic agents |
| 362 | chloride channel activators |
| 363 | probiotics |
| 364 | antiviral chemokine receptor antagonist |
| 365 | medical gas |
| 366 | integrase strand transfer inhibitor |
| 368 | non-ionic iodinated contrast media |
| 369 | ionic iodinated contrast media |
| 370 | otic steroids |
| 371 | dipeptidyl peptidase 4 inhibitors |
| 372 | amylin analogs |
| 373 | incretin mimetics |
| 374 | cardiac stressing agents |
| 375 | peripheral opioid receptor antagonists |
| 376 | radiologic conjugating agents |
| 377 | prolactin inhibitors |
| 378 | drugs used in alcohol dependence |
| 379 | next generation cephalosporins |
| 380 | topical debriding agents |
| 381 | topical depigmenting agents |
| 382 | topical antihistamines |
| 383 | antineoplastic detoxifying agents |
| 384 | platelet-stimulating agents |
| 385 | group I antiarrhythmics |
| 386 | group II antiarrhythmics |
| 387 | group III antiarrhythmics |
| 388 | group IV antiarrhythmics |
| 389 | group V antiarrhythmics |
| 390 | hematopoietic stem cell mobilizer |
| 391 | mTOR kinase inhibitors |
| 392 | otic anesthetics |
| 393 | cerumenolytics |
| 394 | topical astringents |
| 395 | topical keratolytics |
| 396 | prostaglandin D2 antagonists |
| 397 | multikinase inhibitors |
| 398 | BCR-ABL tyrosine kinase inhibitors |
| 399 | CD52 monoclonal antibodies |
| 400 | CD33 monoclonal antibodies |
| 401 | CD20 monoclonal antibodies |
| 402 | VEGF/VEGFR inhibitors |
| 403 | mTOR inhibitors |
| 404 | EGFR inhibitors |
| 405 | HER2 inhibitors |
| 406 | glycopeptide antibiotics |
| 407 | inhaled anti-infectives |
| 408 | histone deacetylase inhibitors |
| 409 | bone resorption inhibitors |
| 410 | adrenal corticosteroid inhibitors |
| 411 | calcitonin |
| 412 | uterotonic agents |
| 413 | antigonadotropic agents |
| 414 | antidiuretic hormones |
| 415 | miscellaneous bone resorption inhibitors |
| 416 | somatostatin and somatostatin analogs |
| 417 | selective estrogen receptor modulators |
| 418 | parathyroid hormone and analogs |
| 419 | gonadotropin-releasing hormone antagonists |
| 420 | antiandrogens |
| 422 | antithyroid agents |
| 423 | aromatase inhibitors |
| 424 | estrogen receptor antagonists |
| 426 | synthetic ovulation stimulants |
| 427 | tocolytic agents |
| 428 | progesterone receptor modulators |
| 429 | trifunctional monoclonal antibodies |
| 430 | anticholinergic chronotropic agents |
| 431 | anti-CTLA-4 monoclonal antibodies |
| 432 | vaccine combinations |
| 433 | Catecholamines |
| 435 | selective phosphodiesterase-4 inhibitors |
| 437 | Immunostimulants |
| 438 | Interleukins |
| 439 | other immunostimulants |
| 440 | therapeutic vaccines |
| 441 | calcineurin inhibitors |
| 442 | TNF alfa inhibitors |
| 443 | interleukin inhibitors |
| 444 | selective immunosuppressants |
| 445 | other immunosuppressants |
| 446 | neuronal potassium channel openers |
| 447 | CD30 monoclonal antibodies |
| 448 | topical non-steroidal anti-inflammatories |
| 449 | hedgehog pathway inhibitors |
| 450 | topical antineoplastics |
| 451 | topical photochemotherapeutics |
| 452 | CFTR potentiators |
| 453 | topical rubefacient |
| 454 | proteasome inhibitors |
| 455 | guanylate cyclase-c agonists |
| 456 | ampa receptor antagonists |
| 457 | hydrazide derivatives |
| 458 | sglt-2 inhibitors |
| 459 | urea cycle disorder agents |
| 460 | phosphate binders |
| 461 | topical anti-rosacea agents |
| 462 | allergenics |
| 463 | protease-activated receptor-1 antagonists |
| 464 | miscellaneous diagnostic dyes |
| 465 | diarylquinolines |
| 466 | bone morphogenetic proteins |
| 467 | ace inhibitors with thiazides |
| 468 | antiadrenergic agents (central) with thiazides |
| 469 | antiadrenergic agents (peripheral) with thiazides |
| 470 | miscellaneous antihypertensive combinations |
| 472 | beta blockers with thiazides |
| 473 | angiotensin II inhibitors with thiazides |
| 474 | beta blockers with calcium channel blockers |
| 475 | potassium sparing diuretics with thiazides |
| 476 | ace inhibitors with calcium channel blocking agents |
| 479 | angiotensin II inhibitors with calcium channel blockers |
| 480 | antiviral boosters |
| 481 | NK1 receptor antagonists |
| 482 | angiotensin receptor blockers and neprilysin inhibitors |
| 483 | neprilysin inhibitors |
| 484 | PCSK9 inhibitors |
| 485 | NS5A inhibitors |
| 486 | oxazolidinone antibiotics |
| 487 | cftr combinations |
| 488 | anticoagulant reversal agents |
| 489 | CD38 monoclonal antibodies |
| 490 | peripheral opioid receptor mixed agonists/antagonists |
| 491 | local injectable anesthetics with corticosteroids |