

**MEPS HC-206I:
Appendix to MEPS 2018 Event Files
HC-206A - HC-206H**

August 2020

The MEPS instrument design changed beginning in Spring of 2018, affecting Panel 23 Round 1, Panel 22 Round 3, and Panel 21 Round 5. For the Full-Year 2017 PUFs, the Panel 22 Round 3 and Panel 21 Round 5 data were transformed to the degree possible to conform to the previous design.

The Full-Year 2018 PUFs are the first year all rounds of data were collected with the re-designed instrument, and no data were transformed to conform to the previous design. In addition, the value -9 NOT ASCERTAINED was removed as an allowable value in the Full-Year 2018 PUFs. The new value -15 CANNOT BE COMPUTED has been added to the Full Year 2018 PUFs. **Data users should be aware of possible impacts on the data and especially trend analysis for these data years due to the design transition.**

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A. Data Use Agreement

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

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

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

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

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

B. Background

1.0 Household Component

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

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

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

2.0 Medical Provider Component

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

3.0 Survey Management and Data Collection

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

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports, micro data files, and tables via the [MEPS website](#).

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

C. Technical and Programming Information

1.0 General Information

This documentation describes the MEPS Public Use Release HC-206I, which is the Appendix to MEPS releases HC-206A through HC-206H. This release contains two data files, both of which are provided in ASCII (with related SAS, SPSS, and Stata programming statements and data user information) and SAS versions: 1) the condition-event link file; and 2) the prescribed medicines-event link file. Also included in this release are the MEPS 2018 condition-event frequency tables.

This documentation offers a brief overview of the content and structure of the files and the accompanying codebook. It contains the following sections:

- Data File Information
- Merging/Linking MEPS Data Files
- Sample SAS Jobs for Linking
- Sample STATA Jobs for Linking

For more information on MEPS HC sample design see Chowdhury, S.R., Machlin, S.R., Gwet, K.L. [Sample Designs of the Medical Expenditure Panel Survey Household Component, 1996–2006 and 2007–2016. Methodology Report #33.](#) January 2019. Agency for Healthcare Research and Quality, Rockville, MD. For information on the MEPS MPC design, see RTI International (2019). *Medical Provider Component (MEPS-MPC) Methodology Report 2017 Data Collection.* Rockville, MD. Agency for Healthcare Research and Quality. A copy of the survey instruments used to collect the information on this file, are available on the [MEPS website](#).

2.0 Data File Information

This public use data set consists of two data files containing variables for linkage of the MEPS 2018 event-level data files. File 1, the H206IF1 or CLNK file, is used for linking the MEPS Conditions file with the MEPS event files; File 2, the H206IF2 or RXLK file, is used for linking the MEPS prescribed medicines event file with other MEPS event files.

The CLNK file contains 6 variables and has a logical record length of 71 with an additional 2-byte carriage return/line feed at the end of each record. The RXLK file contains 6 variables and has a logical record length of 77 with an additional 2-byte carriage return/line feed at the end of each record.

2.1 Codebook Format

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

Identifier	Description
Name	Variable name
Description	Variable descriptor
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

2.2 Variable Naming and Source

In general, variable names reflect the content of the variable. All variables contained on Files 1 and 2 were derived from the CAPI.

2.3 Contents of File 1: Condition-Event Link File (CLNK)

File 1 (H206IF1) or the CLNK file, contains the variables needed to link each record on the MEPS 2018 Conditions file, HC-207, with one or more records on the MEPS 2018 event files, HC-206A, and HC-206D through HC-206H. Section 3.0 contains additional information on completing this linkage.

The 10-character variable DUPERSID uniquely identifies each person represented on the file. The variable DUPERSID is the combination of the variables DUID and PID. As part of the new CAPI design, the lengths of the ID variables have changed in the file. The additional 2 bytes in the IDs resulted from adding a 2-digit panel number to the beginning of all the IDs. Analysts wishing to pool data years 2017 and 2018 should add panel numbers to the beginning of Panel 22 Year 2017 ID variables, or remove the 2-digit panel number at the beginning of Panel 22 Year 2018 ID variables to ensure they identify the same person. There may be more than one record on the CLNK file for a specific DUPERSID value.

CONDIDX is the 13-digit ID that uniquely identifies each condition for a person and corresponds to a unique record on the MEPS 2018 Conditions file, HC-207. The variable CONDIDX is the combination of the variables DUPERSID and CONDN (see HC-207 for a description of CONDN). In addition to the 2-digit panel number added in the beginning of CONDIDX, the CONDN portion of CONDIDX is one less byte (4 bytes to 3 bytes). There may be more than one record on the CLNK file for a specific CONDIDX value.

EVNTIDX is the 16-digit number that uniquely identifies each event for a person and corresponds to a unique record on one of the MEPS 2018 event files, HC-206B through HC-206H. (EVNTIDX is not included on the 2018 Prescribed Medicines event file, HC-206A; rather, on this file the variable for linking with EVNTIDX on the CLNK file is LINKIDX.) There may be more than one record on the CLNK file for a specific EVNTIDX value. As part of the new CAPI design, the length of the EVNTIDX has changed to 16 in the file. In addition to the 2-digit panel number added in the beginning, a 2-digit event type number is added to the end.

The event type number indicates the type of event record and has been rolled up into the following values:

- 01 = MVIS – office-based medical provider visit event on MEPS release HC-206G or
OPAT – outpatient department visit event on MEPS release HC-206F or
EROM – emergency room visit event on MEPS release HC-206E or
STAZ – inpatient hospital stay event on MEPS release HC-206D or
HVIS – home health visit event on MEPS release HC-206H
- 03 = PMED – prescribed medicine event on MEPS release HC-206A

CLNKIDX is the 29-digit number that uniquely identifies each record on the CLNK file and is the combination of CONDIDX + EVNTIDX. There is just one record on this file for each value of CLNKIDX, i.e., each unique combination of CONDIDX + EVNTIDX. Due to the changes in length of CONDIDX and EVNTIDX, CLNKIDX is now 29 bytes.

The variable EVENTYPE indicates the type of event record, and has the following values:

- 1 = MVIS – office-based medical provider visit event contained on MEPS release HC-206G
- 2 = OPAT – outpatient department visit event contained on MEPS release HC-206F
- 3 = EROM – emergency room visit event contained on MEPS release HC-206E
- 4 = STAZ – inpatient hospital stay event contained on MEPS release HC-206D
- 7 = HVIS – home health visit event contained on MEPS release HC-206H
- 8 = PMED – prescribed medicines event contained on MEPS release HC-206A

PANEL is a constructed variable used to specify the panel number for the interview in which the condition was reported. PANEL will indicate either Panel 22 or Panel 23. Panel 22 is the panel that started in 2017, and Panel 23 is the panel that started in 2018. Beginning in 2018, the panel number is included as the first two digits of the DUID and DUPERSID.

2.4 Contents of File 2: Prescribed Medicines-Event Link File (RXLK)

File 2 (H206IF2) or the RXLK file, contains the variables needed to link each record on the MEPS 2018 Prescribed Medicines file, HC-206A, with one or more records on the MEPS 2018 event files, HC-206B and HC-206D through HC-206G. Section 3.0 contains additional information on completing this linkage.

The 10-character variable DUPERSID uniquely identifies each person represented on the file. The variable DUPERSID is the combination of the variables DUID and PID. As part of the new CAPI design, the length of the ID variables has changed in the file. The additional 2 bytes in the IDs resulted from adding a 2-digit panel number to the beginning of all the IDs. There may be more than one record on the RXLK file for a specific DUPERSID value.

EVNTIDX is the 16-digit number that uniquely identifies each event for a person and corresponds to a unique record on one of the MEPS 2018 event files, HC-206B through HC-206G. There may be more than one record on the RXLK file for a specific EVNTIDX value. As part of the new CAPI design, the length of the EVNTIDX has changed to 16 in the file. In addition to the 2-digit panel number added in the beginning, a 2-digit event type number, 01, is added to the end.

LINKIDX is the 16-digit number that identifies the record(s) on the prescribed medicines file, HC-206A that link to an event record. There may be more than one record on the RXLK file for a specific LINKIDX value, and there may be more than one record on the HC-206A file for a specific LINKIDX value. As part of the new CAPI design, the length of the LINKIDX has changed to 16 in the file. In addition to the 2-digit panel number added in the beginning, a 2-digit event type number, 03, is added to the end.

RXLKIDX is the 32-digit number that uniquely identifies each record on the RXLK file, and is the combination of EVNTIDX + LINKIDX. There is just one record on this file for each value of RXLKIDX, i.e., each unique combination of EVNTIDX + LINKIDX. Due to the changes in length of EVNTIDX and LINKIDX, RXLKIDX is now 32 bytes.

The variable EVENTYPE indicates the type of event record and has the following values:

- 1 = MVIS – office-based medical provider visit event contained on MEPS release HC-206G
- 2 = OPAT – outpatient department visit event contained on MEPS release HC-206F
- 3 = EROM – emergency room visit event contained on MEPS release HC-206E
- 4 = STAZ – inpatient hospital stay event contained on MEPS release HC-206D

For 1996-2004, records for purchases of insulin and diabetic supplies in a round were included in the Other Medical Expenses event files. Beginning with the 2005 file, these records are not included in the Other Medical Expenses file because the expenditures have always been included in the Prescribed Medicines file. As a consequence, there are no records in this file where the variable EVENTYPE = 6, the value used in 1996-2004 to identify OMED type of event record. Beginning in 2018, prescription medication is no longer asked for dental visit events. Therefore, there are no records in this file where the variable EVENTYPE = 5.

PANEL is a constructed variable used to specify the panel number for the interview in which the condition was reported. PANEL will indicate either Panel 22 or Panel 23. Panel 22 is the panel that started in 2017, and Panel 23 is the panel that started in 2018. Beginning in 2018, the panel number is included as the first two digits of the DUID and DUPERSID.

2.5 2018 Condition-Event Frequency Table

Table 1 included with this document contains the MEPS 2018 Condition-Event Frequencies. The frequency tables contain unweighted and weighted counts of records on the MEPS 2018 event files, HC-206A through HC-206H, for each of the condition codes contained on the MEPS 2018 Conditions file, HC-207.

Beginning in 2018, Clinical Classification Software Refined (CCSR) codes will be used alongside ICD-10-CM diagnosis codes to group medical conditions into clinically meaningful categories. One ICD-10-CM diagnosis code may map to up to five CCSR categories. However, for the purposes of MEPS, one ICD-10-CM diagnosis code may map to up to three CCSR categories (CCSR1X, CCSR2X, CCSR3X) using the v2019.1 release of the CCSR for ICD-10-CM diagnoses. The CCSR categories are listed in alphabetical order and do not indicate a primary and secondary diagnosis. For more information on CCSR, visit the [user guide](#) for CCSR.

3.0 Merging/Linking MEPS Data Files

This section provides information on using each of the two HC-206I files, RXLK and CLNK, to link with the files contained in MEPS releases HC-207 and HC-206A, HC-206B, and HC-206D through HC-206H. The linking procedure is described using several examples of deriving MEPS-based estimates. Also included in this section are several caveats related to using the RXLK and CLNK files.

3.1 Example A: Using the CLNK (HC-206IF1) and RXLK (HC-206IF2) Files with the Medical Conditions File (HC-207), the Prescribed Medicines and Office-Based Medical Provider Visits Event Files (HC-206A and HC-206G)

This example calculates the total expenditures for prescribed medicines associated with office-based medical provider visits for asthma, using these files: the Conditions file (HC-207), the CLNK file (HC-206IF1), the office-based medical provider visit event file (HC-206G), the RXLK file (HC-206IF2), and the prescribed medicines event file (HC-206A). It includes the following major steps:

1. From the HC-207 file, select only records with condition coded as asthma.
2. Use the CLNK file to obtain unique record IDs of events which are linked to each of the selected asthma condition records.
3. From the HC-206G file, select records for office-based medical provider visits for persons with a positive weight.
4. Using the selected record IDs obtained from the CLNK file, with the selected HC-206G records, identify only those visits which were for asthma.
5. Use the RXLK file with the selected visit records which were for asthma to obtain unique record IDs of prescribed medicine records from file HC-206A linked to those visits.
6. Using these record IDs, obtain the linked records from the HC-206A file and calculate the weighted mean of the expenditure variable.

Attachment 1 contains a copy of the SAS job for this example.

Attachment 2 contains a copy of the STATA job for this example.

3.2 Example B: Using the CLNK File (HC-206IF1) with the Medical Conditions File (HC-207) and the Prescribed Medicines Event File (HC-206A)

This example calculates the total expenditure for prescribed medicines associated with asthma, using the Conditions file (HC-207), the CLNK file (HC-206IF1) and the prescribed medicines event file (HC-206A). It includes the following major steps:

1. From the HC-207 file, select only records with condition coded as asthma.

2. Use the CLNK file to obtain unique record IDs of events which are linked to each of the asthma condition records.
3. Using these record IDs, obtain linked records from the HC-206A file and calculate the weighted mean of the expenditure variable.

Attachment 1 contains a copy of the SAS job for this example.

Attachment 2 contains a copy of the STATA job for this example.

3.3 Example C: Using the CLNK File (HC-206IF1) with the Medical Conditions File (HC-207) and Office-Based Medical Provider Visits Event File (HC-206G)

This example calculates the total expenditures for office-based medical provider visits associated with asthma, using the Conditions file (HC-207), the CLNK file (HC-206IF1) and the office-based medical provider visits event file (HC-206G). It includes the following major steps:

1. From the HC-207 file, select only records with condition coded as asthma.
2. Use the CLNK file to obtain unique record IDs of events which are linked to each of the asthma condition records.
3. From the HC-206G file, select records for office-based medical provider visits for persons with a positive weight.
4. Using the selected record IDs obtained from the CLNK file, with the selected HC-206G records, identify only those visits which were for asthma and calculate the weighted mean of the expenditure variable.

Attachment 1 contains a copy of the SAS job for this example.

Attachment 2 contains a copy of the STATA job for this example.

3.4 Limitations/Caveats of the CLNK File

When using the CLNK file, analysts should keep in mind that (1) conditions are self-reported and (2) there may be multiple conditions associated with an event. Users should also note that not all events link to the Conditions file.

3.5 Limitations/Caveats of the RXLK File

When using the RXLK file, analysts should keep in mind that one event record can link to more than one prescribed medicine record. Conversely, a prescribed medicine record may link to more than one event record in the same event file and/or more than one event record in other event files. When this occurs, it is up to the analyst to determine how the prescribed medicine expenditures should be allocated among those medical events.

3.6 National Health Interview Survey

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

3.7 Using MEPS Data for Trend Analysis

MEPS began in 1996, and the utility of the survey for analyzing health care trends expands with each additional year of data; however, there are a variety of methodological and statistical considerations when examining trends over time using MEPS. Tests of statistical significance 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. For example, as a result of improved methods for collecting priority conditions data implemented in 2007, prevalence measures prior to 2007 are not comparable to those from 2007 and beyond for many conditions. Users should refer to the documentation for the conditions file (HC-207) for details.

With respect to methodological considerations, in 2013 MEPS introduced an effort to obtain more complete information about health care utilization from MEPS respondents with full implementation in early 2014. This effort likely resulted in improved data quality and a reduction in underreporting in 2014, but could have some modest impact on analyses involving trends in utilization across years. The aforementioned change in the NHIS sample design in 2016 could also potentially affect trend analyses. The new NHIS sample design is based on more up-to-date information related to the distribution of housing units across the U.S. As a result, it can be expected to better cover the full U.S. civilian, noninstitutionalized population, the target population for MEPS, as well as many of its subpopulations. Better coverage of the target population helps to reduce the potential for bias in both NHIS and MEPS estimates.

Another change with the potential to affect trend analyses involved modifications to the MEPS instrument design and data collection process. These were introduced in the Spring of 2018 and thus affected data beginning with Round 1 of Panel 23, Round 3 of Panel 22, and Round 5 of Panel 21. Since the Full Year 2017 PUFs were established from data collected in Rounds 1-3 of Panel 22 and Rounds 3-5 of Panel 21, they reflected two different instrument designs. In order to mitigate the effect of such differences within the same full year file, the Panel 22, Round 3 data and the Panel 21 Round 5 data were transformed to make them as consistent as possible with data collected under the previous design. The changes in the instrument were designed to make the data collection effort more efficient and easy to administer. In addition, expectations were that data on some items, such as those related to health care events, would be more complete with the potential for identifying more events. Increases in service use reported since the implementation of these changes are consistent with these expectations.

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

3.8 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 Data Files at the [AHRQ website](#).

Attachment 1:

Sample SAS Jobs for Linking Example

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software 9.4 (TS1M6)

NOTE: This session is executing on the X64_10PRO platform.

NOTE: SAS initialization used:

real time	0.36 seconds
cpu time	0.23 seconds

NOTE: AUTOEXEC processing beginning; file is C:\Program Files\SAS\SASMISC\autoexec_9464.sas.

NOTE: AUTOEXEC processing completed.

```
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17      ods rtf file = 'C:\Data\sampleA.rtf' BODYTITLE;
```

NOTE: Writing RTF Body file: C:\Data\sampleA.rtf

```
18
19      ods noproctitle;
20
21      OPTIONS LS=132 PS=59;
22
23      %let yr=18;
24      %let evntnum=206; /* BE SURE TO UPDTE FOR CURRENT FY */
25      %let condnum=207; /* BE SURE TO UPDTE FOR CURRENT FY */
26
27      TITLE1 "HC-&evntnum.I";
28      TITLE2 "Sample SAS Job for Example A";
29
30      LIBNAME IN "C:\Data";
```

NOTE: Libref IN was successfully assigned as follows:

Engine: V9
Physical Name: C:\Data

31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

```

*****
* Calculate the expenditures for prescribed medicines associated with medical visits for asthma.
*****;

PROC FORMAT;
  VALUE EVENTYPE
    1 = "1 MVIS"
    2 = "2 OPAT"
    3 = "3 EROM"
    4 = "4 STAZ"
    7 = "7 HVIS"
    8 = "8 PMED";

```

NOTE: Format EVENTYPE has been output.

RUN;

NOTE: PROCEDURE FORMAT used (Total process time):

real time	0.00 seconds
cpu time	0.01 seconds

48
49
50
51
52
53
54
55
56

```

*-----
* Get condition records coded as asthma.
*-----;

DATA ASCONDS;
  SET IN.H&condnum (KEEP=CONDIDX CCSR1X CCSR2X CCSR3X ICD10CDX);
  IF CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1';

```

NOTE: There were 94936 observations read from the data set IN.H207.
NOTE: The data set WORK.ASCONDS has 2121 observations and 5 variables.
NOTE: Compressing data set WORK.ASCONDS increased size by 50.00 percent.
Compressed is 3 pages; un-compressed would require 2 pages.

NOTE: DATA statement used (Total process time):

real time	0.78 seconds
cpu time	0.04 seconds

57
58
59
60
61

```

*-----
* Get the events linked to each of the asthma condition records.
*-----;

PROC SORT DATA=ASCONDS; BY CONDIDX; RUN;

```

NOTE: There were 2121 observations read from the data set WORK.ASCONDS.
NOTE: SAS sort was used.
NOTE: The data set WORK.ASCONDS has 2121 observations and 5 variables.
NOTE: Compressing data set WORK.ASCONDS increased size by 50.00 percent.
Compressed is 3 pages; un-compressed would require 2 pages.
NOTE: PROCEDURE SORT used (Total process time):

```
real time      0.00 seconds
cpu time       0.00 seconds
```

```
62
63     proc print data=asconds (obs=50);
64         title3 "sample print of work.asconds - sorted by condidx";
65         title4 "COND (H&condnum) records where CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1'";
66     run;
```

```
NOTE: There were 50 observations read from the data set WORK.ASCONDS.
NOTE: The PROCEDURE PRINT printed page 1.
NOTE: PROCEDURE PRINT used (Total process time):
real time      0.03 seconds
cpu time       0.04 seconds
```

```
67
68     PROC SORT DATA=IN.H&evntnum.IF1 OUT=CLNK; BY CONDIDX; RUN;
```

```
NOTE: There were 407366 observations read from the data set IN.H206IF1.
NOTE: SAS threaded sort was used.
NOTE: The data set WORK.CLNK has 407366 observations and 6 variables.
NOTE: Compressing data set WORK.CLNK increased size by 0.73 percent.
NOTE: Compressed is 553 pages; un-compressed would require 549 pages.
NOTE: PROCEDURE SORT used (Total process time):
real time      0.98 seconds
cpu time       0.40 seconds
```

```
69
70     DATA ASCLNKS;
71         MERGE CLNK (IN=INCLNK KEEP=CONDIDX EVNTIDX EVENTYPE)
72             ASCONDS (IN=INASCOND KEEP=CONDIDX);
73         BY CONDIDX;
74         IF INCLNK & INASCOND;
75     RUN;
```

```
NOTE: There were 407366 observations read from the data set WORK.CLNK.
NOTE: There were 2121 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCLNKS has 8854 observations and 3 variables.
NOTE: Compressing data set WORK.ASCLNKS increased size by 33.33 percent.
NOTE: Compressed is 8 pages; un-compressed would require 6 pages.
NOTE: DATA statement used (Total process time):
real time      0.12 seconds
cpu time       0.12 seconds
```

```
76
77     proc report data=asclnks(obs=75) nowd headskip;
78         define condidx /'CONDIDX' order;
79         define evntidx /'EVNTIDX';
80         define eventype /'EVENTYPE';
81         break after condidx / skip;
82         format eventype eventype.;
83         title3 "sample print of work.asclnks - sorted by condidx";
84         title4 "events linked to asthma condition records";
```

85 run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 75 observations read from the data set WORK.ASCLNKS.
NOTE: The PROCEDURE REPORT printed pages 2-3.
NOTE: PROCEDURE REPORT used (Total process time):
 real time 0.01 seconds
 cpu time 0.01 seconds

86
87 PROC SORT DATA=ASCLNKS; BY EVNTIDX; RUN;

NOTE: There were 8854 observations read from the data set WORK.ASCLNKS.
NOTE: SAS sort was used.
NOTE: The data set WORK.ASCLNKS has 8854 observations and 3 variables.
NOTE: Compressing data set WORK.ASCLNKS increased size by 33.33 percent.
 Compressed is 8 pages; un-compressed would require 6 pages.
NOTE: PROCEDURE SORT used (Total process time):
 real time 0.01 seconds
 cpu time 0.01 seconds

88
89 proc print data=asclnks (obs=50);
90 format eventype eventype.;
91 title3 "sample print of work.asclnks - sorted by evntidx";
92 run;

NOTE: There were 50 observations read from the data set WORK.ASCLNKS.
NOTE: The PROCEDURE PRINT printed page 4.
NOTE: PROCEDURE PRINT used (Total process time):
 real time 0.00 seconds
 cpu time 0.01 seconds

93
94 DATA ASCLNKS;
95 SET ASCLNKS (KEEP=EVNTIDX EVENTYPE);
96 BY EVNTIDX;
97 IF FIRST.EVNTIDX;
98 RUN;

NOTE: There were 8854 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 8852 observations and 2 variables.
NOTE: Compressing data set WORK.ASCLNKS increased size by 50.00 percent.
 Compressed is 6 pages; un-compressed would require 4 pages.
NOTE: DATA statement used (Total process time):
 real time 0.00 seconds
 cpu time 0.01 seconds

99
100 proc print data=asclnks (obs=50);
101 title3 "sample print of unique evntidxs from work.asclnks";
102 format eventype eventype.;
103 run;

NOTE: There were 50 observations read from the data set WORK.ASCLNKS.

NOTE: The PROCEDURE PRINT printed page 5.

NOTE: PROCEDURE PRINT used (Total process time):

real time	0.00 seconds
cpu time	0.00 seconds

```

104
105 *-----
106 * Get office based visits (i.e. MVIS events) for persons with positive weights.
107 *-----;
108 DATA MVIS;
109     SET IN.H&evntnum.G (KEEP=EVNTIDX PERWT&yr.F);
110     IF PERWT&yr.F > 0;
111     RUN;

```

NOTE: There were 193439 observations read from the data set IN.H206G.

NOTE: The data set WORK.MVIS has 190652 observations and 2 variables.

NOTE: Compressing data set WORK.MVIS increased size by 49.30 percent.

Compressed is 106 pages; un-compressed would require 71 pages.

NOTE: DATA statement used (Total process time):

real time	2.19 seconds
cpu time	0.04 seconds

```

112
113     PROC SORT DATA=MVIS; BY EVNTIDX; RUN;

```

NOTE: There were 190652 observations read from the data set WORK.MVIS.

NOTE: SAS threaded sort was used.

NOTE: The data set WORK.MVIS has 190652 observations and 2 variables.

NOTE: Compressing data set WORK.MVIS increased size by 49.30 percent.

Compressed is 106 pages; un-compressed would require 71 pages.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.07 seconds
cpu time	0.12 seconds

```

114
115 *-----
116 * Identify MVIS events which were for asthma.
117 *-----;
118 DATA ASMVIS;
119     MERGE ASCLNKS (IN=INASCLNK)
120           MVIS     (IN=INMVIS KEEP=EVNTIDX);
121     BY EVNTIDX;
122     IF INASCLNK & INMVIS;
123     RUN;

```

NOTE: There were 8852 observations read from the data set WORK.ASCLNKS.

NOTE: There were 190652 observations read from the data set WORK.MVIS.

NOTE: The data set WORK.ASMVIS has 1565 observations and 2 variables.

NOTE: Compressing data set WORK.ASMVIS increased size by 100.00 percent.

Compressed is 2 pages; un-compressed would require 1 pages.

NOTE: DATA statement used (Total process time):

real time	0.05 seconds
-----------	--------------

cpu time 0.04 seconds

```

124
125     proc print data=asmvis (obs=50);
126         format eventype eventype.;
127         title3 "sample print of work.asmvis";
128         title4 "unique evtidxs from work.asclnks that are MVIS (HC-&evntnum.G) events";
129     run;

```

NOTE: There were 50 observations read from the data set WORK.ASMVIS.

NOTE: The PROCEDURE PRINT printed page 6.

NOTE: PROCEDURE PRINT used (Total process time):

real time 0.00 seconds
cpu time 0.00 seconds

```

130
131     *-----
132     * Get PMED IDs linked to the MVIS events which were for asthma.
133     *-----;
134     PROC SORT DATA=IN.H&evntnum.IF2 OUT=RXLK; BY EVNTIDX; RUN;

```

NOTE: There were 52641 observations read from the data set IN.H206IF2.

NOTE: SAS sort was used.

NOTE: The data set WORK.RXLK has 52641 observations and 6 variables.

NOTE: Compressing data set WORK.RXLK decreased size by 0.00 percent.

Compressed is 78 pages; un-compressed would require 78 pages.

NOTE: PROCEDURE SORT used (Total process time):

real time 0.10 seconds
cpu time 0.04 seconds

```

135
136     proc report data=rxlk (obs=140 keep=evntidx linkidx eventype) nowd headskip;
137         define evntidx /'EVNTIDX' order;
138         define linkidx /'LINKIDX';
139         define eventype /'EVENTYPE';
140         break after evntidx / skip;
141         format eventype eventype.;
142         title3 "sample print of work.rxlk - sorted by evntidx";
143         title4 "Rx+event link file records (HC-&evntnum.IF2)";
144     run;

```

NOTE: Multiple concurrent threads will be used to summarize data.

NOTE: There were 140 observations read from the data set WORK.RXLK.

NOTE: The PROCEDURE REPORT printed pages 7-11.

NOTE: PROCEDURE REPORT used (Total process time):

real time 0.01 seconds
cpu time 0.03 seconds

```

145
146     DATA PMEDIDS;
147         MERGE RXLK (IN=INRXLK KEEP=EVNTIDX LINKIDX EVENTYPE)
148             ASMVIS(IN=INASMVIS KEEP=EVNTIDX);
149         BY EVNTIDX;

```

```
150         IF INRXLK & INASMVIS;
151         RUN;
```

NOTE: There were 52641 observations read from the data set WORK.RXLK.
NOTE: There were 1565 observations read from the data set WORK.ASMVIS.
NOTE: The data set WORK.PMEDIDS has 1255 observations and 3 variables.
NOTE: Compressing data set WORK.PMEDIDS increased size by 100.00 percent.
Compressed is 2 pages; un-compressed would require 1 pages.
NOTE: DATA statement used (Total process time):

real time	0.02 seconds
cpu time	0.01 seconds

```
152
153         proc report data=pmedids (obs=50) nowd headskip;
154             define evntidx  /'EVNTIDX' order;
155             define linkidx  /'LINKIDX';
156             define eventype /'EVENTYPE';
157             break after evntidx / skip;
158             format eventype eventype.;
159             title3 "sample print of work.pmedids - sorted by evntidx";
160             title4 "work.rxlk records for evntidxs in work.asmvis";
161         run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE REPORT printed pages 12-13.
NOTE: PROCEDURE REPORT used (Total process time):

real time	0.01 seconds
cpu time	0.01 seconds

```
162
163         PROC SORT DATA=PMEDIDS; BY LINKIDX; RUN;
```

NOTE: There were 1255 observations read from the data set WORK.PMEDIDS.
NOTE: SAS sort was used.
NOTE: The data set WORK.PMEDIDS has 1255 observations and 3 variables.
NOTE: Compressing data set WORK.PMEDIDS increased size by 100.00 percent.
Compressed is 2 pages; un-compressed would require 1 pages.
NOTE: PROCEDURE SORT used (Total process time):

real time	0.00 seconds
cpu time	0.00 seconds

```
164
165         proc print data=pmedids (obs=50);
166             format eventype eventype.;
167             title3 "sample print of work.pmedids - sorted by linkidx";
168         run;
```

NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE PRINT printed page 14.
NOTE: PROCEDURE PRINT used (Total process time):

real time	0.00 seconds
cpu time	0.00 seconds

```

169
170     DATA PMEDIDS;
171         SET PMEDIDS (KEEP=LINKIDX);
172         BY LINKIDX;
173         IF FIRST.LINKIDX;
174     RUN;

NOTE: There were 1255 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 1245 observations and 1 variables.
NOTE: Compressing data set WORK.PMEDIDS increased size by 100.00 percent.
      Compressed is 2 pages; un-compressed would require 1 pages.
NOTE: DATA statement used (Total process time):
      real time          0.00 seconds
      cpu time           0.00 seconds

```

```

175
176     proc print data=pmedids (obs=50);
177         title3 "sample print of unique linkidxs in work.pmedids";
178     run;

NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE PRINT printed page 15.
NOTE: PROCEDURE PRINT used (Total process time):
      real time          0.00 seconds
      cpu time           0.00 seconds

```

```

179
180     *-----
181     * Get PMED records linked to MVIS events which were for asthma.
182     *-----;
183     PROC SORT DATA=IN.H&evntnum.A OUT=PMED; BY LINKIDX; RUN;

NOTE: There were 319666 observations read from the data set IN.H206A.
NOTE: SAS threaded sort was used.
NOTE: The data set WORK.PMED has 319666 observations and 13 variables.
NOTE: Compressing data set WORK.PMED decreased size by 17.18 percent.
      Compressed is 810 pages; un-compressed would require 978 pages.
NOTE: PROCEDURE SORT used (Total process time):
      real time          2.23 seconds
      cpu time           0.57 seconds

```

```

184
185     DATA MVPMEDS;
186         MERGE PMED (KEEP=LINKIDX RXRECIDX  RXXP&yr.X PERWT&yr.F RXNAME)
187             PMEDIDS (IN=A);
188         BY LINKIDX;
189         IF A;
190     RUN;

NOTE: There were 319666 observations read from the data set WORK.PMED.
NOTE: There were 1245 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.MVPMEDS has 2970 observations and 5 variables.
NOTE: Compressing data set WORK.MVPMEDS decreased size by 0.00 percent.

```

Compressed is 5 pages; un-compressed would require 5 pages.

NOTE: DATA statement used (Total process time):

```
real time      0.11 seconds
cpu time       0.10 seconds
```

```
191
192   proc report data=mvpmeds (obs=200) nowd;
193       column LINKIDX RXRECIDX RXNAME RXXP&yr.X PERWT&yr.F;
194       define linkidx    /'LINKIDX' order;
195       define rxrecidx   /'RXRECIDX';
196       define rxname     /'RXNAME';
197       define rxxp&yr.x  /"RXXP&yr.X" display format=8.2;
198       define PERWT&yr.F /"PERWT&yr.F";
199       break after linkidx / skip;
200       title3 "sample print of work.mvpmeds";
201       title4 "PMED (HC-&evntnum.A) records for unique linkidxs in work.pmedids";
202   run;
```

NOTE: Multiple concurrent threads will be used to summarize data.

NOTE: There were 200 observations read from the data set WORK.MVPMEDS.

NOTE: The PROCEDURE REPORT printed pages 16-21.

NOTE: PROCEDURE REPORT used (Total process time):

```
real time      0.03 seconds
cpu time       0.03 seconds
```

```
203
204   PROC MEANS DATA=MVPMEDS N SUM;
205       VAR RXXP&yr.X;
206       TITLE3 "Total Rx expenditures associated with medical visits for asthma";
207   RUN;
```

NOTE: Multiple concurrent threads will be used to summarize data.

NOTE: There were 2970 observations read from the data set WORK.MVPMEDS.

NOTE: The PROCEDURE MEANS printed page 22.

NOTE: PROCEDURE MEANS used (Total process time):

```
real time      0.00 seconds
cpu time       0.03 seconds
```

```
208
209   PROC MEANS DATA=MVPMEDS N SUM;
210       VAR RXXP&yr.X;
211       WEIGHT PERWT&yr.F;
212       TITLE3 "Total Rx expenditures associated with medical visits for asthma";
213       TITLE5 "Weighted";
214   RUN;
```

NOTE: Multiple concurrent threads will be used to summarize data.

NOTE: There were 2970 observations read from the data set WORK.MVPMEDS.

NOTE: The PROCEDURE MEANS printed page 23.

NOTE: PROCEDURE MEANS used (Total process time):

```
real time      0.00 seconds
cpu time       0.01 seconds
```

```
215
216     ods rtf close;
217
```

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:

real time	7.57 seconds
cpu time	2.10 seconds

Sample SAS Job for Example A

sample print of work.asconds - sorted by condidx

COND (H207) records where CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1'

Obs	CONDIDX	ICD10CDX	CCSR1X	CCSR2X	CCSR3X
1	2290001102002	J45	RSP009	-1	-1
2	2290005103001	J45	RSP009	-1	-1
3	2290009101008	J45	RSP009	-1	-1
4	2290009102004	J45	RSP009	-1	-1
5	2290010101003	J45	RSP009	-1	-1
6	2290010105001	J45	RSP009	-1	-1
7	2290010106001	J45	RSP009	-1	-1
8	2290042102001	J45	RSP009	-1	-1
9	2290051104002	J45	RSP009	-1	-1
10	2290103103009	J45	RSP009	-1	-1
11	2290116101004	J45	RSP009	-1	-1
12	2290119104001	J45	RSP009	-1	-1
13	2290121101003	J45	RSP009	-1	-1
14	2290134104001	J45	RSP009	-1	-1
15	2290150101014	J45	RSP009	-1	-1
16	2290168101005	J45	RSP009	-1	-1
17	2290169102003	J45	RSP009	-1	-1
18	2290186102002	J45	RSP009	-1	-1
19	2290209105001	J45	RSP009	-1	-1
20	2290214101002	J45	RSP009	-1	-1
21	2290244103002	J45	RSP009	-1	-1
22	2290252102005	J45	RSP009	-1	-1
23	2290254101001	J45	RSP009	-1	-1
24	2290278102003	J45	RSP009	-1	-1
25	2290298105001	J45	RSP009	-1	-1
26	2290326101006	J45	RSP009	-1	-1
27	2290326102005	J45	RSP009	-1	-1
28	2290326103001	J45	RSP009	-1	-1
29	2290326104005	J45	RSP009	-1	-1
30	2290344101003	J45	RSP009	-1	-1
31	2290382104001	J45	RSP009	-1	-1
32	2290392102010	J45	RSP009	-1	-1
33	2290393101010	J45	RSP009	-1	-1
34	2290393102001	J45	RSP009	-1	-1
35	2290421102001	J45	RSP009	-1	-1
36	2290428101004	J45	RSP009	-1	-1
37	2290430101002	J45	RSP009	-1	-1
38	2290430102001	J45	RSP009	-1	-1
39	2290430103001	J45	RSP009	-1	-1
40	2290445102005	J45	RSP009	-1	-1
41	2290472102006	J45	RSP009	-1	-1
42	2290476101001	J45	RSP009	-1	-1
43	2290487103001	J45	RSP009	-1	-1
44	2290492102003	J45	RSP009	-1	-1
45	2290492103001	J45	RSP009	-1	-1
46	2290492104001	J45	RSP009	-1	-1
47	2290492105001	J45	RSP009	-1	-1
48	2290504101005	J45	RSP009	-1	-1
49	2290504101011	J45	RSP009	-1	-1
50	2290511101006	J45	RSP009	-1	-1

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Sample SAS Job for Example A

sample print of work.asclnks - sorted by condidx
events linked to asthma condition records

CONDIDX	EVNTIDX	EVENTYPE
2290001102002	2290001102002503	8 PMED
2290005103001	2290005103004001	2 OPAT
2290005103001	2290005103004101	2 OPAT
2290005103001	2290005103004201	2 OPAT
2290005103001	2290005103004301	2 OPAT
2290005103001	2290005103004401	2 OPAT
2290005103001	2290005103004501	2 OPAT
2290005103001	2290005103004601	2 OPAT
2290009101008	2290009101001403	8 PMED
2290009101008	2290009101001503	8 PMED
2290009101008	2290009101011403	8 PMED
2290009101008	2290009101011503	8 PMED
2290009101008	2290009101012403	8 PMED
2290009101008	2290009101012503	8 PMED
2290009101008	2290009101015503	8 PMED
2290009102004	2290009102002403	8 PMED
2290009102004	2290009102002503	8 PMED
2290010101003	2290010101005403	8 PMED
2290010101003	2290010101005503	8 PMED
2290010101003	2290010101011403	8 PMED
2290010101003	2290010101012403	8 PMED
2290010101003	2290010101012503	8 PMED
2290010101003	2290010101013403	8 PMED
2290010101003	2290010101013503	8 PMED
2290010101003	2290010101014403	8 PMED
2290010101003	2290010101015403	8 PMED
2290010101003	2290010101015503	8 PMED
2290010105001	2290010105001403	8 PMED
2290010105001	2290010105001503	8 PMED
2290010106001	2290010106003403	8 PMED
2290010106001	2290010106003503	8 PMED
2290010106001	2290010106004403	8 PMED
2290010106001	2290010106004503	8 PMED
2290010106001	2290010106005403	8 PMED
2290010106001	2290010106006403	8 PMED
2290010106001	2290010106006503	8 PMED
2290042102001	2290042102002303	8 PMED
2290042102001	2290042102002403	8 PMED
2290042102001	2290042102005303	8 PMED
2290042102001	2290042102005403	8 PMED
2290051104002	2290051104001403	8 PMED
2290051104002	2290051104002403	8 PMED
2290103103009	2290103103002303	8 PMED
2290103103009	2290103103003303	8 PMED
2290116101004	2290116101001503	8 PMED
2290116101004	2290116101012403	8 PMED
2290116101004	2290116101014503	8 PMED
2290116101004	2290116101103201	1 MVIS
2290116101004	2290116101103301	1 MVIS
2290116101004	2290116101204401	3 EROM
2290119104001	2290119104000901	1 MVIS
2290119104001	2290119104001001	1 MVIS
2290119104001	2290119104001303	8 PMED
2290119104001	2290119104002503	8 PMED
2290119104001	2290119104004503	8 PMED
2290119104001	2290119104103001	1 MVIS
2290119104001	2290119104103101	1 MVIS
2290119104001	2290119104103201	1 MVIS
2290119104001	2290119104103301	1 MVIS
2290119104001	2290119104103401	1 MVIS
2290119104001	2290119104103501	1 MVIS
2290119104001	2290119104103601	1 MVIS
2290119104001	2290119104103701	1 MVIS
2290119104001	2290119104205801	1 MVIS
2290121101003	2290121101001303	8 PMED
2290121101003	2290121101001403	8 PMED
2290121101003	2290121101001503	8 PMED
2290134104001	2290134104001303	8 PMED
2290134104001	2290134104001403	8 PMED

CONDIDX	EVNTIDX	EVENTYPE
2290134104001	2290134104001503	8 PMED
2290134104001	2290134104002403	8 PMED
2290134104001	2290134104002503	8 PMED
2290134104001	2290134104106101	1 MVIS
2290150101014	2290150101005303	8 PMED
2290150101014	2290150101005503	8 PMED

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Sample SAS Job for Example A
sample print of work.asclnks - sorted by evtntidx

Obs	CONDIDX	EVNTIDX	EVENTYPE
1	2290001102002	2290001102002503	8 PMED
2	2290005103001	2290005103004001	2 OPAT
3	2290005103001	2290005103004101	2 OPAT
4	2290005103001	2290005103004201	2 OPAT
5	2290005103001	2290005103004301	2 OPAT
6	2290005103001	2290005103004401	2 OPAT
7	2290005103001	2290005103004501	2 OPAT
8	2290005103001	2290005103004601	2 OPAT
9	2290009101008	2290009101001403	8 PMED
10	2290009101008	2290009101001503	8 PMED
11	2290009101008	2290009101011403	8 PMED
12	2290009101008	2290009101011503	8 PMED
13	2290009101008	2290009101012403	8 PMED
14	2290009101008	2290009101012503	8 PMED
15	2290009101008	2290009101015503	8 PMED
16	2290009102004	2290009102002403	8 PMED
17	2290009102004	2290009102002503	8 PMED
18	2290010101003	2290010101005403	8 PMED
19	2290010101003	2290010101005503	8 PMED
20	2290010101003	2290010101011403	8 PMED
21	2290010101003	2290010101012403	8 PMED
22	2290010101003	2290010101012503	8 PMED
23	2290010101003	2290010101013403	8 PMED
24	2290010101003	2290010101013503	8 PMED
25	2290010101003	2290010101014403	8 PMED
26	2290010101003	2290010101015403	8 PMED
27	2290010101003	2290010101015503	8 PMED
28	2290010105001	2290010105001403	8 PMED
29	2290010105001	2290010105001503	8 PMED
30	2290010106001	2290010106003403	8 PMED
31	2290010106001	2290010106003503	8 PMED
32	2290010106001	2290010106004403	8 PMED
33	2290010106001	2290010106004503	8 PMED
34	2290010106001	2290010106005403	8 PMED
35	2290010106001	2290010106006403	8 PMED
36	2290010106001	2290010106006503	8 PMED
37	2290042102001	2290042102002303	8 PMED
38	2290042102001	2290042102002403	8 PMED
39	2290042102001	2290042102005303	8 PMED
40	2290042102001	2290042102005403	8 PMED
41	2290051104002	2290051104001403	8 PMED
42	2290051104002	2290051104002403	8 PMED
43	2290103103009	2290103103002303	8 PMED
44	2290103103009	2290103103003303	8 PMED
45	2290116101004	2290116101001503	8 PMED
46	2290116101004	2290116101012403	8 PMED
47	2290116101004	2290116101014503	8 PMED
48	2290116101004	2290116101103201	1 MVIS
49	2290116101004	2290116101103301	1 MVIS
50	2290116101004	2290116101204401	3 EROM

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 Sample SAS Job for Example A
 sample print of unique evtidxs from work.asclnks

Obs	EVNTIDX	EVENTYPE
1	2290001102002503	8 PMED
2	2290005103004001	2 OPAT
3	2290005103004101	2 OPAT
4	2290005103004201	2 OPAT
5	2290005103004301	2 OPAT
6	2290005103004401	2 OPAT
7	2290005103004501	2 OPAT
8	2290005103004601	2 OPAT
9	2290009101001403	8 PMED
10	2290009101001503	8 PMED
11	2290009101011403	8 PMED
12	2290009101011503	8 PMED
13	2290009101012403	8 PMED
14	2290009101012503	8 PMED
15	2290009101015503	8 PMED
16	2290009102002403	8 PMED
17	2290009102002503	8 PMED
18	2290010101005403	8 PMED
19	2290010101005503	8 PMED
20	2290010101011403	8 PMED
21	2290010101012403	8 PMED
22	2290010101012503	8 PMED
23	2290010101013403	8 PMED
24	2290010101013503	8 PMED
25	2290010101014403	8 PMED
26	2290010101015403	8 PMED
27	2290010101015503	8 PMED
28	2290010105001403	8 PMED
29	2290010105001503	8 PMED
30	2290010106003403	8 PMED
31	2290010106003503	8 PMED
32	2290010106004403	8 PMED
33	2290010106004503	8 PMED
34	2290010106005403	8 PMED
35	2290010106006403	8 PMED
36	2290010106006503	8 PMED
37	2290042102002303	8 PMED
38	2290042102002403	8 PMED
39	2290042102005303	8 PMED
40	2290042102005403	8 PMED
41	2290051104001403	8 PMED
42	2290051104002403	8 PMED
43	2290103103002303	8 PMED
44	2290103103003303	8 PMED
45	2290116101001503	8 PMED
46	2290116101012403	8 PMED
47	2290116101014503	8 PMED
48	2290116101103201	1 MVIS
49	2290116101103301	1 MVIS
50	2290116101204401	3 EROM

HC-206I
 Sample SAS Job for Example A
 sample print of work.asmvis
 unique evntidxs from work.asclnks that are MVIS (HC-206G) events

Obs	EVNTIDX	EVENTYPE
1	2290116101103201	1 MVIS
2	2290116101103301	1 MVIS
3	2290119104000901	1 MVIS
4	2290119104001001	1 MVIS
5	2290119104103001	1 MVIS
6	2290119104103101	1 MVIS
7	2290119104103201	1 MVIS
8	2290119104103301	1 MVIS
9	2290119104103401	1 MVIS
10	2290119104103501	1 MVIS
11	2290119104103601	1 MVIS
12	2290119104103701	1 MVIS
13	2290119104205801	1 MVIS
14	2290134104106101	1 MVIS
15	2290244103101101	1 MVIS
16	2290278102006101	1 MVIS
17	2290278102006201	1 MVIS
18	2290382104206101	1 MVIS
19	2290393101106801	1 MVIS
20	2290393101106901	1 MVIS
21	2290393101107101	1 MVIS
22	2290393101107201	1 MVIS
23	2290393101107301	1 MVIS
24	2290393101107401	1 MVIS
25	2290393101107501	1 MVIS
26	2290393101209001	1 MVIS
27	2290393101209101	1 MVIS
28	2290393101209201	1 MVIS
29	2290393101209301	1 MVIS
30	2290393101209401	1 MVIS
31	2290393101209501	1 MVIS
32	2290393101209601	1 MVIS
33	2290430102001401	1 MVIS
34	2290430103204701	1 MVIS
35	2290476101001401	1 MVIS
36	2290487103101601	1 MVIS
37	2290492103204501	1 MVIS
38	2290511101003701	1 MVIS
39	2290511101106301	1 MVIS
40	2290511101106401	1 MVIS
41	2290511101106501	1 MVIS
42	2290511101106601	1 MVIS
43	2290511101106701	1 MVIS
44	2290515101003401	1 MVIS
45	2290515101204901	1 MVIS
46	2290515101205001	1 MVIS
47	2290515101205101	1 MVIS
48	2290515101205201	1 MVIS
49	2290518101102901	1 MVIS
50	2290518101203801	1 MVIS

HC-206I
Sample SAS Job for Example A
sample print of work.rx1k - sorted by evtidx
Rx+event link file records (HC-206IF2)

EVNTIDX	LINKIDX	EVENTYPE
2290001101003401	2290001101005303	1 MVIS
2290001101104101	2290001101013403	1 MVIS
2290001101104301	2290001101012403	1 MVIS
2290001102104501	2290001102003403	1 MVIS
2290003102002601	2290003102001303	1 MVIS
2290003102205701	2290003102005503	1 MVIS
2290003102205701	2290003102006503	1 MVIS
2290003102205901	2290003102004503	1 MVIS
2290003102206101	2290003102002503	1 MVIS
2290003103003201	2290003103003303	1 MVIS
2290003103003301	2290003103002303	1 MVIS
2290003103205201	2290003103001503	1 MVIS
2290003104002801	2290003104002303	1 MVIS
2290003104003401	2290003104001303	1 MVIS
2290005102105801	2290005102003403	1 MVIS
2290005104206401	2290005104001503	1 MVIS
2290007101101101	2290007101001403	1 MVIS
2290007101101101	2290007101002403	1 MVIS
2290007102000501	2290007102002303	1 MVIS
2290007102101001	2290007102004403	1 MVIS
2290008102105801	2290008102002403	1 MVIS
2290008102207601	2290008102004503	1 MVIS
2290008102207801	2290008102001503	1 MVIS
2290008102207801	2290008102003503	1 MVIS
2290008102207901	2290008102004503	1 MVIS
2290008103003201	2290008103001303	1 MVIS
2290008103003201	2290008103002303	1 MVIS
2290008103207301	2290008103003503	1 MVIS
2290009101204701	2290009101013503	1 MVIS
2290009101204701	2290009101014503	1 MVIS
2290009102104201	2290009102004403	2 OPAT
2290009102104401	2290009102003403	2 OPAT
2290009102205101	2290009102005503	1 MVIS
2290010101103101	2290010101014403	3 EROM
2290010101103201	2290010101012403	1 MVIS
2290010101103201	2290010101013403	1 MVIS
2290010101103301	2290010101008403	1 MVIS
2290010101103301	2290010101011403	1 MVIS
2290010101205301	2290010101005503	1 MVIS
2290010101205301	2290010101006503	1 MVIS
2290010101205301	2290010101008503	1 MVIS
2290010101205301	2290010101013503	1 MVIS
2290010101205301	2290010101015503	1 MVIS
2290010102001801	2290010102005303	1 MVIS
2290010102102701	2290010102003403	1 MVIS
2290010102102701	2290010102004403	1 MVIS
2290010102102701	2290010102005403	1 MVIS
2290010102102801	2290010102001403	1 MVIS
2290010102102801	2290010102003403	1 MVIS
2290010102102801	2290010102004403	1 MVIS
2290010102102801	2290010102005403	1 MVIS
2290010102102801	2290010102006403	1 MVIS
2290010103002301	2290010103001303	1 MVIS
2290010103002301	2290010103002303	1 MVIS
2290010103103501	2290010103003403	1 MVIS
2290010103205601	2290010103004503	1 MVIS
2290010106103401	2290010106001403	1 MVIS
2290010106103401	2290010106002403	1 MVIS
2290010106206301	2290010106001503	1 MVIS
2290010106206301	2290010106002503	1 MVIS
2290010106206301	2290010106007503	1 MVIS
2290015101001801	2290015101010303	1 MVIS
2290015101001801	2290015101011303	1 MVIS
2290015101102501	2290015101013403	1 MVIS
2290015101203201	2290015101004503	1 MVIS
2290015101203201	2290015101012503	1 MVIS
2290016101101401	2290016101001403	1 MVIS
2290016102202301	2290016102001503	1 MVIS
2290016103101901	2290016103001403	1 MVIS

EVNTIDX	LINKIDX	EVENTYPE
2290019101207801	2290019101001503	1 MVIS
2290019101207801	2290019101002503	1 MVIS
2290019101207801	2290019101003503	1 MVIS
2290019102207701	2290019102001503	1 MVIS
2290019102207701	2290019102002503	1 MVIS
2290020101100701	2290020101004403	1 MVIS
2290024101001901	2290024101001303	1 MVIS
2290024101001901	2290024101002303	1 MVIS
2290024101002301	2290024101002303	3 EROM
2290025102003201	2290025102006303	1 MVIS
2290025102003301	2290025102001303	1 MVIS
2290025102204401	2290025102005503	1 MVIS
2290025102204401	2290025102007503	1 MVIS
2290032101207001	2290032101008503	1 MVIS
2290032101207001	2290032101009503	1 MVIS
2290032102104601	2290032102002403	4 STAZ
2290032102104601	2290032102008403	4 STAZ
2290032102104601	2290032102009403	4 STAZ
2290032102104601	2290032102010403	4 STAZ
2290032102105301	2290032102007403	1 MVIS
2290032102206401	2290032102002503	4 STAZ
2290032102206401	2290032102010503	4 STAZ
2290032103105401	2290032103006403	1 MVIS
2290032103105401	2290032103007403	1 MVIS
2290032103105501	2290032103001403	1 MVIS
2290032103105501	2290032103002403	1 MVIS
2290032103105501	2290032103003403	1 MVIS
2290032103105501	2290032103004403	1 MVIS
2290034101101601	2290034101003403	1 MVIS
2290034101202001	2290034101004503	1 MVIS
2290038101204501	2290038101001503	1 MVIS
2290038102104201	2290038102007403	1 MVIS
2290038102104201	2290038102008403	1 MVIS
2290038102205401	2290038102007503	1 MVIS
2290038102205401	2290038102009503	1 MVIS
2290041105105301	2290041105001403	2 OPAT
2290041105206201	2290041105001503	1 MVIS
2290042101100301	2290042101004403	1 MVIS
2290042101100301	2290042101005403	1 MVIS
2290046101101901	2290046101004403	1 MVIS
2290046101101901	2290046101005403	1 MVIS
2290046101102001	2290046101006403	3 EROM
2290046101202201	2290046101006503	3 EROM
2290046101202501	2290046101004503	1 MVIS
2290046101202601	2290046101003503	1 MVIS
2290046101202601	2290046101005503	1 MVIS
2290049101106901	2290049101005403	1 MVIS
2290049101210301	2290049101008503	1 MVIS
2290049101210301	2290049101009503	1 MVIS
2290050102001601	2290050102005303	1 MVIS
2290050102101901	2290050102001403	1 MVIS
2290050102101901	2290050102002403	1 MVIS
2290050102101901	2290050102003403	1 MVIS
2290051101001501	2290051101001303	1 MVIS
2290051101001501	2290051101003303	1 MVIS
2290051101105101	2290051101004403	1 MVIS
2290051101105101	2290051101005403	1 MVIS
2290051101208501	2290051101001503	1 MVIS
2290051101208501	2290051101003503	1 MVIS
2290051102103601	2290051102007403	3 EROM
2290051102103601	2290051102008403	3 EROM
2290051102104101	2290051102003403	1 MVIS
2290051102104101	2290051102004403	1 MVIS
2290051102104101	2290051102005403	1 MVIS
2290051102104101	2290051102006403	1 MVIS
2290051102104201	2290051102001403	1 MVIS
2290051102205301	2290051102001503	1 MVIS
2290051102205301	2290051102002503	1 MVIS
2290051104103301	2290051104001403	1 MVIS
2290051104103301	2290051104002403	1 MVIS
2290051105002201	2290051105001303	1 MVIS

HC-206I
Sample SAS Job for Example A
sample print of work.pmedids - sorted by evtntidx
work.rxlk records for evtntidxs in work.asmvis

EVNTIDX	LINKIDX	EVENTYPE
2290116101103301	2290116101012403	1 MVIS
2290119104205801	2290119104001503	1 MVIS
2290134104106101	2290134104001403	1 MVIS
2290134104106101	2290134104002403	1 MVIS
2290244103101101	2290244103001403	1 MVIS
2290278102006201	2290278102008303	1 MVIS
2290278102006201	2290278102009303	1 MVIS
2290278102006201	2290278102010303	1 MVIS
2290278102006201	2290278102011303	1 MVIS
2290278102006201	2290278102012303	1 MVIS
2290382104206101	2290382104001503	1 MVIS
2290382104206101	2290382104002503	1 MVIS
2290382104206101	2290382104003503	1 MVIS
2290382104206101	2290382104004503	1 MVIS
2290382104206101	2290382104006503	1 MVIS
2290382104206101	2290382104007503	1 MVIS
2290393101107401	2290393101002403	1 MVIS
2290393101107401	2290393101003403	1 MVIS
2290393101107401	2290393101005403	1 MVIS
2290393101107401	2290393101006403	1 MVIS
2290393101107401	2290393101011403	1 MVIS
2290393101107401	2290393101012403	1 MVIS
2290393101209601	2290393101001503	1 MVIS
2290393101209601	2290393101002503	1 MVIS
2290393101209601	2290393101003503	1 MVIS
2290393101209601	2290393101006503	1 MVIS
2290393101209601	2290393101007503	1 MVIS
2290393101209601	2290393101011503	1 MVIS
2290393101209601	2290393101012503	1 MVIS
2290393101209601	2290393101015503	1 MVIS
2290393101209601	2290393101016503	1 MVIS
2290430102001401	2290430102002303	1 MVIS
2290430103204701	2290430103007503	1 MVIS
2290487103101601	2290487103004403	1 MVIS
2290492103204501	2290492103001503	1 MVIS
2290492103204501	2290492103002503	1 MVIS
2290492103204501	2290492103003503	1 MVIS
2290511101003701	2290511101001303	1 MVIS
2290511101106701	2290511101001403	1 MVIS
2290511101106701	2290511101020403	1 MVIS
2290515101205201	2290515101018503	1 MVIS
2290518101102901	2290518101010403	1 MVIS
2290518101102901	2290518101011403	1 MVIS
2290518101102901	2290518101012403	1 MVIS
2290518101203801	2290518101015503	1 MVIS
2290518101203801	2290518101016503	1 MVIS
2290518101203801	2290518101017503	1 MVIS
2290550101202601	2290550101002503	1 MVIS
2290550101202601	2290550101003503	1 MVIS
2290550101202601	2290550101004503	1 MVIS

HC-206I
Sample SAS Job for Example A
sample print of work.pmedids - sorted by linkidx

Obs	EVNTIDX	LINKIDX	EVENTYPE
1	2290116101103301	2290116101012403	1 MVIS
2	2290119104205801	2290119104001503	1 MVIS
3	2290134104106101	2290134104001403	1 MVIS
4	2290134104106101	2290134104002403	1 MVIS
5	2290244103101101	2290244103001403	1 MVIS
6	2290278102006201	2290278102008303	1 MVIS
7	2290278102006201	2290278102009303	1 MVIS
8	2290278102006201	2290278102010303	1 MVIS
9	2290278102006201	2290278102011303	1 MVIS
10	2290278102006201	2290278102012303	1 MVIS
11	2290382104206101	2290382104001503	1 MVIS
12	2290382104206101	2290382104002503	1 MVIS
13	2290382104206101	2290382104003503	1 MVIS
14	2290382104206101	2290382104004503	1 MVIS
15	2290382104206101	2290382104006503	1 MVIS
16	2290382104206101	2290382104007503	1 MVIS
17	2290393101209601	2290393101001503	1 MVIS
18	2290393101107401	2290393101002403	1 MVIS
19	2290393101209601	2290393101002503	1 MVIS
20	2290393101107401	2290393101003403	1 MVIS
21	2290393101209601	2290393101003503	1 MVIS
22	2290393101107401	2290393101005403	1 MVIS
23	2290393101107401	2290393101006403	1 MVIS
24	2290393101209601	2290393101006503	1 MVIS
25	2290393101209601	2290393101007503	1 MVIS
26	2290393101107401	2290393101011403	1 MVIS
27	2290393101209601	2290393101011503	1 MVIS
28	2290393101107401	2290393101012403	1 MVIS
29	2290393101209601	2290393101012503	1 MVIS
30	2290393101209601	2290393101015503	1 MVIS
31	2290393101209601	2290393101016503	1 MVIS
32	2290430102001401	2290430102002303	1 MVIS
33	2290430103204701	2290430103007503	1 MVIS
34	2290487103101601	2290487103004403	1 MVIS
35	2290492103204501	2290492103001503	1 MVIS
36	2290492103204501	2290492103002503	1 MVIS
37	2290492103204501	2290492103003503	1 MVIS
38	2290511101003701	2290511101001303	1 MVIS
39	2290511101106701	2290511101001403	1 MVIS
40	2290511101106701	2290511101020403	1 MVIS
41	2290515101205201	2290515101018503	1 MVIS
42	2290518101102901	2290518101010403	1 MVIS
43	2290518101102901	2290518101011403	1 MVIS
44	2290518101102901	2290518101012403	1 MVIS
45	2290518101203801	2290518101015503	1 MVIS
46	2290518101203801	2290518101016503	1 MVIS
47	2290518101203801	2290518101017503	1 MVIS
48	2290550101202601	2290550101002503	1 MVIS
49	2290550101202601	2290550101003503	1 MVIS
50	2290550101202601	2290550101004503	1 MVIS

HC-206I
 Sample SAS Job for Example A
 sample print of unique linkidxs in work.pmedids

Obs	LINKIDX
1	2290116101012403
2	2290119104001503
3	2290134104001403
4	2290134104002403
5	2290244103001403
6	2290278102008303
7	2290278102009303
8	2290278102010303
9	2290278102011303
10	2290278102012303
11	2290382104001503
12	2290382104002503
13	2290382104003503
14	2290382104004503
15	2290382104006503
16	2290382104007503
17	2290393101001503
18	2290393101002403
19	2290393101002503
20	2290393101003403
21	2290393101003503
22	2290393101005403
23	2290393101006403
24	2290393101006503
25	2290393101007503
26	2290393101011403
27	2290393101011503
28	2290393101012403
29	2290393101012503
30	2290393101015503
31	2290393101016503
32	2290430102002303
33	2290430103007503
34	2290487103004403
35	2290492103001503
36	2290492103002503
37	2290492103003503
38	2290511101001303
39	2290511101001403
40	2290511101020403
41	2290515101018503
42	2290518101010403
43	2290518101011403
44	2290518101012403
45	2290518101015503
46	2290518101016503
47	2290518101017503
48	2290550101002503
49	2290550101003503
50	2290550101004503

HC-206I
Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-206A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP18X	PERWT18F
2290116101012403	2290116101012403001	VENTOLIN HFA	53.56	6829.704742
2290119104001503	2290119104001503001	QVAR	88.68	8737.024067
2290119104001503	2290119104001503002	QVAR	88.68	8737.024067
2290134104001403	2290134104001403001	MONTELUKAST	24.64	6568.907035
2290134104001403	2290134104001403002	MONTELUKAST	24.64	6568.907035
2290134104002403	2290134104002403001	ALBUTEROL	9.75	6568.907035
2290244103001403	2290244103001403001	PROAIR HFA	61.72	18755.841225
2290244103001403	2290244103001403002	PROAIR HFA	61.72	18755.841225
2290244103001403	2290244103001403003	PROAIR HFA	61.72	18755.841225
2290278102008303	2290278102008303001	TOPIRAMATE	78.62	13936.196865
2290278102009303	2290278102009303001	MELATONIN	2.62	13936.196865
2290278102009303	2290278102009303002	MELATONIN	2.62	13936.196865
2290278102010303	2290278102010303001	BACLOFEN	4.46	13936.196865
2290278102010303	2290278102010303002	BACLOFEN	4.83	13936.196865
2290278102011303	2290278102011303001	MELOXICAM	15.00	13936.196865
2290278102012303	2290278102012303001	OMEPRAZOLE	15.73	13936.196865
2290278102012303	2290278102012303002	OMEPRAZOLE	15.73	13936.196865
2290382104001503	2290382104001503001	QVAR	202.46	10406.365521
2290382104002503	2290382104002503001	AUVI-Q	8006.88	10406.365521
2290382104003503	2290382104003503001	ALBUTEROL	32.00	10406.365521
2290382104004503	2290382104004503001	AUVI-Q	8006.88	10406.365521
2290382104006503	2290382104006503001	PROAIR HFA	125.62	10406.365521
2290382104007503	2290382104007503001	QVAR	202.46	10406.365521
2290393101001503	2290393101001503001	HYDROCHLOROT	1.18	4772.077067
2290393101001503	2290393101001503002	HYDROCHLOROT	1.18	4772.077067
2290393101001503	2290393101001503003	HYDROCHLOROT	1.18	4772.077067
2290393101001503	2290393101001503004	HYDROCHLOROT	1.18	4772.077067
2290393101001503	2290393101001503005	HYDROCHLOROT	1.18	4772.077067
2290393101002403	2290393101002403001	AMLODIPINE	20.74	4772.077067
2290393101002403	2290393101002403002	AMLODIPINE	20.74	4772.077067
2290393101002403	2290393101002403003	AMLODIPINE	20.74	4772.077067
2290393101002403	2290393101002403004	AMLODIPINE	62.22	4772.077067
2290393101002503	2290393101002503001	AMLODIPINE	109.98	4772.077067
2290393101002503	2290393101002503002	AMLODIPINE	109.98	4772.077067
2290393101002503	2290393101002503003	AMLODIPINE	109.98	4772.077067
2290393101002503	2290393101002503004	AMLODIPINE	109.98	4772.077067
2290393101002503	2290393101002503005	AMLODIPINE	109.98	4772.077067
2290393101003403	2290393101003403001	LOSARTAN POT	21.25	4772.077067
2290393101003403	2290393101003403002	LOSARTAN POT	21.79	4772.077067
2290393101003403	2290393101003403003	LOSARTAN POT	21.55	4772.077067
2290393101003403	2290393101003403004	LOSARTAN POT	63.21	4772.077067
2290393101003503	2290393101003503001	LOSARTAN POT	112.06	4772.077067
2290393101003503	2290393101003503002	LOSARTAN POT	112.06	4772.077067
2290393101003503	2290393101003503003	LOSARTAN POT	112.06	4772.077067
2290393101003503	2290393101003503004	LOSARTAN POT	112.06	4772.077067
2290393101003503	2290393101003503005	LOSARTAN POT	112.06	4772.077067
2290393101005403	2290393101005403001	FREESTYLE	163.44	4772.077067
2290393101006403	2290393101006403001	METFORMIN	9.38	4772.077067
2290393101006403	2290393101006403002	METFORMIN	9.38	4772.077067
2290393101006403	2290393101006403003	METFORMIN	9.38	4772.077067
2290393101006403	2290393101006403004	METFORMIN	9.38	4772.077067
2290393101006503	2290393101006503001	METFORMIN	16.89	4772.077067
2290393101006503	2290393101006503002	METFORMIN	16.89	4772.077067
2290393101006503	2290393101006503003	METFORMIN	16.89	4772.077067
2290393101006503	2290393101006503004	METFORMIN	16.89	4772.077067
2290393101006503	2290393101006503005	METFORMIN	16.89	4772.077067
2290393101007503	2290393101007503001	LANTUS	306.62	4772.077067
2290393101007503	2290393101007503002	LANTUS	306.62	4772.077067
2290393101007503	2290393101007503003	LANTUS	306.62	4772.077067
2290393101007503	2290393101007503004	LANTUS	306.62	4772.077067
2290393101007503	2290393101007503005	LANTUS	306.62	4772.077067
2290393101007503	2290393101007503006	LANTUS	306.62	4772.077067
2290393101007503	2290393101007503007	LANTUS	306.62	4772.077067
2290393101007503	2290393101007503008	LANTUS	306.62	4772.077067
2290393101007503	2290393101007503009	LANTUS	306.62	4772.077067
2290393101007503	2290393101007503010	LANTUS	306.62	4772.077067
2290393101011403	2290393101011403001	POT CL MICRO	8.50	4772.077067
2290393101011403	2290393101011403002	POT CL MICRO	8.50	4772.077067
2290393101011403	2290393101011403003	POT CL MICRO	8.50	4772.077067

LINKIDX	RXRECIDX	RXNAME	RXXP18X	PERWT18F
2290393101011403	2290393101011403004	POT CL MICRO	8.50	4772.077067
2290393101011503	2290393101011503001	POT CL MICRO	6.86	4772.077067
2290393101011503	2290393101011503002	KLOR-CON M20	2.82	4772.077067
2290393101011503	2290393101011503003	KLOR-CON M20	6.50	4772.077067
2290393101011503	2290393101011503004	KLOR-CON M20	6.50	4772.077067
2290393101011503	2290393101011503005	KLOR-CON M20	6.50	4772.077067
2290393101012403	2290393101012403001	FUROSEMIDE	20.42	4772.077067
2290393101012403	2290393101012403002	FUROSEMIDE	20.45	4772.077067
2290393101012403	2290393101012403003	FUROSEMIDE	20.42	4772.077067
2290393101012403	2290393101012403004	FUROSEMIDE	61.35	4772.077067
2290393101012503	2290393101012503001	FUROSEMIDE	16.89	4772.077067
2290393101012503	2290393101012503002	FUROSEMIDE	16.89	4772.077067
2290393101012503	2290393101012503003	FUROSEMIDE	16.89	4772.077067
2290393101012503	2290393101012503004	FUROSEMIDE	16.89	4772.077067
2290393101012503	2290393101012503005	FUROSEMIDE	16.89	4772.077067
2290393101015503	2290393101015503001	SPIRIVA	392.41	4772.077067
2290393101015503	2290393101015503002	SPIRIVA	392.41	4772.077067
2290393101015503	2290393101015503003	SPIRIVA	392.41	4772.077067
2290393101015503	2290393101015503004	SPIRIVA	392.41	4772.077067
2290393101015503	2290393101015503005	SPIRIVA	392.41	4772.077067
2290393101016503	2290393101016503001	DULERA	305.97	4772.077067
2290393101016503	2290393101016503002	DULERA	305.97	4772.077067
2290393101016503	2290393101016503003	DULERA	305.97	4772.077067
2290393101016503	2290393101016503004	DULERA	305.97	4772.077067
2290393101016503	2290393101016503005	DULERA	305.97	4772.077067
2290430102002303	2290430102002303001	LORATADINE	4.52	5662.369999
2290430103007503	2290430103007503001	FLUTICASONE	3.29	6857.303334
2290487103004403	2290487103004403001	MONTELUKAST	108.57	8222.324031
2290492103001503	2290492103001503001	FLUTICASONE	69.99	1508.528925
2290492103001503	2290492103001503002	FLUTICASONE	69.99	1508.528925
2290492103001503	2290492103001503003	FLUTICASONE	69.99	1508.528925
2290492103001503	2290492103001503004	FLUTICASONE	69.99	1508.528925
2290492103001503	2290492103001503005	FLUTICASONE	69.99	1508.528925
2290492103002503	2290492103002503001	LORATADINE	3.88	1508.528925
2290492103002503	2290492103002503002	LORATADINE	3.88	1508.528925
2290492103002503	2290492103002503003	LORATADINE	3.88	1508.528925
2290492103002503	2290492103002503004	LORATADINE	3.88	1508.528925
2290492103002503	2290492103002503005	LORATADINE	3.88	1508.528925
2290492103003503	2290492103003503001	VENTOLIN HFA	64.29	1508.528925
2290492103003503	2290492103003503002	VENTOLIN HFA	64.29	1508.528925
2290492103003503	2290492103003503003	VENTOLIN HFA	64.29	1508.528925
2290492103003503	2290492103003503004	VENTOLIN HFA	64.29	1508.528925
2290492103003503	2290492103003503005	VENTOLIN HFA	64.29	1508.528925
2290511101001303	2290511101001303001	PREDNISONE	12.99	9562.408680
2290511101001403	2290511101001403001	PREDNISONE	15.15	9562.408680
2290511101020403	2290511101020403001	ALLOPURINOL	22.60	9562.408680
2290515101018503	2290515101018503001	ACARBOSE	14.96	16696.517985
2290518101010403	2290518101010403001	DOXYCYCL HYC	43.94	6549.314668
2290518101011403	2290518101011403001	PREDNISONE	2.43	6549.314668
2290518101012403	2290518101012403001	ALBUTEROL	7.00	6549.314668
2290518101015503	2290518101015503001	PROMETHAZINE	17.69	6549.314668
2290518101016503	2290518101016503001	FLUTICASONE	10.85	6549.314668
2290518101017503	2290518101017503001	AZITHROMYCIN	11.04	6549.314668
2290550101002503	2290550101002503001	METFORMIN	71.94	3184.355126
2290550101002503	2290550101002503002	METFORMIN	71.94	3184.355126
2290550101003503	2290550101003503001	DILTIAZEM	177.42	3184.355126
2290550101003503	2290550101003503002	DILTIAZEM	177.42	3184.355126
2290550101004503	2290550101004503001	BREO ELLIPTA	340.16	3184.355126
2290550101004503	2290550101004503002	BREO ELLIPTA	340.16	3184.355126
2290550101004503	2290550101004503003	BREO ELLIPTA	340.16	3184.355126
2290550101004503	2290550101004503004	BREO ELLIPTA	340.16	3184.355126
2290550101004503	2290550101004503005	BREO ELLIPTA	340.16	3184.355126
2290550101004503	2290550101004503006	BREO ELLIPTA	340.16	3184.355126
2290550101005503	2290550101005503001	BUPROPION	14.37	3184.355126
2290550101006503	2290550101006503001	IPRATROPIUM/	40.11	3184.355126
2290550101006503	2290550101006503002	IPRATROPIUM/	40.11	3184.355126
2290550101006503	2290550101006503003	IPRATROPIUM/	40.11	3184.355126
2290550101007503	2290550101007503001	SIMVASTATIN	24.03	3184.355126
2290550101007503	2290550101007503002	SIMVASTATIN	24.03	3184.355126
2290550101007503	2290550101007503003	SIMVASTATIN	38.88	3184.355126
2290550101007503	2290550101007503004	SIMVASTATIN	38.88	3184.355126
2290550101007503	2290550101007503005	SIMVASTATIN	7.68	3184.355126
2290550101007503	2290550101007503006	SIMVASTATIN	7.68	3184.355126
2290550101009503	2290550101009503001	VENTOLIN HFA	221.97	3184.355126

LINKIDX	RXRECIDX	RXNAME	RXXP18X	PERWT18F
2290550101009503	2290550101009503002	VENTOLIN HFA	221.97	3184.355126
2290550101009503	2290550101009503003	VENTOLIN HFA	221.97	3184.355126
2290550101009503	2290550101009503004	VENTOLIN HFA	221.97	3184.355126
2290552103002403	2290552103002403001	PROAIR HFA	59.32	7232.024501
2290552103002403	2290552103002403002	PROAIR HFA	125.45	7232.024501
2290552103002403	2290552103002403003	PROAIR HFA	125.45	7232.024501
2290552103002403	2290552103002403004	PROAIR HFA	125.45	7232.024501
2290581102023503	2290581102023503001	PROAIR HFA	158.25	7903.908312
2290581102024503	2290581102024503001	PREDNISONE	0.53	7903.908312
2290581102025503	2290581102025503001	SYMBICORT	326.40	7903.908312
2290648101003503	2290648101003503001	VENTOLIN HFA	53.56	7694.150985
2290648101003503	2290648101003503002	VENTOLIN HFA	53.56	7694.150985
2290648101003503	2290648101003503003	VENTOLIN HFA	53.56	7694.150985
2290648101003503	2290648101003503004	VENTOLIN HFA	53.56	7694.150985
2290648101003503	2290648101003503005	VENTOLIN HFA	53.56	7694.150985
2290648101005503	2290648101005503001	FUROSEMIDE	1.00	7694.150985
2290648101005503	2290648101005503002	FUROSEMIDE	1.00	7694.150985
2290648101005503	2290648101005503003	FUROSEMIDE	1.01	7694.150985
2290648101005503	2290648101005503004	FUROSEMIDE	1.01	7694.150985
2290648101005503	2290648101005503005	FUROSEMIDE	1.01	7694.150985
2290648101006503	2290648101006503001	TRULICITY	723.25	7694.150985
2290648101006503	2290648101006503002	TRULICITY	723.25	7694.150985
2290648101006503	2290648101006503003	TRULICITY	723.25	7694.150985
2290648101006503	2290648101006503004	TRULICITY	723.25	7694.150985
2290648101007503	2290648101007503001	AMLODIPINE	11.14	7694.150985
2290648101007503	2290648101007503002	AMLODIPINE	11.14	7694.150985
2290648101007503	2290648101007503003	AMLODIPINE	11.14	7694.150985
2290648101007503	2290648101007503004	AMLODIPINE	11.14	7694.150985
2290648101007503	2290648101007503005	AMLODIPINE	11.14	7694.150985
2290648101008503	2290648101008503001	METOPROL TAR	1.26	7694.150985
2290648101008503	2290648101008503002	METOPROL TAR	1.26	7694.150985
2290648101008503	2290648101008503003	METOPROL TAR	1.26	7694.150985
2290648101008503	2290648101008503004	METOPROL TAR	1.26	7694.150985
2290648101008503	2290648101008503005	METOPROL TAR	1.26	7694.150985
2290740107001303	2290740107001303001	AMOXICILLIN	7.58	9624.741176
2290785103001303	2290785103001303001	ALBUTEROL	38.50	10093.896094
2290862101012403	2290862101012403001	PREDNISONE	3.09	12732.954874
2290862101013403	2290862101013403001	TOPIRAMATE	26.72	12732.954874
2290914101007403	2290914101007403001	AZITHROMYCIN	5.64	5825.071481
2290995101002403	2290995101002403001	ARNUIITY ELPT	674.59	13820.551908
2290995101002403	2290995101002403002	ARNUIITY ELPT	809.43	13820.551908
2290995101006403	2290995101006403001	RANITIDINE	28.00	13820.551908
2290995101006403	2290995101006403002	RANITIDINE	28.00	13820.551908
2290995101009403	2290995101009403001	PREDNISONE	1.98	13820.551908
2290995101009403	2290995101009403002	PREDNISONE	3.96	13820.551908
2290995101010403	2290995101010403001	VENTOLIN HFA	54.74	13820.551908
2290999101002503	2290999101002503001	DIVALPROEX	15.12	8420.058129
2290999101002503	2290999101002503002	DIVALPROEX	15.12	8420.058129
2290999101002503	2290999101002503003	DIVALPROEX	57.43	8420.058129
2290999101002503	2290999101002503004	DIVALPROEX	57.43	8420.058129
2290999101002503	2290999101002503005	DIVALPROEX	57.43	8420.058129
2290999101002503	2290999101002503006	DIVALPROEX	57.37	8420.058129
2290999101003503	2290999101003503001	MONTELUKAST	54.00	8420.058129
2290999101003503	2290999101003503002	MONTELUKAST	54.00	8420.058129
2290999101003503	2290999101003503003	MONTELUKAST	54.00	8420.058129
2290999101003503	2290999101003503004	MONTELUKAST	24.64	8420.058129
2290999101003503	2290999101003503005	MONTELUKAST	39.44	8420.058129

HC-206I
Sample SAS Job for Example A
Total Rx expenditures associated with medical visits for asthma
Analysis Variable: RXXP18X SUM OF PAYMENTS RXSF18X-RXOU18X (IMPUTED)

N	Sum
2970	424280.64

HC-206I
Sample SAS Job for Example A
Total Rx expenditures associated with medical visits for asthma
Weighted

Analysis Variable:RXXP18X SUM OF PAYMENTS RXSF18X-RXOU18X(IMPUTED)

N	Sum
2970	5259547555

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (x) Proprietary Software 9.4 (TS1M6)

NOTE: This session is executing on the X64_10PRO platform.

NOTE: SAS initialization used:

real time 0.34 seconds

cpu time 0.23 seconds

NOTE: AUTOEXEC processing beginning; file is C:\Program Files\SAS\SASMISC\autoexec_9464.sas.

NOTE: AUTOEXEC processing completed.

```
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17      ods rtf file = 'C:\Data\sampleB.rtf' BODYTITLE;
NOTE: Writing RTF Body file: 'C:\Data\sampleB.rtf'
18
19      ods noproctitle;
20
21      OPTIONS LS=132 PS=59;
22
23      %let yr=18;
24      %let evntnum=206; /* BE SURE TO UPDTE FOR CURRENT FY */
25      %let condnum=207; /* BE SURE TO UPDTE FOR CURRENT FY */
26
27      TITLE1 "HC-&evntnum.I";
28      TITLE2 "Sample SAS Job for Example B";
29
30      LIBNAME IN "C:\Data";
NOTE: Libref IN was successfully assigned as follows:
```

Engine: V9
Physical Name: C:\Data

```

31
32 *****
33 * Calculate the expenditures for prescribed medicines associated with asthma.
34 *****;
35 PROC FORMAT;
36   VALUE EVENTYPE
37     1 = "1 MVIS"
38     2 = "2 OPAT"
39     3 = "3 EROM"
40     4 = "4 STAZ"
41     7 = "7 HVIS"
42     8 = "8 PMED";
NOTE: Format EVENTYPE has been output.
43   RUN;
```

NOTE: PROCEDURE FORMAT used (Total process time):
real time 0.00 seconds
cpu time 0.01 seconds

```

44
45 *-----
46 * Get condition records coded as asthma.
47 *-----;
48 DATA ASCONDS;
49   SET IN.H&condnum (KEEP=CONDIDX CCSR1X CCSR2X CCSR3X ICD10CDX);
50   IF CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1';
51   RUN;
```

NOTE: There were 94936 observations read from the data set IN.H207.
NOTE: The data set WORK.ASCONDS has 2121 observations and 5 variables.
NOTE: Compressing data set WORK.ASCONDS increased size by 50.00 percent.
Compressed is 3 pages; un-compressed would require 2 pages.
NOTE: DATA statement used (Total process time):
real time 0.48 seconds
cpu time 0.01 seconds

```

52
53 *-----
54 * Get the events linked to each of the asthma condition records.
55 *-----;
56 PROC SORT DATA=ASCONDS; BY CONDDIX; RUN;
```

NOTE: There were 2121 observations read from the data set WORK.ASCONDS.
NOTE: SAS sort was used.
NOTE: The data set WORK.ASCONDS has 2121 observations and 5 variables.
NOTE: Compressing data set WORK.ASCONDS increased size by 50.00 percent.
Compressed is 3 pages; un-compressed would require 2 pages.
NOTE: PROCEDURE SORT used (Total process time):
real time 0.00 seconds
cpu time 0.00 seconds

57

```

58     proc print data=asconds (obs=50);
59         title3 "sample print of work.asconds - sorted by condidx";
60         title4 "COND (H&condnum) records where CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1'";
61     run;

```

NOTE: There were 50 observations read from the data set WORK.ASCONDS.

NOTE: The PROCEDURE PRINT printed page 1.

NOTE: PROCEDURE PRINT used (Total process time):

```

real time      0.03 seconds
cpu time       0.03 seconds

```

```

62
63     PROC SORT DATA=IN.H&evntnum.IF1 OUT=CLNK; BY CONDIDX; RUN;

```

NOTE: There were 407366 observations read from the data set IN.H206IF1.

NOTE: SAS threaded sort was used.

NOTE: The data set WORK.CLNK has 407366 observations and 6 variables.

NOTE: Compressing data set WORK.CLNK increased size by 0.73 percent.

Compressed is 553 pages; un-compressed would require 549 pages.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      0.70 seconds
cpu time       0.32 seconds

```

```

64
65     DATA ASCLNKS;
66         MERGE CLNK (IN=INCLNK KEEP=CONDIDX EVNTIDX EVENTYPE)
67             ASCONDS (IN=INASCOND KEEP=CONDIDX);
68         BY CONDIDX;
69         IF INCLNK & INASCOND;
70     RUN;

```

NOTE: There were 407366 observations read from the data set WORK.CLNK.

NOTE: There were 2121 observations read from the data set WORK.ASCONDS.

NOTE: The data set WORK.ASCLNKS has 8854 observations and 3 variables.

NOTE: Compressing data set WORK.ASCLNKS increased size by 33.33 percent.

Compressed is 8 pages; un-compressed would require 6 pages.

NOTE: DATA statement used (Total process time):

```

real time      0.11 seconds
cpu time       0.12 seconds

```

```

71
72     proc report data=asclnks (obs=75) nowd headskip;
73         define condidx /'CONDIDX' order;
74         define EVNTIDX /'EVNTIDX';
75         define EVENTYPE /'EVENTYPE';
76         break after condidx / skip;
77         format eventype eventype.;
78         title3 "sample print of work.asclnks - sorted by condidx";
79         title4 "events linked to asthma condition records";
80     run;

```

NOTE: Multiple concurrent threads will be used to summarize data.

NOTE: There were 75 observations read from the data set WORK.ASCLNKS.

NOTE: The PROCEDURE REPORT printed pages 2-3.

NOTE: PROCEDURE REPORT used (Total process time):

real time 0.02 seconds
cpu time 0.01 seconds

81
82 PROC SORT DATA=ASCLNKS; BY EVNTIDX; RUN;

NOTE: There were 8854 observations read from the data set WORK.ASCLNKS.
NOTE: SAS sort was used.
NOTE: The data set WORK.ASCLNKS has 8854 observations and 3 variables.
NOTE: Compressing data set WORK.ASCLNKS increased size by 33.33 percent.
Compressed is 8 pages; un-compressed would require 6 pages.

NOTE: PROCEDURE SORT used (Total process time):

real time 0.01 seconds
cpu time 0.00 seconds

83
84 proc print data=asclnks (obs=50);
85 format eventype eventype.;
86 title3 "sample print of work.asclnks - sorted by evntidx";
87 run;

NOTE: There were 50 observations read from the data set WORK.ASCLNKS.

NOTE: The PROCEDURE PRINT printed page 4.

NOTE: PROCEDURE PRINT used (Total process time):

real time 0.00 seconds
cpu time 0.01 seconds

88
89 DATA ASCLNKS;
90 SET ASCLNKS (KEEP=EVNTIDX EVENTYPE);
91 BY EVNTIDX;
92 IF FIRST.EVNTIDX;
93 RUN;

NOTE: There were 8854 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 8852 observations and 2 variables.
NOTE: Compressing data set WORK.ASCLNKS increased size by 50.00 percent.
Compressed is 6 pages; un-compressed would require 4 pages.

NOTE: DATA statement used (Total process time):

real time 0.00 seconds
cpu time 0.00 seconds

94
95 proc print data=asclnks (obs=50);
96 format eventype eventype.;
97 title3 "sample print of unique evntidxs from work.asclnks";
98 run;

NOTE: There were 50 observations read from the data set WORK.ASCLNKS.

NOTE: The PROCEDURE PRINT printed page 5.

NOTE: PROCEDURE PRINT used (Total process time):

real time 0.00 seconds

cpu time 0.01 seconds

```

99
100 *-----
101 * Get PMED records linked to asthma condition records.
102 *-----;
103 PROC SORT DATA=IN.H&evntnum.A OUT=PMED; BY LINKIDX; RUN;

```

NOTE: There were 319666 observations read from the data set IN.H206A.

NOTE: SAS threaded sort was used.

NOTE: The data set WORK.PMED has 319666 observations and 13 variables.

NOTE: Compressing data set WORK.PMED decreased size by 17.18 percent.

Compressed is 810 pages; un-compressed would require 978 pages.

NOTE: PROCEDURE SORT used (Total process time):

real time 1.93 seconds

cpu time 0.50 seconds

```

104
105 DATA ASPMEDS;
106 MERGE PMED (KEEP=LINKIDX RXRECIDX RXNAME RXXP&yr.X PERWT&yr.F)
107 ASCLNKS (IN=INASCLNK KEEP=EVNTIDX RENAME=(EVNTIDX=LINKIDX));
108 BY LINKIDX;
109 IF INASCLNK & PERWT&yr.F>0;
110 RUN;

```

NOTE: There were 319666 observations read from the data set WORK.PMED.

NOTE: There were 8852 observations read from the data set WORK.ASCLNKS.

NOTE: The data set WORK.ASPMEDS has 15308 observations and 5 variables.

NOTE: Compressing data set WORK.ASPMEDS decreased size by 24.00 percent.

Compressed is 19 pages; un-compressed would require 25 pages.

NOTE: DATA statement used (Total process time):

real time 0.11 seconds

cpu time 0.09 seconds

```

111
112 proc report data=aspmeds (obs=300) nowd headskip;
113 column LINKIDX RXRECIDX RXNAME RXXP&yr.X PERWT&yr.F;
114 define linkidx / 'LINKIDX' order;
115 define rxrecidx / 'RXRECIDX';
116 define rxname / 'RXNAME';
117 define rxxp&yr.x / "RXXP&yr.X" display format=8.2;
118 define perwt&yr.f / "PERWT&yr.F";
119 break after linkidx / skip;
120 title3 "sample print of work.aspmeds";
121 title4 "PMED (HC-&evntnum.A) records which link to condition records coded as asthma";
122 run;

```

NOTE: Multiple concurrent threads will be used to summarize data.

NOTE: There were 300 observations read from the data set WORK.ASPMEDS.

NOTE: The PROCEDURE REPORT printed pages 6-14.

NOTE: PROCEDURE REPORT used (Total process time):

real time 0.04 seconds

cpu time 0.03 seconds

```
123
124     PROC MEANS DATA=ASPMEDS N SUM;
125         VAR RXXP&yr.X;
126         TITLE3 "Total Rx expenditures associated with asthma";
127     RUN;
```

```
NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 15308 observations read from the data set WORK.ASPMEDS.
NOTE: The PROCEDURE MEANS printed page 15.
NOTE: PROCEDURE MEANS used (Total process time):
real time          0.01 seconds
cpu time           0.01 seconds
```

```
128
129     PROC MEANS DATA=ASPMEDS N SUM;
130         VAR RXXP&yr.X;
131         WEIGHT PERWT&yr.F;
132         TITLE3 "Total Rx expenditures associated with asthma";
133         TITLE5 "Weighted";
134     RUN;
```

```
NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 15308 observations read from the data set WORK.ASPMEDS.
NOTE: The PROCEDURE MEANS printed page 16.
NOTE: PROCEDURE MEANS used (Total process time):
real time          0.02 seconds
cpu time           0.01 seconds
```

```
135
136     ods rtf close;
137
```

```
NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414
NOTE: The SAS System used:
real time          4.09 seconds
cpu time           1.56 seconds
```

HC-206I

Sample SAS Job for Example B

sample print of work.asconds - sorted by condidx

COND (H207) records where CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1'

Obs	CONDIDX	ICD10CDX	CCSR1X	CCSR2X	CCSR3X
1	2290001102002	J45	RSP009	-1	-1
2	2290005103001	J45	RSP009	-1	-1
3	2290009101008	J45	RSP009	-1	-1
4	2290009102004	J45	RSP009	-1	-1
5	2290010101003	J45	RSP009	-1	-1
6	2290010105001	J45	RSP009	-1	-1
7	2290010106001	J45	RSP009	-1	-1
8	2290042102001	J45	RSP009	-1	-1
9	2290051104002	J45	RSP009	-1	-1
10	2290103103009	J45	RSP009	-1	-1
11	2290116101004	J45	RSP009	-1	-1
12	2290119104001	J45	RSP009	-1	-1
13	2290121101003	J45	RSP009	-1	-1
14	2290134104001	J45	RSP009	-1	-1
15	2290150101014	J45	RSP009	-1	-1
16	2290168101005	J45	RSP009	-1	-1
17	2290169102003	J45	RSP009	-1	-1
18	2290186102002	J45	RSP009	-1	-1
19	2290209105001	J45	RSP009	-1	-1
20	2290214101002	J45	RSP009	-1	-1
21	2290244103002	J45	RSP009	-1	-1
22	2290252102005	J45	RSP009	-1	-1
23	2290254101001	J45	RSP009	-1	-1
24	2290278102003	J45	RSP009	-1	-1
25	2290298105001	J45	RSP009	-1	-1
26	2290326101006	J45	RSP009	-1	-1
27	2290326102005	J45	RSP009	-1	-1
28	2290326103001	J45	RSP009	-1	-1
29	2290326104005	J45	RSP009	-1	-1
30	2290344101003	J45	RSP009	-1	-1
31	2290382104001	J45	RSP009	-1	-1
32	2290392102010	J45	RSP009	-1	-1
33	2290393101010	J45	RSP009	-1	-1
34	2290393102001	J45	RSP009	-1	-1
35	2290421102001	J45	RSP009	-1	-1
36	2290428101004	J45	RSP009	-1	-1
37	2290430101002	J45	RSP009	-1	-1
38	2290430102001	J45	RSP009	-1	-1
39	2290430103001	J45	RSP009	-1	-1
40	2290445102005	J45	RSP009	-1	-1
41	2290472102006	J45	RSP009	-1	-1
42	2290476101001	J45	RSP009	-1	-1
43	2290487103001	J45	RSP009	-1	-1
44	2290492102003	J45	RSP009	-1	-1
45	2290492103001	J45	RSP009	-1	-1
46	2290492104001	J45	RSP009	-1	-1
47	2290492105001	J45	RSP009	-1	-1
48	2290504101005	J45	RSP009	-1	-1
49	2290504101011	J45	RSP009	-1	-1
50	2290511101006	J45	RSP009	-1	-1

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Sample SAS Job for Example B

sample print of work.asclnks - sorted by condidx
events linked to asthma condition records

CONDIDX	EVNTIDX	EVENTYPE
2290001102002	2290001102002503	8 PMED
2290005103001	2290005103004001	2 OPAT
2290005103001	2290005103004101	2 OPAT
2290005103001	2290005103004201	2 OPAT
2290005103001	2290005103004301	2 OPAT
2290005103001	2290005103004401	2 OPAT
2290005103001	2290005103004501	2 OPAT
2290005103001	2290005103004601	2 OPAT
2290009101008	2290009101001403	8 PMED
2290009101008	2290009101001503	8 PMED
2290009101008	2290009101011403	8 PMED
2290009101008	2290009101011503	8 PMED
2290009101008	2290009101012403	8 PMED
2290009101008	2290009101012503	8 PMED
2290009101008	2290009101015503	8 PMED
2290009102004	2290009102002403	8 PMED
2290009102004	2290009102002503	8 PMED
2290010101003	2290010101005403	8 PMED
2290010101003	2290010101005503	8 PMED
2290010101003	2290010101011403	8 PMED
2290010101003	2290010101012403	8 PMED
2290010101003	2290010101012503	8 PMED
2290010101003	2290010101013403	8 PMED
2290010101003	2290010101013503	8 PMED
2290010101003	2290010101014403	8 PMED
2290010101003	2290010101015403	8 PMED
2290010101003	2290010101015503	8 PMED
2290010105001	2290010105001403	8 PMED
2290010105001	2290010105001503	8 PMED
2290010106001	2290010106003403	8 PMED
2290010106001	2290010106003503	8 PMED
2290010106001	2290010106004403	8 PMED
2290010106001	2290010106004503	8 PMED
2290010106001	2290010106005403	8 PMED
2290010106001	2290010106006403	8 PMED
2290010106001	2290010106006503	8 PMED
2290042102001	2290042102002303	8 PMED
2290042102001	2290042102002403	8 PMED
2290042102001	2290042102005303	8 PMED
2290042102001	2290042102005403	8 PMED
2290051104002	2290051104001403	8 PMED
2290051104002	2290051104002403	8 PMED
2290103103009	2290103103002303	8 PMED
2290103103009	2290103103003303	8 PMED
2290116101004	2290116101001503	8 PMED
2290116101004	2290116101012403	8 PMED
2290116101004	2290116101014503	8 PMED
2290116101004	2290116101103201	1 MVIS
2290116101004	2290116101103301	1 MVIS
2290116101004	2290116101204401	3 EROM
2290119104001	2290119104000901	1 MVIS
2290119104001	2290119104001001	1 MVIS
2290119104001	2290119104001303	8 PMED
2290119104001	2290119104002503	8 PMED
2290119104001	2290119104004503	8 PMED
2290119104001	2290119104103001	1 MVIS
2290119104001	2290119104103101	1 MVIS
2290119104001	2290119104103201	1 MVIS
2290119104001	2290119104103301	1 MVIS
2290119104001	2290119104103401	1 MVIS
2290119104001	2290119104103501	1 MVIS
2290119104001	2290119104103601	1 MVIS
2290119104001	2290119104103701	1 MVIS
2290119104001	2290119104205801	1 MVIS
2290121101003	2290121101001303	8 PMED
2290121101003	2290121101001403	8 PMED
2290121101003	2290121101001503	8 PMED
2290134104001	2290134104001303	8 PMED
2290134104001	2290134104001403	8 PMED

CONDIDX	EVNTIDX	EVENTYPE
2290134104001	2290134104001503	8 PMED
2290134104001	2290134104002403	8 PMED
2290134104001	2290134104002503	8 PMED
2290134104001	2290134104106101	1 MVIS
2290150101014	2290150101005303	8 PMED
2290150101014	2290150101005503	8 PMED

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Sample SAS Job for Example B
sample print of work.asclnks - sorted by evtntidx

Obs	CONDIDX	EVNTIDX	EVENTYPE
1	2290001102002	2290001102002503	8 PMED
2	2290005103001	2290005103004001	2 OPAT
3	2290005103001	2290005103004101	2 OPAT
4	2290005103001	2290005103004201	2 OPAT
5	2290005103001	2290005103004301	2 OPAT
6	2290005103001	2290005103004401	2 OPAT
7	2290005103001	2290005103004501	2 OPAT
8	2290005103001	2290005103004601	2 OPAT
9	2290009101008	2290009101001403	8 PMED
10	2290009101008	2290009101001503	8 PMED
11	2290009101008	2290009101011403	8 PMED
12	2290009101008	2290009101011503	8 PMED
13	2290009101008	2290009101012403	8 PMED
14	2290009101008	2290009101012503	8 PMED
15	2290009101008	2290009101015503	8 PMED
16	2290009102004	2290009102002403	8 PMED
17	2290009102004	2290009102002503	8 PMED
18	2290010101003	2290010101005403	8 PMED
19	2290010101003	2290010101005503	8 PMED
20	2290010101003	2290010101011403	8 PMED
21	2290010101003	2290010101012403	8 PMED
22	2290010101003	2290010101012503	8 PMED
23	2290010101003	2290010101013403	8 PMED
24	2290010101003	2290010101013503	8 PMED
25	2290010101003	2290010101014403	8 PMED
26	2290010101003	2290010101015403	8 PMED
27	2290010101003	2290010101015503	8 PMED
28	2290010105001	2290010105001403	8 PMED
29	2290010105001	2290010105001503	8 PMED
30	2290010106001	2290010106003403	8 PMED
31	2290010106001	2290010106003503	8 PMED
32	2290010106001	2290010106004403	8 PMED
33	2290010106001	2290010106004503	8 PMED
34	2290010106001	2290010106005403	8 PMED
35	2290010106001	2290010106006403	8 PMED
36	2290010106001	2290010106006503	8 PMED
37	2290042102001	2290042102002303	8 PMED
38	2290042102001	2290042102002403	8 PMED
39	2290042102001	2290042102005303	8 PMED
40	2290042102001	2290042102005403	8 PMED
41	2290051104002	2290051104001403	8 PMED
42	2290051104002	2290051104002403	8 PMED
43	2290103103009	2290103103002303	8 PMED
44	2290103103009	2290103103003303	8 PMED
45	2290116101004	2290116101001503	8 PMED
46	2290116101004	2290116101012403	8 PMED
47	2290116101004	2290116101014503	8 PMED
48	2290116101004	2290116101103201	1 MVIS
49	2290116101004	2290116101103301	1 MVIS
50	2290116101004	2290116101204401	3 EROM

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Sample SAS Job for Example B
sample print of unique evtidxs from work.asclnks

Obs	EVNTIDX	EVENTYPE
1	2290001102002503	8 PMED
2	2290005103004001	2 OPAT
3	2290005103004101	2 OPAT
4	2290005103004201	2 OPAT
5	2290005103004301	2 OPAT
6	2290005103004401	2 OPAT
7	2290005103004501	2 OPAT
8	2290005103004601	2 OPAT
9	2290009101001403	8 PMED
10	2290009101001503	8 PMED
11	2290009101011403	8 PMED
12	2290009101011503	8 PMED
13	2290009101012403	8 PMED
14	2290009101012503	8 PMED
15	2290009101015503	8 PMED
16	2290009102002403	8 PMED
17	2290009102002503	8 PMED
18	2290010101005403	8 PMED
19	2290010101005503	8 PMED
20	2290010101011403	8 PMED
21	2290010101012403	8 PMED
22	2290010101012503	8 PMED
23	2290010101013403	8 PMED
24	2290010101013503	8 PMED
25	2290010101014403	8 PMED
26	2290010101015403	8 PMED
27	2290010101015503	8 PMED
28	2290010105001403	8 PMED
29	2290010105001503	8 PMED
30	2290010106003403	8 PMED
31	2290010106003503	8 PMED
32	2290010106004403	8 PMED
33	2290010106004503	8 PMED
34	2290010106005403	8 PMED
35	2290010106006403	8 PMED
36	2290010106006503	8 PMED
37	2290042102002303	8 PMED
38	2290042102002403	8 PMED
39	2290042102005303	8 PMED
40	2290042102005403	8 PMED
41	2290051104001403	8 PMED
42	2290051104002403	8 PMED
43	2290103103002303	8 PMED
44	2290103103003303	8 PMED
45	2290116101001503	8 PMED
46	2290116101012403	8 PMED
47	2290116101014503	8 PMED
48	2290116101103201	1 MVIS
49	2290116101103301	1 MVIS
50	2290116101204401	3 EROM

HC-206I
Sample SAS Job for Example B
sample print of work.aspmeds
FMED (HC-206A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXKP18X	PERWT18F
2290001102002503	2290001102002503001	BUPROPN HCL	279.98	18188.857143
2290001102002503	2290001102002503002	BUPROPN HCL	279.98	18188.857143
2290001102002503	2290001102002503003	BUPROPN HCL	279.98	18188.857143
2290009101001403	2290009101001403001	PREDNISONE	3.80	4500.458919
2290009101001503	2290009101001503001	PREDNISONE	5.50	4500.458919
2290009101001503	2290009101001503002	PREDNISONE	5.50	4500.458919
2290009101001503	2290009101001503003	PREDNISONE	5.50	4500.458919
2290009101001503	2290009101001503004	PREDNISONE	5.50	4500.458919
2290009101011403	2290009101011403001	BEVESPI	353.75	4500.458919
2290009101011503	2290009101011503001	BEVESPI	353.75	4500.458919
2290009101011503	2290009101011503002	BEVESPI	353.75	4500.458919
2290009101011503	2290009101011503003	BEVESPI	353.75	4500.458919
2290009101011503	2290009101011503004	BEVESPI	353.75	4500.458919
2290009101012403	2290009101012403001	ALBUTEROL	4.00	4500.458919
2290009101012503	2290009101012503001	IPRATROPIUM/	19.00	4500.458919
2290009101012503	2290009101012503002	IPRATROPIUM/	19.00	4500.458919
2290009101012503	2290009101012503003	IPRATROPIUM/	19.00	4500.458919
2290009101012503	2290009101012503004	IPRATROPIUM/	19.00	4500.458919
2290009101015503	2290009101015503001	ALBUTEROL	4.00	4500.458919
2290009102002403	2290009102002403001	BREO ELLIPTA	340.16	2676.560017
2290009102002503	2290009102002503001	BREO ELLIPTA	340.16	2676.560017
2290009102002503	2290009102002503002	BREO ELLIPTA	340.16	2676.560017
2290009102002503	2290009102002503003	BREO ELLIPTA	340.16	2676.560017
2290009102002503	2290009102002503004	BREO ELLIPTA	340.16	2676.560017
2290010101005403	2290010101005403001	COMBIVENT	1005.77	7925.087668
2290010101005503	2290010101005503001	COMBIVENT	1005.77	7925.087668
2290010101005503	2290010101005503002	COMBIVENT	1005.77	7925.087668
2290010101011403	2290010101011403001	EUCRISA	629.35	7925.087668
2290010101012403	2290010101012403001	CYCLOBENZAPR	0.67	7925.087668
2290010101012403	2290010101012403002	CYCLOBENZAPR	1.32	7925.087668
2290010101012503	2290010101012503001	CYCLOBENZAPR	2.77	7925.087668
2290010101013403	2290010101013403001	METHYLPRED	7.96	7925.087668
2290010101013503	2290010101013503001	METHYLPRED	7.96	7925.087668
2290010101014403	2290010101014403001	ALBUTEROL	92.98	7925.087668
2290010101015403	2290010101015403001	PREDNISONE	3.97	7925.087668
2290010101015503	2290010101015503001	PREDNISONE	3.97	7925.087668
2290010101015503	2290010101015503002	PREDNISONE	3.97	7925.087668
2290010101015503	2290010101015503003	PREDNISONE	5.13	7925.087668
2290042102002303	2290042102002303001	MONTELUKAST	54.00	20706.399091
2290042102002403	2290042102002403001	MONTELUKAST	54.00	20706.399091
2290042102002403	2290042102002403002	MONTELUKAST	54.00	20706.399091
2290042102005303	2290042102005303001	COMBIVENT	418.33	20706.399091
2290042102005403	2290042102005403001	COMBIVENT	418.33	20706.399091
2290051104001403	2290051104001403001	ALBUTEROL	5.35	2784.522587
2290051104001403	2290051104001403002	ALBUTEROL	5.35	2784.522587
2290051104001403	2290051104001403003	ALBUTEROL	5.35	2784.522587
2290051104001403	2290051104001403004	ALBUTEROL	5.35	2784.522587
2290051104001403	2290051104001403005	ALBUTEROL	6.37	2784.522587
2290051104001403	2290051104001403006	ALBUTEROL	6.37	2784.522587
2290051104001403	2290051104001403007	ALBUTEROL	6.37	2784.522587
2290051104002403	2290051104002403001	FLOVENT HFA	180.27	2784.522587
2290051104002403	2290051104002403002	FLOVENT HFA	180.27	2784.522587
2290051104002403	2290051104002403003	FLOVENT HFA	180.27	2784.522587
2290051104002403	2290051104002403004	FLOVENT HFA	180.27	2784.522587
2290051104002403	2290051104002403005	FLOVENT HFA	180.27	2784.522587
2290051104002403	2290051104002403006	FLOVENT HFA	180.27	2784.522587
2290051104002403	2290051104002403007	FLOVENT HFA	180.27	2784.522587
2290116101001503	2290116101001503001	VENTOLIN HFA	53.56	6829.704742
2290116101001503	2290116101001503002	VENTOLIN HFA	53.11	6829.704742
2290116101012403	2290116101012403001	VENTOLIN HFA	53.56	6829.704742
2290116101014503	2290116101014503001	PREDNISONE	3.00	6829.704742
2290119104001303	2290119104001303001	QVAR	186.17	8737.024067
2290119104002503	2290119104002503001	FLUTICASONE	44.67	8737.024067
2290119104004503	2290119104004503001	ALBUTEROL	38.50	8737.024067
2290121101001303	2290121101001303001	MONTELUKAST	14.33	11386.724425
2290121101001403	2290121101001403001	MONTELUKAST	14.33	11386.724425
2290121101001403	2290121101001403002	MONTELUKAST	14.33	11386.724425
2290121101001403	2290121101001403003	MONTELUKAST	14.33	11386.724425
2290121101001403	2290121101001403004	MONTELUKAST	16.59	11386.724425

LINKIDX	RXRECIDX	RXNAME	RXXP18X	PERWT18F
2290121101001403	2290121101001403005	MONTELUKAST	16.59	11386.724425
2290121101001403	2290121101001403006	MONTELUKAST	16.59	11386.724425
2290121101001403	2290121101001403007	MONTELUKAST	16.59	11386.724425
2290121101001503	2290121101001503001	MONTELUKAST	16.59	11386.724425
2290121101001503	2290121101001503002	MONTELUKAST	20.89	11386.724425
2290121101001503	2290121101001503003	MONTELUKAST	16.91	11386.724425
2290121101001503	2290121101001503004	MONTELUKAST	19.56	11386.724425
2290134104001303	2290134104001303001	MONTELUKAST	24.64	6568.907035
2290134104001403	2290134104001403001	MONTELUKAST	24.64	6568.907035
2290134104001403	2290134104001403002	MONTELUKAST	24.64	6568.907035
2290134104001503	2290134104001503001	MONTELUKAST	41.22	6568.907035
2290134104001503	2290134104001503002	MONTELUKAST	41.22	6568.907035
2290134104002403	2290134104002403001	ALBUTEROL	9.75	6568.907035
2290134104002503	2290134104002503001	ALBUTEROL	11.20	6568.907035
2290150101005303	2290150101005303001	VENTOLIN HFA	54.97	4545.798478
2290150101005303	2290150101005303002	PROAIR HFA	60.79	4545.798478
2290150101005303	2290150101005303003	VENTOLIN HFA	54.97	4545.798478
2290150101005303	2290150101005303004	VENTOLIN HFA	54.97	4545.798478
2290150101005503	2290150101005503001	VENTOLIN HFA	54.97	4545.798478
2290150101005503	2290150101005503002	PROAIR HFA	60.79	4545.798478
2290150101005503	2290150101005503003	VENTOLIN HFA	54.97	4545.798478
2290150101006303	2290150101006303001	ADVAIR HFA	556.82	4545.798478
2290150101006303	2290150101006303002	ADVAIR HFA	556.82	4545.798478
2290150101006303	2290150101006303003	ADVAIR HFA	556.82	4545.798478
2290150101006303	2290150101006303004	ADVAIR HFA	1581.55	4545.798478
2290150101006503	2290150101006503001	ADVAIR HFA	556.82	4545.798478
2290150101006503	2290150101006503002	ADVAIR HFA	556.82	4545.798478
2290150101006503	2290150101006503003	ADVAIR HFA	556.82	4545.798478
2290168101021303	2290168101021303001	HYD POL/CPM	47.07	10251.354209
2290168101021403	2290168101021403001	HYD POL/CPM	47.07	10251.354209
2290168101024303	2290168101024303001	VIRTUSSIN AC	11.00	10251.354209
2290168101025303	2290168101025303001	ATROVENT HFA	478.67	10251.354209
2290168101025403	2290168101025403001	ATROVENT HFA	478.67	10251.354209
2290168101026303	2290168101026303001	PROAIR HFA	56.58	10251.354209
2290168101026403	2290168101026403001	PROAIR HFA	56.58	10251.354209
2290168101027303	2290168101027303001	BENZONATATE	15.80	10251.354209
2290168101027503	2290168101027503001	BENZONATATE	15.80	10251.354209
2290168101028303	2290168101028303001	LEVOFLOXACIN	25.72	10251.354209
2290168101029303	2290168101029303001	PHENAZOPYRID	10.10	10251.354209
2290169102010303	2290169102010303001	QVAR	249.28	6510.638528
2290169102010303	2290169102010303002	QVAR	249.28	6510.638528
2290169102010403	2290169102010403001	FLOVENT HFA	248.42	6510.638528
2290169102010403	2290169102010403002	FLOVENT HFA	248.42	6510.638528
2290169102010403	2290169102010403003	FLOVENT HFA	246.42	6510.638528
2290169102010503	2290169102010503001	FLOVENT HFA	248.42	6510.638528
2290169102010503	2290169102010503002	FLOVENT HFA	248.42	6510.638528
2290169102010503	2290169102010503003	FLOVENT HFA	248.42	6510.638528
2290169102010503	2290169102010503004	FLOVENT HFA	248.42	6510.638528
2290169102010503	2290169102010503005	FLOVENT HFA	246.42	6510.638528
2290169102010503	2290169102011303001	PROVENTIL	83.85	6510.638528
2290169102010503	2290169102011303002	PROVENTIL	83.85	6510.638528
2290169102011403	2290169102011403001	PROVENTIL	83.85	6510.638528
2290169102011403	2290169102011403002	PROVENTIL	83.85	6510.638528
2290169102011503	2290169102011503001	PROVENTIL	83.85	6510.638528
2290169102012303	2290169102012303001	IPRATROPIUM/	5.98	6510.638528
2290169102012503	2290169102012503001	IPRATROPIUM/	5.98	6510.638528
2290186102001303	2290186102001303001	ATENOLOL	4.00	21626.744763
2290209105001403	2290209105001403001	VENTOLIN HFA	64.29	2507.365372
2290209105001503	2290209105001503001	PROAIR HFA	71.25	2507.365372
2290209105001503	2290209105001503002	PROAIR HFA	71.25	2507.365372
2290214101005503	2290214101005503001	PREDNISONE	0.85	14608.519354
2290214101006503	2290214101006503001	IPRATROPIUM	49.60	14608.519354
2290214101007503	2290214101007503001	IPRATROPIUM	49.60	14608.519354
2290244103001403	2290244103001403001	PROAIR HFA	61.72	18755.841225
2290244103001403	2290244103001403002	PROAIR HFA	61.72	18755.841225
2290244103001403	2290244103001403003	PROAIR HFA	61.72	18755.841225
2290252102008303	2290252102008303001	LEVALBUTEROL	46.97	12629.368717
2290252102008503	2290252102008503001	LEVALBUTEROL	46.97	12629.368717
2290252102010403	2290252102010403001	VENTOLIN HFA	54.39	12629.368717
2290252102010403	2290252102010403002	VENTOLIN HFA	54.39	12629.368717
2290252102011403	2290252102011403001	PREDNISONE	9.56	12629.368717
2290254101005503	2290254101005503001	PREDNISONE	7.99	27782.543626
2290278102013303	2290278102013303001	PROAIR HFA	65.13	13936.196865
2290278102013303	2290278102013303002	PROAIR HFA	72.16	13936.196865

LINKIDX	RXRECIDX	RXNAME	RXXP18X	PERWT18F
2290278102013503	2290278102013503001	PROAIR HFA	64.18	13936.196865
2290278102014403	2290278102014403001	TOPIRAMATE	24.56	13936.196865
2290278102016503	2290278102016503001	ALBUTEROL	245.94	13936.196865
2290278102018503	2290278102018503001	FLOVENT HFA	498.99	13936.196865
2290298105008303	2290298105008303001	DEXAMETHASON	3.76	7151.636104
2290298105008303	2290298105008303002	DEXAMETHASON	3.76	7151.636104
2290298105008303	2290298105008303003	DEXAMETHASON	3.76	7151.636104
2290298105008303	2290298105008303004	DEXAMETHASON	3.76	7151.636104
2290298105008303	2290298105008303005	DEXAMETHASON	3.76	7151.636104
2290298105008303	2290298105008303006	DEXAMETHASON	3.76	7151.636104
2290298105008303	2290298105008303007	DEXAMETHASON	3.76	7151.636104
2290326101012403	2290326101012403001	ALBUTEROL	47.99	5854.475216
2290326101012403	2290326101012403002	ALBUTEROL	47.99	5854.475216
2290326101012403	2290326101012403003	ALBUTEROL	47.99	5854.475216
2290326101012403	2290326101012403004	ALBUTEROL	47.99	5854.475216
2290326101012403	2290326101012403005	ALBUTEROL	47.99	5854.475216
2290326101012503	2290326101012503001	ALBUTEROL	11.23	5854.475216
2290326101012503	2290326101012503002	ALBUTEROL	11.23	5854.475216
2290326101012503	2290326101012503003	ALBUTEROL	7.75	5854.475216
2290326101012503	2290326101012503004	ALBUTEROL	7.75	5854.475216
2290326102019503	2290326102019503001	VENTOLIN HFA	51.96	6519.198199
2290326102019503	2290326102019503002	VENTOLIN HFA	51.96	6519.198199
2290326102019503	2290326102019503003	VENTOLIN HFA	51.96	6519.198199
2290326102019503	2290326102019503004	VENTOLIN HFA	51.96	6519.198199
2290326103003303	2290326103003303001	ALBUTEROL	47.99	4100.162051
2290326103003403	2290326103003403001	ALBUTEROL	47.99	4100.162051
2290326103003403	2290326103003403002	ALBUTEROL	47.99	4100.162051
2290326103003403	2290326103003403003	ALBUTEROL	47.99	4100.162051
2290326103003403	2290326103003403004	ALBUTEROL	47.99	4100.162051
2290326103003403	2290326103003403005	ALBUTEROL	47.99	4100.162051
2290326104003403	2290326104003403001	QVAR	249.28	3115.436254
2290326104003403	2290326104003403002	QVAR	249.28	3115.436254
2290326104003403	2290326104003403003	QVAR	249.28	3115.436254
2290326104003403	2290326104003403004	QVAR	249.28	3115.436254
2290326104003403	2290326104003403005	QVAR	249.28	3115.436254
2290344101007503	2290344101007503001	FLOVENT HFA	249.74	31050.313047
2290344101008503	2290344101008503001	QVAR	154.50	31050.313047
2290382104001503	2290382104001503001	QVAR	202.46	10406.365521
2290382104003503	2290382104003503001	ALBUTEROL	32.00	10406.365521
2290382104006503	2290382104006503001	PROAIR HFA	125.62	10406.365521
2290382104007503	2290382104007503001	QVAR	202.46	10406.365521
2290392102006503	2290392102006503001	PROAIR HFA	163.61	7123.432831
2290393101010303	2290393101010303001	FLOVENT HFA	364.54	4772.077067
2290393101010403	2290393101010403001	FLOVENT HFA	364.54	4772.077067
2290393101010503	2290393101010503001	FLOVENT HFA	273.21	4772.077067
2290393101010503	2290393101010503002	FLOVENT HFA	273.21	4772.077067
2290393101010503	2290393101010503003	FLOVENT HFA	273.21	4772.077067
2290393101010503	2290393101010503004	FLOVENT HFA	273.21	4772.077067
2290393101010503	2290393101010503005	FLOVENT HFA	273.21	4772.077067
2290393101014403	2290393101014403001	PROAIR HFA	63.72	4772.077067
2290393101014403	2290393101014403002	PROAIR HFA	63.72	4772.077067
2290393101014403	2290393101014403003	PROAIR HFA	63.72	4772.077067
2290393101014403	2290393101014403004	PROAIR HFA	63.72	4772.077067
2290393101014503	2290393101014503001	PROAIR HFA	67.70	4772.077067
2290393101014503	2290393101014503002	PROAIR HFA	67.70	4772.077067
2290393101014503	2290393101014503003	PROAIR HFA	67.70	4772.077067
2290393101015403	2290393101015403001	SPIRIVA	446.57	4772.077067
2290393101015503	2290393101015503001	SPIRIVA	392.41	4772.077067
2290393101015503	2290393101015503002	SPIRIVA	392.41	4772.077067
2290393101015503	2290393101015503003	SPIRIVA	392.41	4772.077067
2290393101015503	2290393101015503004	SPIRIVA	392.41	4772.077067
2290393101015503	2290393101015503005	SPIRIVA	392.41	4772.077067
2290393101016403	2290393101016403001	DULERA	410.99	4772.077067
2290393101016503	2290393101016503001	DULERA	305.97	4772.077067
2290393101016503	2290393101016503002	DULERA	305.97	4772.077067
2290393101016503	2290393101016503003	DULERA	305.97	4772.077067
2290393101016503	2290393101016503004	DULERA	305.97	4772.077067
2290393101016503	2290393101016503005	DULERA	305.97	4772.077067
2290393102002503	2290393102002503001	ALBUTEROL	38.50	2381.155793
2290393102002503	2290393102002503002	ALBUTEROL	38.50	2381.155793
2290421102001503	2290421102001503001	PROAIR HFA	57.31	14470.603694
2290421102001503	2290421102001503002	PROAIR HFA	57.31	14470.603694
2290421102001503	2290421102001503003	PROAIR HFA	57.31	14470.603694
2290421102001503	2290421102001503004	PROAIR HFA	57.31	14470.603694

LINKIDX	RXRECIDX	RXNAME	RXXP18X	PERWT18F
2290428101005303	2290428101005303001	MONTELUKAST	10.37	2742.912700
2290428101005403	2290428101005403001	MONTELUKAST	10.37	2742.912700
2290428101005403	2290428101005403002	MONTELUKAST	10.37	2742.912700
2290428101005503	2290428101005503001	MONTELUKAST	10.37	2742.912700
2290428101005503	2290428101005503002	MONTELUKAST	118.32	2742.912700
2290430101003403	2290430101003403001	Methylprednisolone	2.44	4265.288447
2290430101003403	2290430101003403002	Methylprednisolone	2.44	4265.288447
2290430103002303	2290430103002303001	ALBUTEROL	3.26	6857.303334
2290430103007503	2290430103007503001	FLUTICASONE	3.29	6857.303334
2290445102004503	2290445102004503001	PROAIR HFA	57.51	14605.662806
2290445102025503	2290445102025503001	ANORO ELLIPT	524.99	14605.662806
2290472102007303	2290472102007303001	PROAIR HFA	67.85	2150.061568
2290476101004303	2290476101004303001	LORATADINE	10.71	4791.942344
2290476101004303	2290476101004303002	LORATADINE	10.71	4791.942344
2290476101004303	2290476101004303003	LORATADINE	10.71	4791.942344
2290487103003503	2290487103003503001	BUDESONIDE	33.59	8222.324031
2290487103004403	2290487103004403001	MONTELUKAST	108.57	8222.324031
2290487103005403	2290487103005403001	MONTELUKAST	108.57	8222.324031
2290487103005403	2290487103005403002	MONTELUKAST	108.57	8222.324031
2290487103005503	2290487103005503001	MONTELUKAST	108.57	8222.324031
2290487103006403	2290487103006403001	VENTOLIN HFA	64.29	8222.324031
2290492102001403	2290492102001403001	FLUTICASONE	4.18	2091.474839
2290492102001403	2290492102001403002	FLUTICASONE	4.18	2091.474839
2290492102001403	2290492102001403003	FLUTICASONE	4.18	2091.474839
2290492102001503	2290492102001503001	FLUTICASONE	44.35	2091.474839
2290492102001503	2290492102001503002	FLUTICASONE	44.35	2091.474839
2290492102001503	2290492102001503003	FLUTICASONE	44.35	2091.474839
2290492102001503	2290492102001503004	FLUTICASONE	44.35	2091.474839
2290492102001503	2290492102001503005	FLUTICASONE	44.35	2091.474839
2290492102006303	2290492102006303001	TIZANIDINE	30.16	2091.474839
2290492102006303	2290492102006303002	TIZANIDINE	30.16	2091.474839
2290492102008403	2290492102008403001	PROAIR HFA	97.99	2091.474839
2290492102008403	2290492102008403002	PROAIR HFA	97.99	2091.474839
2290492102008403	2290492102008403003	PROAIR HFA	97.99	2091.474839
2290492102008403	2290492102008403004	PROAIR HFA	97.99	2091.474839
2290492102008503	2290492102008503001	VENTOLIN HFA	84.99	2091.474839
2290492102008503	2290492102008503002	VENTOLIN HFA	84.99	2091.474839
2290492102008503	2290492102008503003	VENTOLIN HFA	84.99	2091.474839
2290492102008503	2290492102008503004	VENTOLIN HFA	84.99	2091.474839
2290492102008503	2290492102008503005	VENTOLIN HFA	84.99	2091.474839
2290492102010503	2290492102010503001	LORATADINE	4.00	2091.474839
2290492102010503	2290492102010503002	LORATADINE	4.00	2091.474839
2290492102010503	2290492102010503003	LORATADINE	24.99	2091.474839
2290492102010503	2290492102010503004	ALLERGY	0.50	2091.474839
2290492102010503	2290492102010503005	ALLERGY	0.50	2091.474839
2290492103001503	2290492103001503001	FLUTICASONE	69.99	1508.528925
2290492103001503	2290492103001503002	FLUTICASONE	69.99	1508.528925
2290492103001503	2290492103001503003	FLUTICASONE	69.99	1508.528925
2290492103001503	2290492103001503004	FLUTICASONE	69.99	1508.528925
2290492103001503	2290492103001503005	FLUTICASONE	69.99	1508.528925
2290492103002503	2290492103002503001	LORATADINE	3.88	1508.528925
2290492103002503	2290492103002503002	LORATADINE	3.88	1508.528925
2290492103002503	2290492103002503003	LORATADINE	3.88	1508.528925
2290492103002503	2290492103002503004	LORATADINE	3.88	1508.528925
2290492103002503	2290492103002503005	LORATADINE	3.88	1508.528925
2290492103003303	2290492103003303001	VENTOLIN HFA	84.99	1508.528925
2290492103003303	2290492103003303002	VENTOLIN HFA	84.99	1508.528925
2290492103003503	2290492103003503001	VENTOLIN HFA	64.29	1508.528925
2290492103003503	2290492103003503002	VENTOLIN HFA	64.29	1508.528925
2290492103003503	2290492103003503003	VENTOLIN HFA	64.29	1508.528925
2290492103003503	2290492103003503004	VENTOLIN HFA	64.29	1508.528925
2290492103003503	2290492103003503005	VENTOLIN HFA	64.29	1508.528925
2290492104003303	2290492104003303001	VENTOLIN HFA	127.82	1508.528925
2290492104003303	2290492104003303002	VENTOLIN HFA	127.82	1508.528925
2290492105001503	2290492105001503001	FLUTICASONE	69.99	1613.957090
2290492105001503	2290492105001503002	FLUTICASONE	69.99	1613.957090
2290492105001503	2290492105001503003	FLUTICASONE	69.99	1613.957090
2290492105001503	2290492105001503004	FLUTICASONE	69.99	1613.957090
2290492105001503	2290492105001503005	FLUTICASONE	69.99	1613.957090
2290492105002403	2290492105002403001	LORATADINE	3.88	1613.957090
2290492105002403	2290492105002403002	LORATADINE	3.88	1613.957090
2290492105002503	2290492105002503001	LORATADINE	3.88	1613.957090
2290492105002503	2290492105002503002	LORATADINE	3.88	1613.957090
2290492105002503	2290492105002503003	LORATADINE	3.88	1613.957090

LINKIDX	RXRECIDX	RXNAME	RXXP18X	PERWT18F
2290492105002503	2290492105002503004	LORATADINE	3.88	1613.957090
2290492105002503	2290492105002503005	LORATADINE	3.88	1613.957090
2290492105003303	2290492105003303001	VENTOLIN HFA	127.82	1613.957090
2290492105003303	2290492105003303002	VENTOLIN HFA	127.82	1613.957090
2290492105003403	2290492105003403001	VENTOLIN HFA	127.82	1613.957090
2290492105003403	2290492105003403002	VENTOLIN HFA	127.82	1613.957090
2290492105003403	2290492105003403003	VENTOLIN HFA	127.82	1613.957090
2290492105003403	2290492105003403004	VENTOLIN HFA	127.82	1613.957090
2290492105003403	2290492105003403005	VENTOLIN HFA	127.82	1613.957090

HC-206I
Sample SAS Job for Example B
Total Rx expenditures associated with asthma

Analysis Variable : RXXP18X SUM OF PAYMENTS RXSF18X-RXOU18X(IMPUTED)

N	Sum
15308	2429318.95

HC-206I
Sample SAS Job for Example B
Total Rx expenditures associated with asthma
Weighted

Analysis Variable: RXXP18X SUM OF PAYMENTS RXSF18X-RXOU18X (IMPUTED)

N	Sum
15308	24535234929

1

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software 9.4 (TS1M6)

NOTE: This session is executing on the X64_10PRO platform.

NOTE: SAS initialization used:
real time 0.38 seconds
cpu time 0.17 seconds

NOTE: AUTOEXEC processing beginning; file is C:\Program Files\SAS\SASMISC\autoexec_9464.sas.

NOTE: AUTOEXEC processing completed.

```
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16 ods rtf file = 'C:\Data\sampleC.rtf' BODYTITLE;
NOTE: Writing RTF Body file: 'C:\Data\sampleC.rtf'
17
18 ods noproctitle;
19
20 OPTIONS LS=132 PS=59;
21
22 %let yr=18;
23 %let evntnum=206; /* BE SURE TO UPDTE FOR CURRENT FY */
24 %let condnum=207; /* BE SURE TO UPDTE FOR CURRENT FY */
25
26 TITLE1 "HC-&evntnum.I";
27 TITLE2 "Sample SAS Job for Example C";
28
29 LIBNAME IN "C:\Data";
NOTE: Libref IN was successfully assigned as follows:
Engine: V9
```

Physical Name: C:\Data

```

30
31 *****
32 * Calculate the expenditures for medical visits associated with asthma.
33 *****;
34 PROC FORMAT;
35     VALUE EVENTYPE
36         1 = "1 MVIS"
37         2 = "2 OPAT"
38         3 = "3 EROM"
39         4 = "4 STAZ"
40         7 = "7 HVIS"
41         8 = "8 PMED";
NOTE: Format EVENTYPE has been output.
42     RUN;
```

NOTE: PROCEDURE FORMAT used (Total process time):

real time	0.00 seconds
cpu time	0.01 seconds

```

43
44 *-----
45 * Get conditions records coded as asthma.
46 *-----;
47 DATA ASCONDS;
48     SET IN.H&condnum (KEEP=CONDIDX CCSR1X CCSR2X CCSR3X ICD10CDX);
49     IF CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1';
50     RUN;
```

NOTE: There were 94936 observations read from the data set IN.H207.
NOTE: The data set WORK.ASCONDS has 2121 observations and 5 variables.
NOTE: Compressing data set WORK.ASCONDS increased size by 50.00 percent.
Compressed is 3 pages; un-compressed would require 2 pages.

NOTE: DATA statement used (Total process time):

real time	0.80 seconds
cpu time	0.01 seconds

```

51
52 *-----
53 * Get the events linked to each of the asthma condition records.
54 *-----;
55 PROC SORT DATA=ASCONDS; BY CONDIDX; RUN;
```

NOTE: There were 2121 observations read from the data set WORK.ASCONDS.
NOTE: SAS sort was used.
NOTE: The data set WORK.ASCONDS has 2121 observations and 5 variables.
NOTE: Compressing data set WORK.ASCONDS increased size by 50.00 percent.
Compressed is 3 pages; un-compressed would require 2 pages.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.00 seconds
cpu time	0.00 seconds

```

56
57     proc print data=asconds (obs=50);
```

```

58     title3 "sample print of work.asconds - sorted by condidx";
59     title4 "COND (H&condnum) records where CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1'";
60     run;

```

NOTE: There were 50 observations read from the data set WORK.ASCONDS.

NOTE: The PROCEDURE PRINT printed page 1.

NOTE: PROCEDURE PRINT used (Total process time):

```

real time      0.03 seconds
cpu time       0.01 seconds

```

```

61
62     PROC SORT DATA=IN.H&evntnum.IF1 OUT=CLNK; BY CONDIDX; RUN;

```

NOTE: There were 407366 observations read from the data set IN.H206IF1.

NOTE: SAS threaded sort was used.

NOTE: The data set WORK.CLNK has 407366 observations and 6 variables.

NOTE: Compressing data set WORK.CLNK increased size by 0.73 percent.

Compressed is 553 pages; un-compressed would require 549 pages.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      1.35 seconds
cpu time       0.25 seconds

```

```

63
64     DATA ASCLNKS;
65     MERGE CLNK (IN=INCLNK KEEP=CONDIDX EVNTIDX EVENTYPE)
66           ASCONDS (IN=INASCOND KEEP=CONDIDX);
67     BY CONDIDX;
68     IF INCLNK & INASCOND;
69     RUN;

```

NOTE: There were 407366 observations read from the data set WORK.CLNK.

NOTE: There were 2121 observations read from the data set WORK.ASCONDS.

NOTE: The data set WORK.ASCLNKS has 8854 observations and 3 variables.

NOTE: Compressing data set WORK.ASCLNKS increased size by 33.33 percent.

Compressed is 8 pages; un-compressed would require 6 pages.

NOTE: DATA statement used (Total process time):

```

real time      0.11 seconds
cpu time       0.12 seconds

```

```

70
71     proc report data=asclnks (obs=75)nowd headskip;
72     define condidx / 'CONDIDX' order;
73     define evntidx / 'EVNTIDX';
74     define eventype / 'EVENTYPE';
75     break after condidx / skip;
76     format eventype eventype.;
77     title3 "sample print of work.asclnks - sorted by condidx";
78     title4 "events linked to asthma condition records";
79     run;

```

NOTE: Multiple concurrent threads will be used to summarize data.

NOTE: There were 75 observations read from the data set WORK.ASCLNKS.

NOTE: The PROCEDURE REPORT printed pages 2-3.

NOTE: PROCEDURE REPORT used (Total process time):

```
real time      0.01 seconds
cpu time       0.01 seconds
```

80

```
81          PROC SORT DATA=ASCLNKS; BY EVNTIDX; RUN;
```

```
NOTE: There were 8854 observations read from the data set WORK.ASCLNKS.
NOTE: SAS sort was used.
NOTE: The data set WORK.ASCLNKS has 8854 observations and 3 variables.
NOTE: Compressing data set WORK.ASCLNKS increased size by 33.33 percent.
      Compressed is 8 pages; un-compressed would require 6 pages.
NOTE: PROCEDURE SORT used (Total process time):
real time      0.01 seconds
cpu time       0.00 seconds
```

82

```
83          proc print data=asclnks (obs=50);
84              format eventype eventype.;
85              title3 "sample print of work.asclnks - sorted by evntidx";
86          run;
```

```
NOTE: There were 50 observations read from the data set WORK.ASCLNKS.
NOTE: The PROCEDURE PRINT printed page 4.
NOTE: PROCEDURE PRINT used (Total process time):
real time      0.00 seconds
cpu time       0.00 seconds
```

87

```
88          DATA ASCLNKS;
89              SET ASCLNKS (KEEP=EVNTIDX EVENTYPE);
90              BY EVNTIDX;
91              IF FIRST.EVNTIDX;
92          RUN;
```

```
NOTE: There were 8854 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 8852 observations and 2 variables.
NOTE: Compressing data set WORK.ASCLNKS increased size by 50.00 percent.
      Compressed is 6 pages; un-compressed would require 4 pages.
NOTE: DATA statement used (Total process time):
real time      0.00 seconds
cpu time       0.00 seconds
```

93

```
94          proc print data=asclnks (obs=50);
95              format eventype eventype.;
96              title3 "sample print of unique evntidxs from work.asclnks";
97          run;
```

```
NOTE: There were 50 observations read from the data set WORK.ASCLNKS.
NOTE: The PROCEDURE PRINT printed page 5.
NOTE: PROCEDURE PRINT used (Total process time):
real time      0.00 seconds
cpu time       0.01 seconds
```

```

98
99 *-----
100 * Get office based visits (i.e. MVIS events) for persons with positive weights.
101 *-----;
102 DATA MVIS;
103     SET IN.H&evntnum.G (KEEP=EVNTIDX PERWT&yr.F OBP&yr.X);
104     IF PERWT&yr.F > 0;
105     RUN;

```

```

NOTE: There were 193439 observations read from the data set IN.H206G.
NOTE: The data set WORK.MVIS has 190652 observations and 3 variables.
NOTE: Compressing data set WORK.MVIS increased size by 32.98 percent.
      Compressed is 125 pages; un-compressed would require 94 pages.
NOTE: DATA statement used (Total process time):
      real time          2.22 seconds
      cpu time           0.06 seconds

```

```

106
107     PROC SORT DATA=MVIS; BY EVNTIDX; RUN;

```

```

NOTE: There were 190652 observations read from the data set WORK.MVIS.
NOTE: SAS threaded sort was used.
NOTE: The data set WORK.MVIS has 190652 observations and 3 variables.
NOTE: Compressing data set WORK.MVIS increased size by 32.98 percent.
      Compressed is 125 pages; un-compressed would require 94 pages.
NOTE: PROCEDURE SORT used (Total process time):
      real time          0.08 seconds
      cpu time           0.12 seconds

```

```

108
109 *-----
110 * Identify MVIS events which were for asthma.
111 *-----;
112 DATA ASMVIS;
113     MERGE ASCLNKS (IN=INASCLNK)
114           MVIS   (IN=INMVIS);
115     BY EVNTIDX;
116     IF INASCLNK & INMVIS;
117     RUN;

```

```

NOTE: There were 8852 observations read from the data set WORK.ASCLNKS.
NOTE: There were 190652 observations read from the data set WORK.MVIS.
NOTE: The data set WORK.ASMVIS has 1565 observations and 4 variables.
NOTE: Compressing data set WORK.ASMVIS increased size by 200.00 percent.
      Compressed is 3 pages; un-compressed would require 1 pages.
NOTE: DATA statement used (Total process time):
      real time          0.05 seconds
      cpu time           0.04 seconds

```

```

118
119     proc print data=asmvis (obs=50);
120         format eventype eventype.;

```

```
121         title3 "sample print of work.asmvis";
122         title4 "unique evtidxs from work.asclnks that are MVIS (HC-&evntnum.G) events";
123     run;
```

NOTE: There were 50 observations read from the data set WORK.ASMVIS.

NOTE: The PROCEDURE PRINT printed page 6.

NOTE: PROCEDURE PRINT used (Total process time):

```
real time      0.00 seconds
cpu time       0.01 seconds
```

```
124
125     PROC MEANS DATA=ASMVIS N SUM;
126         VAR OEXP&yr.X;
127         TITLE3 "Total medical visit expenditures associated with asthma";
128     RUN;
```

NOTE: Multiple concurrent threads will be used to summarize data.

NOTE: There were 1565 observations read from the data set WORK.ASMVIS.

NOTE: The PROCEDURE MEANS printed page 7.

NOTE: PROCEDURE MEANS used (Total process time):

```
real time      0.00 seconds
cpu time       0.01 seconds
```

```
129
130     PROC MEANS DATA=ASMVIS N SUM;
131         VAR OEXP&yr.X;
132         WEIGHT PERWT&yr.F;
133         TITLE3 "Total medical visit expenditures associated with asthma";
134         TITLE5 "Weighted";
135     RUN;
```

NOTE: Multiple concurrent threads will be used to summarize data.

NOTE: There were 1565 observations read from the data set WORK.ASMVIS.

NOTE: The PROCEDURE MEANS printed page 8.

NOTE: PROCEDURE MEANS used (Total process time):

```
real time      0.00 seconds
cpu time       0.00 seconds
```

```
136
137     ods rtf close;
138
139
```

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:

```
real time      5.38 seconds
cpu time       1.06 seconds
```

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Sample SAS Job for Example C

sample print of work.asconds - sorted by condidx

COND (H207) records where CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1'

Obs	CONDIDX	ICD10CDX	CCSR1X	CCSR2X	CCSR3X
1	2290001102002	J45	RSP009	-1	-1
2	2290005103001	J45	RSP009	-1	-1
3	2290009101008	J45	RSP009	-1	-1
4	2290009102004	J45	RSP009	-1	-1
5	2290010101003	J45	RSP009	-1	-1
6	2290010105001	J45	RSP009	-1	-1
7	2290010106001	J45	RSP009	-1	-1
8	2290042102001	J45	RSP009	-1	-1
9	2290051104002	J45	RSP009	-1	-1
10	2290103103009	J45	RSP009	-1	-1
11	2290116101004	J45	RSP009	-1	-1
12	2290119104001	J45	RSP009	-1	-1
13	2290121101003	J45	RSP009	-1	-1
14	2290134104001	J45	RSP009	-1	-1
15	2290150101014	J45	RSP009	-1	-1
16	2290168101005	J45	RSP009	-1	-1
17	2290169102003	J45	RSP009	-1	-1
18	2290186102002	J45	RSP009	-1	-1
19	2290209105001	J45	RSP009	-1	-1
20	2290214101002	J45	RSP009	-1	-1
21	2290244103002	J45	RSP009	-1	-1
22	2290252102005	J45	RSP009	-1	-1
23	2290254101001	J45	RSP009	-1	-1
24	2290278102003	J45	RSP009	-1	-1
25	2290298105001	J45	RSP009	-1	-1
26	2290326101006	J45	RSP009	-1	-1
27	2290326102005	J45	RSP009	-1	-1
28	2290326103001	J45	RSP009	-1	-1
29	2290326104005	J45	RSP009	-1	-1
30	2290344101003	J45	RSP009	-1	-1
31	2290382104001	J45	RSP009	-1	-1
32	2290392102010	J45	RSP009	-1	-1
33	2290393101010	J45	RSP009	-1	-1
34	2290393102001	J45	RSP009	-1	-1
35	2290421102001	J45	RSP009	-1	-1
36	2290428101004	J45	RSP009	-1	-1
37	2290430101002	J45	RSP009	-1	-1
38	2290430102001	J45	RSP009	-1	-1
39	2290430103001	J45	RSP009	-1	-1
40	2290445102005	J45	RSP009	-1	-1
41	2290472102006	J45	RSP009	-1	-1
42	2290476101001	J45	RSP009	-1	-1
43	2290487103001	J45	RSP009	-1	-1
44	2290492102003	J45	RSP009	-1	-1
45	2290492103001	J45	RSP009	-1	-1
46	2290492104001	J45	RSP009	-1	-1
47	2290492105001	J45	RSP009	-1	-1
48	2290504101005	J45	RSP009	-1	-1
49	2290504101011	J45	RSP009	-1	-1
50	2290511101006	J45	RSP009	-1	-1

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Sample SAS Job for Example C
sample print of work.asclnks - sorted by condidx
events linked to asthma condition records

CONDIDX	EVNTIDX	EVENTYPE
2290001102002	2290001102002503	8 PMED
2290005103001	2290005103004001	2 OPAT
2290005103001	2290005103004101	2 OPAT
2290005103001	2290005103004201	2 OPAT
2290005103001	2290005103004301	2 OPAT
2290005103001	2290005103004401	2 OPAT
2290005103001	2290005103004501	2 OPAT
2290005103001	2290005103004601	2 OPAT
2290009101008	2290009101001403	8 PMED
2290009101008	2290009101001503	8 PMED
2290009101008	2290009101011403	8 PMED
2290009101008	2290009101011503	8 PMED
2290009101008	2290009101012403	8 PMED
2290009101008	2290009101012503	8 PMED
2290009101008	2290009101015503	8 PMED
2290009102004	2290009102002403	8 PMED
2290009102004	2290009102002503	8 PMED
2290010101003	2290010101005403	8 PMED
2290010101003	2290010101005503	8 PMED
2290010101003	2290010101011403	8 PMED
2290010101003	2290010101012403	8 PMED
2290010101003	2290010101012503	8 PMED
2290010101003	2290010101013403	8 PMED
2290010101003	2290010101013503	8 PMED
2290010101003	2290010101014403	8 PMED
2290010101003	2290010101015403	8 PMED
2290010101003	2290010101015503	8 PMED
2290010105001	2290010105001403	8 PMED
2290010105001	2290010105001503	8 PMED
2290010106001	2290010106003403	8 PMED
2290010106001	2290010106003503	8 PMED
2290010106001	2290010106004403	8 PMED
2290010106001	2290010106004503	8 PMED
2290010106001	2290010106005403	8 PMED
2290010106001	2290010106006403	8 PMED
2290010106001	2290010106006503	8 PMED
2290042102001	2290042102002303	8 PMED
2290042102001	2290042102002403	8 PMED
2290042102001	2290042102005303	8 PMED
2290042102001	2290042102005403	8 PMED
2290051104002	2290051104001403	8 PMED
2290051104002	2290051104002403	8 PMED
2290103103009	2290103103002303	8 PMED
2290103103009	2290103103003303	8 PMED
2290116101004	2290116101001503	8 PMED
2290116101004	2290116101012403	8 PMED
2290116101004	2290116101014503	8 PMED
2290116101004	2290116101103201	1 MVIS
2290116101004	2290116101103301	1 MVIS
2290116101004	2290116101204401	3 EROM
2290119104001	2290119104000901	1 MVIS
2290119104001	2290119104001001	1 MVIS
2290119104001	2290119104001303	8 PMED
2290119104001	2290119104002503	8 PMED
2290119104001	2290119104004503	8 PMED
2290119104001	2290119104103001	1 MVIS
2290119104001	2290119104103101	1 MVIS
2290119104001	2290119104103201	1 MVIS
2290119104001	2290119104103301	1 MVIS
2290119104001	2290119104103401	1 MVIS
2290119104001	2290119104103501	1 MVIS
2290119104001	2290119104103601	1 MVIS
2290119104001	2290119104103701	1 MVIS
2290119104001	2290119104205801	1 MVIS
2290121101003	2290121101001303	8 PMED
2290121101003	2290121101001403	8 PMED
2290121101003	2290121101001503	8 PMED
2290134104001	2290134104001303	8 PMED
2290134104001	2290134104001403	8 PMED

CONDIDX	EVNTIDX	EVENTYPE
2290134104001	2290134104001503	8 PMED
2290134104001	2290134104002403	8 PMED
2290134104001	2290134104002503	8 PMED
2290134104001	2290134104106101	1 MVIS
2290150101014	2290150101005303	8 PMED
2290150101014	2290150101005503	8 PMED

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Sample SAS Job for Example C
sample print of work.asclnks - sorted by evtntidx

Obs	CONDIDX	EVNTIDX	EVENTYPE
1	2290001102002	2290001102002503	8 PMED
2	2290005103001	2290005103004001	2 OPAT
3	2290005103001	2290005103004101	2 OPAT
4	2290005103001	2290005103004201	2 OPAT
5	2290005103001	2290005103004301	2 OPAT
6	2290005103001	2290005103004401	2 OPAT
7	2290005103001	2290005103004501	2 OPAT
8	2290005103001	2290005103004601	2 OPAT
9	2290009101008	2290009101001403	8 PMED
10	2290009101008	2290009101001503	8 PMED
11	2290009101008	2290009101011403	8 PMED
12	2290009101008	2290009101011503	8 PMED
13	2290009101008	2290009101012403	8 PMED
14	2290009101008	2290009101012503	8 PMED
15	2290009101008	2290009101015503	8 PMED
16	2290009102004	2290009102002403	8 PMED
17	2290009102004	2290009102002503	8 PMED
18	2290010101003	2290010101005403	8 PMED
19	2290010101003	2290010101005503	8 PMED
20	2290010101003	2290010101011403	8 PMED
21	2290010101003	2290010101012403	8 PMED
22	2290010101003	2290010101012503	8 PMED
23	2290010101003	2290010101013403	8 PMED
24	2290010101003	2290010101013503	8 PMED
25	2290010101003	2290010101014403	8 PMED
26	2290010101003	2290010101015403	8 PMED
27	2290010101003	2290010101015503	8 PMED
28	2290010105001	2290010105001403	8 PMED
29	2290010105001	2290010105001503	8 PMED
30	2290010106001	2290010106003403	8 PMED
31	2290010106001	2290010106003503	8 PMED
32	2290010106001	2290010106004403	8 PMED
33	2290010106001	2290010106004503	8 PMED
34	2290010106001	2290010106005403	8 PMED
35	2290010106001	2290010106006403	8 PMED
36	2290010106001	2290010106006503	8 PMED
37	2290042102001	2290042102002303	8 PMED
38	2290042102001	2290042102002403	8 PMED
39	2290042102001	2290042102005303	8 PMED
40	2290042102001	2290042102005403	8 PMED
41	2290051104002	2290051104001403	8 PMED
42	2290051104002	2290051104002403	8 PMED
43	2290103103009	2290103103002303	8 PMED
44	2290103103009	2290103103003303	8 PMED
45	2290116101004	2290116101001503	8 PMED
46	2290116101004	2290116101012403	8 PMED
47	2290116101004	2290116101014503	8 PMED
48	2290116101004	2290116101103201	1 MVIS
49	2290116101004	2290116101103301	1 MVIS
50	2290116101004	2290116101204401	3 EROM

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Sample SAS Job for Example C
sample print of unique evtidxs from work.asclnks

Obs	EVNTIDX	EVENTYPE
1	2290001102002503	8 PMED
2	2290005103004001	2 OPAT
3	2290005103004101	2 OPAT
4	2290005103004201	2 OPAT
5	2290005103004301	2 OPAT
6	2290005103004401	2 OPAT
7	2290005103004501	2 OPAT
8	2290005103004601	2 OPAT
9	2290009101001403	8 PMED
10	2290009101001503	8 PMED
11	2290009101011403	8 PMED
12	2290009101011503	8 PMED
13	2290009101012403	8 PMED
14	2290009101012503	8 PMED
15	2290009101015503	8 PMED
16	2290009102002403	8 PMED
17	2290009102002503	8 PMED
18	2290010101005403	8 PMED
19	2290010101005503	8 PMED
20	2290010101011403	8 PMED
21	2290010101012403	8 PMED
22	2290010101012503	8 PMED
23	2290010101013403	8 PMED
24	2290010101013503	8 PMED
25	2290010101014403	8 PMED
26	2290010101015403	8 PMED
27	2290010101015503	8 PMED
28	2290010105001403	8 PMED
29	2290010105001503	8 PMED
30	2290010106003403	8 PMED
31	2290010106003503	8 PMED
32	2290010106004403	8 PMED
33	2290010106004503	8 PMED
34	2290010106005403	8 PMED
35	2290010106006403	8 PMED
36	2290010106006503	8 PMED
37	2290042102002303	8 PMED
38	2290042102002403	8 PMED
39	2290042102005303	8 PMED
40	2290042102005403	8 PMED
41	2290051104001403	8 PMED
42	2290051104002403	8 PMED
43	2290103103002303	8 PMED
44	2290103103003303	8 PMED
45	2290116101001503	8 PMED
46	2290116101012403	8 PMED
47	2290116101014503	8 PMED
48	2290116101103201	1 MVIS
49	2290116101103301	1 MVIS
50	2290116101204401	3 EROM

HC-206I
 Sample SAS Job for Example C
 sample print of work.asmvis
 unique evtidxs from work.asclnks that are MVIS (HC-206G) events

Obs	EVNTIDX	EVENTYPE	OBXP18X	PERWT18F
1	2290116101103201	1 MVIS	126.15	6829.70
2	2290116101103301	1 MVIS	126.15	6829.70
3	2290119104000901	1 MVIS	51.20	8737.02
4	2290119104001001	1 MVIS	41.21	8737.02
5	2290119104103001	1 MVIS	202.27	8737.02
6	2290119104103101	1 MVIS	68.12	8737.02
7	2290119104103201	1 MVIS	146.43	8737.02
8	2290119104103301	1 MVIS	146.43	8737.02
9	2290119104103401	1 MVIS	146.43	8737.02
10	2290119104103501	1 MVIS	202.27	8737.02
11	2290119104103601	1 MVIS	68.12	8737.02
12	2290119104103701	1 MVIS	68.12	8737.02
13	2290119104205801	1 MVIS	200.00	8737.02
14	2290134104106101	1 MVIS	123.27	6568.91
15	2290244103101101	1 MVIS	202.99	18755.84
16	2290278102006101	1 MVIS	235.00	13936.20
17	2290278102006201	1 MVIS	173.60	13936.20
18	2290382104206101	1 MVIS	145.01	10406.37
19	2290393101106801	1 MVIS	158.21	4772.08
20	2290393101106901	1 MVIS	112.05	4772.08
21	2290393101107101	1 MVIS	118.03	4772.08
22	2290393101107201	1 MVIS	94.75	4772.08
23	2290393101107301	1 MVIS	192.66	4772.08
24	2290393101107401	1 MVIS	98.16	4772.08
25	2290393101107501	1 MVIS	201.18	4772.08
26	2290393101209001	1 MVIS	145.74	4772.08
27	2290393101209101	1 MVIS	133.97	4772.08
28	2290393101209201	1 MVIS	69.36	4772.08
29	2290393101209301	1 MVIS	147.63	4772.08
30	2290393101209401	1 MVIS	305.88	4772.08
31	2290393101209501	1 MVIS	44.11	4772.08
32	2290393101209601	1 MVIS	101.52	4772.08
33	2290430102001401	1 MVIS	73.66	5662.37
34	2290430103204701	1 MVIS	175.52	6857.30
35	2290476101001401	1 MVIS	131.31	4791.94
36	2290487103101601	1 MVIS	114.17	8222.32
37	2290492103204501	1 MVIS	131.00	1508.53
38	2290511101003701	1 MVIS	197.77	9562.41
39	2290511101106301	1 MVIS	197.77	9562.41
40	2290511101106401	1 MVIS	197.77	9562.41
41	2290511101106501	1 MVIS	197.77	9562.41
42	2290511101106601	1 MVIS	197.77	9562.41
43	2290511101106701	1 MVIS	197.77	9562.41
44	2290515101003401	1 MVIS	89.37	16696.52
45	2290515101204901	1 MVIS	166.07	16696.52
46	2290515101205001	1 MVIS	166.07	16696.52
47	2290515101205101	1 MVIS	67.09	16696.52
48	2290515101205201	1 MVIS	166.07	16696.52
49	2290518101102901	1 MVIS	165.00	6549.31
50	2290518101203801	1 MVIS	198.00	6549.31

HC-206I
Sample SAS Job for Example C
Total medical visit expenditures associated with asthma
Analysis Variable : OBXP18X SUM OF OBSF18X - OBOT18X (IMPUTED)

N	Sum
1565	286724.16

HC-206I
Sample SAS Job for Example C
Total medical visit expenditures associated with asthma
Weighted

Analysis Variable : OBP18X SUM OF OBSF18X - OBOT18X (IMPUTED)

N	Sum
1565	2918162718

Attachment 2:

Sample STATA Jobs for Linking Example

```
-----
name: <unnamed>
log: C:\Program Files\STATA\Stata2020\StataDoFileA.log
log type: text
opened on: 20 Jul 2020, 14:15:07

.
. /* BE SURE TO UPDATE VALUES FOR CURRENT FY */
. local yr=18

. local evtnum=206

. local condnum=207

.
.
. *-----
. * Get condition records coded as asthma.
. *-----;
.
. use "C:\Program Files\STATA\Stata2020\H`condnum'.dta", clear

.
. keep if CCSR1X == "RSP009" & CCSR2X == "-1" & CCSR3X == "-1"
(92,815 observations deleted)

.
. keep CONDIDX CCSR1X CCSR2X CCSR3X ICD10CDX

.
. *-----
. * Get the events linked to each of the asthma condition records.
. *-----;
.
. sort CONDIDX

. /* sample print of work.asconds - sorted by condidx;
> COND (H&condnum) records where CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1'*/
. list if _n<=50, separator(0)

.
. export excel "C:\Program Files\STATA\Stata2020\A1.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A1.xlsx saved

.
. save "C:\Program Files\STATA\Stata2020\ASCONDS.dta", replace
file C:\Program Files\STATA\Stata2020\ASCONDS.dta saved

.
. use "C:\Program Files\STATA\Stata2020\H`evtntnum'IF1.dta", clear

.
. sort CONDIDX

.
. label define eventype1 1 "1 MVIS"

. label define eventype1 2 "2 OPAT", add

. label define eventype1 3 "3 EROM", add

. label define eventype1 4 "4 STAZ", add

.
. label define eventype1 7 "7 HVIS", add

. label define eventype1 8 "8 PMED", add

.
. label values EVENTYPE eventype1

.

```

```

. save "C:\Program Files\STATA\Stata2020\CLNK.dta", replace
file C:\Program Files\STATA\Stata2020\CLNK.dta saved

.

. keep CONDIDX EVNTIDX EVENTYPE

.

. merge m:m CONDIDX using "C:\Program Files\STATA\Stata2020\ASCONDS.dta", keepusing(CONDIDX) nogenerate keep(mat
> ch)

```

Result	# of obs.
not matched	0
matched	8,854

```

. save "C:\Program Files\STATA\Stata2020\ASCLNKS.dta", replace
file C:\Program Files\STATA\Stata2020\ASCLNKS.dta saved

.

. label variable CONDIDX "condidx"

. label variable EVNTIDX "evntidx"

. label variable EVENTYPE "eventype"

.

. /* sample print of work.asclnks - sorted by condidx;
> events linked to asthma condition records */
. list CONDIDX EVNTIDX EVENTYPE if _n<=75, sepby(CONDIDX) noobs

.

. export excel "C:\Program Files\STATA\Stata2020\A1.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A1.xlsx saved

.

. sort EVNTIDX

.

. /* sample print of work.asclnks - sorted by evntidx */
. list if _n<=50, separator(0)

.

. export excel "C:\Program Files\STATA\Stata2020\A1.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A1.xlsx saved

.

. keep EVNTIDX EVENTYPE

.

. gen first=0

. by EVNTIDX, sort: replace first=1 if _n==1
(8,852 real changes made)

.

. keep if first==1
(2 observations deleted)

.

. drop first

.

. save "C:\Program Files\STATA\Stata2020\ASCLNKS.dta", replace
file C:\Program Files\STATA\Stata2020\ASCLNKS.dta saved

.

. /* sample print of unique evntidxs from work.asclnks */
. list if _n<=50, separator(0)

.

. export excel "C:\Program Files\STATA\Stata2020\A1.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A1.xlsx saved

```



```

. label define eventype1 6 "6 OMED", add

. label define eventype1 7 "7 HVIS", add

. label define eventype1 8 "8 PMED", add

.

. label values EVENTYPE eventype1

. label variable LINKIDX "linkidx"

.

. /* sample print of work.rxlk - sorted by evtid;
>   Rx+event link file records (HC-206IF2) */
. list EVNTIDX LINKIDX EVENTYPE if _n<=140, sepby(EVNTIDX) noobs

.

. export excel "C:\Program Files\ STATA\Stata2020\ a1.xlsx", replace firstrow(variables)
file C:\Program Files\ STATA\Stata2020\ a1.xlsx saved

.

. merge m:m EVNTIDX using "C:\Program Files\ STATA\Stata2020\ASMVIS.dta", keepusing(EVNTIDX) nogenerate keep(matc
> h)
(label eventype1 already defined)

Result          # of obs.
-----
not matched           0
matched             1,255
-----

. save "C:\Program Files\ STATA\Stata2020\PMEDIDS.dta", replace
file C:\Program Files\ STATA\Stata2020\PMEDIDS.dta saved

.

. /* sample print of work.pmedids - sorted by evtid;
>   work.rxlk records for evtidxs in work.asmvis */
. list EVNTIDX LINKIDX EVENTYPE if _n<=50, sepby(EVNTIDX) noobs

.

. export excel "C:\Program Files\ STATA\Stata2020\ a1.xlsx", replace firstrow(variables)
file C:\Program Files\ STATA\Stata2020\ a1.xlsx saved

.

. sort LINKIDX

.

. /* sample print of work.pmedids - sorted by linkidx */
. list if _n<=50, separator(0)

.

. export excel "C:\Program Files\ STATA\Stata2020\ a1.xlsx", replace firstrow(variables)
file C:\Program Files\ STATA\Stata2020\ a1.xlsx saved

.

. keep LINKIDX

.

. gen first=0

. by LINKIDX, sort: replace first=1 if _n==1
(1,245 real changes made)

.

. keep if first==1
(10 observations deleted)

.

. drop first

.

. save "C:\Program Files\ STATA\Stata2020\PMEDIDS.dta", replace
file C:\Program Files\ STATA\Stata2020\PMEDIDS.dta saved

```

```

/* sample print of unique linkidxs in work.pmedids */
list if _n<=50, separator(0)

.

export excel "C:\Program Files\ STATA\Stata2020\A1.xlsx", replace firstrow(variables)
file C:\Program Files\ STATA\Stata2020\A1.xlsx saved

.

*-----
* Get PMED records linked to MVIS events which were for asthma.
*-----;

.

use "C:\Program Files\ STATA\Stata2020\H\evntnum'A.dta", clear

.

sort LINKIDX RXRECIDX

.

*save "C:\Program Files\ STATA\Stata2020\PMED.dta", replace

.

keep LINKIDX RXRECIDX RXXP`yr`X PERWT`yr`F RXNAME

.

merge m:m LINKIDX using "C:\Program Files\ STATA\Stata2020\PMEDIDS.dta", nogenerate keep(match using)

Result          # of obs.
-----
not matched           0
matched             2,970
-----

.

save "C:\Program Files\ STATA\Stata2020\MVPMEDS.dta", replace
file C:\Program Files\ STATA\Stata2020\MVPMEDS.dta saved

.

sort LINKIDX RXRECIDX

.

label variable RXRECIDX "rxrecidx"

.

label variable RXNAME "rxname"

.

label variable RXXP`yr`X "rxxp18x"

.

label variable PERWT`yr`F "perwt18f"

.

/* sample print of work.mvpmeds;
> PMED (HC-206A) records for unique linkidxs in work.pmedids */
list LINKIDX RXRECIDX RXNAME RXXP`yr`X PERWT`yr`F if _n<=200, sepby(LINKIDX) noobs

.

export excel "C:\Program Files\ STATA\Stata2020\A1.xlsx", replace firstrow(variables)
file C:\Program Files\ STATA\Stata2020\A1.xlsx saved

.

/* Total Rx expenditures associated with medical visits for asthma */
tabstat RXXP`yr`X, stat(n sum) format(%15.2fc)

.

export excel "C:\Program Files\ STATA\Stata2020\A1.xlsx", replace firstrow(variables)
file C:\Program Files\ STATA\Stata2020\A1.xlsx saved

.

/* Total Rx expenditures associated with medical visits for asthma;
> Weighted */
tabstat RXXP`yr`X[w=PERWT`yr`F], stat(n sum) format(%15.2fc)
(analytic weights assumed)

.

export excel "C:\Program Files\ STATA\Stata2020\A1.xlsx", replace firstrow(variables)
file C:\Program Files\ STATA\Stata2020\A1.xlsx saved

.

.

end of do-file
exit, clear

```

```

name: <unnamed>
log: C:\Program Files\STATA\Stata2020\STATAdofileB.log
log type: text
opened on: 20 Jul 2020, 14:16:39

.
. /* BE SURE TO UPDATE VALUES FOR CURRENT FY */
. local yr=18

. local evtnum=206

. local condnum=207

.
.
. *-----
. * Get condition records coded as asthma.
. *-----;
.
. use "C:\Program Files\STATA\Stata2020\H`condnum'.dta", clear

.
. keep if CCSR1X == "RSP009" & CCSR2X == "-1" & CCSR3X == "-1"
(92,815 observations deleted)

.
. keep CONDIDX CCSR1X CCSR2X CCSR3X ICD10CDX

.
. *-----
. * Get the events linked to each of the asthma condition records.
. *-----;
.
. sort CONDIDX

. /* sample print of work.asconds - sorted by condidx;
> COND (H&condnum) records where CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1'*/
. list if _n<=50, separator(0)

.
. export excel "C:\Program Files\STATA\Stata2020\A2.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A2.xlsx saved

.
. save "C:\Program Files\STATA\Stata2020\ASCONDS.dta", replace
file C:\Program Files\STATA\Stata2020\ASCONDS.dta saved

.
. use "C:\Program Files\STATA\Stata2020\H`evtntnum`IF1.dta", clear

.
. sort CONDIDX

.
. label define eventype1 1 "1 MVIS"

. label define eventype1 2 "2 OPAT", add

. label define eventype1 3 "3 EROM", add

. label define eventype1 4 "4 STAZ", add

.
. label define eventype1 7 "7 HVIS", add

. label define eventype1 8 "8 PMED", add

.
. label values EVENTYPE eventype1

.
. save "C:\Program Files\STATA\Stata2020\CLNK.dta", replace

```

```

file C:\Program Files\STATA\Stata2020\CLNK.dta saved

.
. keep CONDIDX EVNTIDX EVENTYPE

.
. merge m:m CONDIDX using "C:\Program Files\STATA\Stata2020\ASCONDS.dta", keepusing(CONDIDX) nogenerate keep(mat
> ch)

-----
Result                # of obs.
-----
not matched            0
matched                8,854
-----

.
. save "C:\Program Files\STATA\Stata2020\ASCLNKS.dta", replace
file C:\Program Files\STATA\Stata2020\ASCLNKS.dta saved

.
. label variable CONDIDX "condidx"

. label variable EVNTIDX "evntidx"

. label variable EVENTYPE "eventype"

.
. /* sample print of work.asclnks - sorted by condidx;
>  events linked to asthma condition records */
. list CONDIDX EVNTIDX EVENTYPE if _n<=75, sepby(CONDIDX) noobs

.
. export excel "C:\Program Files\STATA\Stata2020\A2.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A2.xlsx saved

.
. sort EVNTIDX

.
. /* sample print of work.asclnks - sorted by evntidx */
. list if _n<=50, separator(0)

.
. export excel "C:\Program Files\STATA\Stata2020\A2.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A2.xlsx saved

.
. keep EVNTIDX EVENTYPE

.
. gen first=0

. by EVNTIDX, sort: replace first=1 if _n==1
(8,852 real changes made)

.
. keep if first==1
(2 observations deleted)

.
. drop first

.
. /* sample print of unique evntidxs from work.asclnks */
. list if _n<=50, separator(0)

.
. export excel "C:\Program Files\STATA\Stata2020\A2.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A2.xlsx saved

.
. rename EVNTIDX LINKIDX

.
. save "C:\Program Files\STATA\Stata2020\ASCLNKS.dta", replace

```

```

file C:\Program Files\STATA\Stata2020\ASCLNKS.dta saved

.
.
. *-----
. * Get PMED records linked to MVIS events which were for asthma.
. *-----;
.
. use "C:\Program Files\STATA\Stata2020\H'evntnum'A.dta", clear

. sort LINKIDX RXRECIDX

. *save "C:\Program Files\STATA\Stata2020\PMED.dta", replace
.
. keep LINKIDX RXRECIDX RXXP`yr`X PERWT`yr`F RXNAME

.
. merge m:m LINKIDX using "C:\Program Files\STATA\Stata2020\ASCLNKS.dta", nogenerate keep(match)

```

Result	# of obs.
not matched	0
matched	15,656

```

. keep if PERWT`yr`F > 0
(348 observations deleted)

.
. save "C:\Program Files\STATA\Stata2020\ASPMEDES.dta", replace
file C:\Program Files\STATA\Stata2020\ASPMEDES.dta saved

.
. sort LINKIDX RXRECIDX

.
. label variable RXRECIDX "rxrecidx"

. label variable RXNAME "rxname"

. label variable RXXP`yr`X "rxxp18x"

. label variable PERWT`yr`F "perwt18f"

.
. /* sample print of work.aspmeds;
> PMED (HC197A) records which link to condition records coded as asthma */
. list LINKIDX RXRECIDX RXNAME RXXP`yr`X PERWT`yr`F if _n<=300, sepby(LINKIDX) noobs

.
. export excel "C:\Program Files\STATA\Stata2020\A2.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A2.xlsx saved

.
. /* Total Rx expenditures associated with asthma */
. tabstat RXXP`yr`X, stat(n sum) format(%15.2fc)

.
. export excel "C:\Program Files\STATA\Stata2020\A2.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A2.xlsx saved

.
. /* Total Rx expenditures associated with asthma
> Weighted */
. tabstat RXXP`yr`X[w=PERWT`yr`F], stat(n sum) format(%15.2fc)
(analytic weights assumed)

.
. export excel "C:\Program Files\STATA\Stata2020\A2.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A2.xlsx saved

.
end of do-file

. exit, clear

```

```
name: <unnamed>
log: C:\Program Files\STATA\Stata2020\STATAadofileC.log
log type: text
opened on: 17 Jul 2020, 17:31:03

.
. /* BE SURE TO UPDATE VALUES FOR CURRENT FY */
. local yr=18

. local evtnum=206

. local condnum=207

.
.
. *-----
. * Get condition records coded as asthma.
. *-----;

. use "C:\Program Files\STATA\Stata2020\H`condnum'.dta", clear

.
. keep if CCSR1X == "RSP009" & CCSR2X == "-1" & CCSR3X == "-1"
(92,815 observations deleted)

.
. keep CONDIDX CCSR1X CCSR2X CCSR3X ICD10CDX

.
. *-----
. * Get the events linked to each of the asthma condition records.
. *-----;

.
. sort CONDIDX

. /* sample print of work.asconds - sorted by condidx;
> COND (H&condnum) records where CCSR1X = 'RSP009' and CCSR2X = '-1' and CCSR3X = '-1'*/

.
. list if _n<=50, separator(0)

.
. export excel "C:\Program Files\STATA\Stata2020\A3.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A3.xlsx saved

.
. save "C:\Program Files\STATA\Stata2020\ASCONDS.dta", replace
file C:\Program Files\STATA\Stata2020\ASCONDS.dta saved

.
.
. use "C:\Program Files\STATA\Stata2020\H`evtntnum`IF1.dta", clear

.
. sort CONDIDX

.
. label define eventype1 1 "1 MVIS"

. label define eventype1 2 "2 OPAT", add

. label define eventype1 3 "3 EROM", add

. label define eventype1 4 "4 STAZ", add

.
. label define eventype1 7 "7 HVIS", add

. label define eventype1 8 "8 PMED", add

.
. label values EVENTYPE eventype1

.
. save "C:\Program Files\STATA\Stata2020\CLNK.dta", replace
```

```

file C:\Program Files\STATA\Stata2020\CLNK.dta saved
.
. keep CONDIDX EVNTIDX EVENTYPE
.
. merge m:m CONDIDX using "C:\Program Files\STATA\Stata2020\ASCONDS.dta", keepusing(CONDIDX) nogenerate keep(mat
> ch)

Result          # of obs.
-----
not matched           0
matched             8,854
-----

.
. save "C:\Program Files\STATA\Stata2020\ASCLNKS.dta", replace
file C:\Program Files\STATA\Stata2020\ASCLNKS.dta saved
.
. label variable CONDIDX "condidx"
. label variable EVNTIDX "evntidx"
. label variable EVENTYPE "eventype"
.
. /* sample print of work.asclnks - sorted by condidx;
>  events linked to asthma condition records */
. list CONDIDX EVNTIDX EVENTYPE if _n<=75, sepby(CONDIDX) noobs
.
. export excel "C:\Program Files\STATA\Stata2020\A3.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A3.xlsx saved
.
. sort EVNTIDX
.
. /* sample print of work.asclnks - sorted by evntidx */
. list if _n<=50, separator(0)
.
. export excel "C:\Program Files\STATA\Stata2020\A3.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A3.xlsx saved
.
. keep EVNTIDX EVENTYPE
.
. gen first=0
.
. by EVNTIDX, sort: replace first=1 if _n==1
(8,852 real changes made)
.
. keep if first==1
(2 observations deleted)
.
. drop first
.
. save "C:\Program Files\STATA\Stata2020\ASCLNKS.dta", replace
file C:\Program Files\STATA\Stata2020\ASCLNKS.dta saved
.
. /* sample print of unique evntidxs from work.asclnks */
. list if _n<=50, separator(0)
.
. export excel "C:\Program Files\STATA\Stata2020\A3.xlsx", replace firstrow(variables)
file C:\Program Files\STATA\Stata2020\A3.xlsx saved
.

```

```

*-----
* Get office based visits (i.e. MVIS events) for persons with positive weights.
*-----;
.
. use "C:\Program Files\ STATA\Stata2020\H\evntnum'G.dta", clear
.
. keep EVNTIDX PERWT`yr'F OBXP`yr'X
.
. keep if PERWT`yr'F > 0
(2,787 observations deleted)
.
. save "C:\Program Files\ STATA\Stata2020\MVIS.dta", replace
file C:\Program Files\ STATA\Stata2020\MVIS.dta saved
.
. sort EVNTIDX
.
*-----
* Identify MVIS events which were for asthma.
*-----
.
.*keep EVNTIDX
.
. merge m:m EVNTIDX using "C:\Program Files\ STATA\Stata2020\ASCLNKS.dta", nogenerate keep(match)

Result          # of obs.
-----
not matched          0
matched             1,565
-----

. save "C:\Program Files\ STATA\Stata2020\ASMVIS.dta", replace
file C:\Program Files\ STATA\Stata2020\ASMVIS.dta saved
.
. /* sample print of work.asmvis;
> unique evtidxs from work.asclinks that are MVIS (HC197G) events */
. list EVNTIDX EVENTYPE OBXP`yr'X PERWT`yr'F if _n<=50, separator(0)
.
. export excel "C:\Program Files\ STATA\Stata2020\A3.xlsx", replace firstrow(variables)
file C:\Program Files\ STATA\Stata2020\A3.xlsx saved
.
. /* Total medical visit expenditures associated with asthma */
. tabstat OBXP`yr'X, stat(n sum) format(%15.2fc)
.
. export excel "C:\Program Files\ STATA\Stata2020\A3.xlsx", replace firstrow(variables)
file C:\Program Files\ STATA\Stata2020\A3.xlsx saved
.
. /* Total medical visit expenditures associated with asthma;
> Weighted */
. tabstat OBXP`yr'X[w=PERWT`yr'F], stat(n sum) format(%15.2fc)
(analytic weights assumed)
.
. export excel "C:\Program Files\ STATA\Stata2020\A3.xlsx", replace firstrow(variables)
file C:\Program Files\ STATA\Stata2020\A3.xlsx saved
.
end of do-file

. exit, clear

```