# MEPS HC-051I:
# Appendix to MEPS 2000 Event Files
# HC-051A - HC-051H

# June 2003

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

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## A.  Data Use Agreement

Individual identifiers have been removed from the macro-data contained in the files on this CD-ROM.  Nevertheless, under sections 308 (d) and 903 (c) of the Public Health Service Act (42 U.S.C. 242m and 42 U.S.C. 299 a-I), 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 it was 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:

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

> 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.

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

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

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

# B. Background

This documentation describes one in a series of public use files from the Medical Expenditure Panel Survey (MEPS). The survey provides a new and extensive data set on the use of health services and health care in the United States.

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

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

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

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

## 1.0    Household Component (HC)

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

The HC uses an overlapping panel design in which data are collected through a preliminary contact followed by a series of five rounds of interviews over a 2½-year period. Using

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

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

## 2.0     Medical Provider Component (MPC)

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

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

## 3.0     Insurance Component (IC)

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

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

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

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

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

## 4.0    Survey Management

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

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

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

>       AHRQ Publications Clearinghouse
>       Attn: (publication number)
>       P.O. Box 8547
>       Silver Spring, MD 20907
>       800-358-9295
>       410-381-3150 (callers outside the United States only)
>       888-586-6340 (toll-free TDD service; hearing impaired only)

Be sure to specify the AHRQ number of the document or CD-ROM you are requesting. Selected electronic files are available through the Internet on the MEPS Web site:

>       http://www.meps.ahrq.gov/

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

# C. Technical and Programming Information

## 1.0    General Information

This documentation describes the MEPS Public Use Release HC-051I, which is the Appendix to MEPS releases HC-051A through HC-051H.  This release contains two data files, both of which are provided in ASCII and SAS versions:  1) the condition-event link file; and 2) the prescribed medicines-event link file.  Also included in this release are two tables provided as PDF files: 1) the condition-event frequency table and 2) the utilization and expenditures summary table.

This documentation offers a brief overview of the content and structure of the files and the codebooks (provided as files H51IF1CB.PDF and H51IF2CB.PDF). It contains the following sections:

Data File Information
Merging MEPS Data Files
Crosswalk of Clinical Classification Code to ICD-9 Code

For more information on MEPS HC survey design see S. Cohen, 1997; J. Cohen, 1997; and S. Cohen, 1996.  For information on the MEPS MPC design, see S. Cohen, 1998.  Both reports, along with a copy of the survey instruments used to collect the information on this file, are available on the MEPS web site at the following address: <http**://**www.meps.ahrq.gov>.


## 2.0    Data File Information

This public use data set consists of two data files containing variables for linkage of the MEPS 2000 event-level data files.  File 1, the H51IF1 or CLNK file,  is used for linking the MEPS condition file with the MEPS event files; File 2, the H51IF2 or RXLK file, is used for linking the MEPS prescribed medicines event file with other MEPS event files.

## 2.1    Codebook Format

Section D of this document includes codebooks describing the ASCII version of each data file (the data are also provided as SAS transport files).  The following codebook items are provided for each variable on the file:

| IDENTIFIER | DESCRIPTION |
|---|---|
| Name | Variable name (maximum of 8 characters) |
| Description | Variable descriptor (maximum of 40 characters) |
| Format | Number of bytes |
| Type | Type of data:  numeric (indicated by NUM) or character (indicated by CHAR) |

|       |                                                        |
|-------|--------------------------------------------------------|
| Start | Beginning column position of variable in record |
| End   | Ending column position of variable in record    |

## 2.2    Variable Naming and Source

In general, variable names reflect the content of the variable, with an 8 character limitation.  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, (H51IF1) or the CLNK file, contains the variables needed to link each record on the MEPS 2000 condition file, HC-052, with one or more records on the MEPS 2000 event files, HC-051A through HC-051H.  Section 3.0 contains additional information on completing this linkage.

The 8-character variable DUPERSID uniquely identifies each person represented on the file.  There may be more than one record on the CLNK file for a specific DUPERSID value.

CONDIDX is the ID which uniquely identifies each condition for a person and corresponds to a unique record on the MEPS 2000 Condition file, HC-052.  There may be more than one record on the CLNK file for a specific CONDIDX value.

EVNTIDX is the 12-digit number which uniquely identifies each event for a person and corresponds to a unique record on one of the MEPS 2000 event files, HC-051B through HC-051H. (EVNTIDX is not included on the 2000 Prescription Medicines event file, HC-051A; 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.

CLNKIDX is the 24-digit number which 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.

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

    1 = MVIS - office-based medical provider visit event contained on MEPS release HC-051G
    2 = OPAT - outpatient department visit event contained on MEPS release HC-051F
    3 = EROM - emergency room visit event contained on MEPS release HC-051E
    4 = STAZ -  hospital inpatient stay event contained on MEPS release HC-051D
    5 = DVIS - dental visit event contained on MEPS release HC-051B
    7 = HVIS - home health visit event contained on MEPS release HC-051H
    8 = PMED - prescribed medicines event contained on MEPS release HC-051A

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

File 2, (H51IF2) or the RXLK file, contains the variables needed to link each record on the MEPS 2000 prescribed medicines file, HC-051A, with one or more records on the MEPS 2000 event files, HC-051B through HC-051H.  Section 3.0 contains additional information on completing this linkage.

The 8-character variable DUPERSID uniquely identifies each person represented on the file.  There may be more than one record on the RXLK file  for a specific DUPERSID value.

EVNTIDX is the 12-digit number which uniquely identifies each event for a person and corresponds to a unique record on one of the MEPS 2000 event files, HC-051B through HC-051H.  There may be more than one record on the RXLK file for a specific EVNTIDX value.

LINKIDX is the 12-digit number which identifies the record(s) on the prescribed medicines file, HC-051A which 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-051A file for a specific LINKIDX value.

RXLKIDX is the 24-digit number which 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.

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

    1 = MVIS - office-based medical provider visit event contained on MEPS release HC-051G
    2 = OPAT - outpatient department visit event contained on MEPS release HC-051F
    3 = EROM - emergency room visit event contained on MEPS release HC-051E
    4 = STAZ - hospital inpatient stay event contained on MEPS release HC-051D
    5 = DVIS - dental visit event contained on MEPS release HC-051B
    6 = OMED - other medical expense event contained on MEPS release HC-051C

## 2.5    2000 Condition-Event Frequency Table

The file H51IT1.PDF contains the MEPS 2000 Condition-Event Frequency table.  This table contains unweighted and weighted counts of records on the MEPS 2000 event files, HC-051A through HC-051H, for each of the condition, procedure and clinical classification codes contained on the MEPS 2000 condition file, HC-052.  Attachment 1 contains a crosswalk of the clinical classification codes to ICD-9 codes.  See the HC-052 document for additional information on these codes.

## 2.6    2000 Utilization and Expenditures Summary Table

The file H51IT2.PDF contains the MEPS 2000 Utilization and Expenditures Summary table.  This table contains statistics for all of the utilization and expenditure variables contained on the MEPS 2000 Full Year Use and Expenditure Data file, HC-050.  For each of these variables, the following statistics are provided from the HC-050 file, and from the corresponding event-level file(s) HC-051A through HC-051H:

> Number of persons with positive person-level weight (PERWT00F) and with value GT 0 for that variable
>
> Weighted sum of the variable
>
> Weighted mean of the variable

The table also includes the technical specifications used to construct each of the person-level HC-050 variables from the event-level files.


## 3.0    Merging/Linking MEPS Data Files

This section provides information on using each of the two HC-051I files, RXLK and CLNK, to link with the files contained in MEPS releases HC-052 and HC-051A through HC-051H.  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 RXLK and CLNK Files with the Medical Conditions File (HC-052), the Prescribed Medicines and Office-Based Medical Provider Visits Event Files (HC-051A and HC-051G)

This example calculates the total expenditures for prescribed medicines associated with office-based medical provider visits for asthma, using these files: the condition file (HC-052), the CLNK file, the office-based medical provider visit event file (HC-051G), the RXLK file, and the prescribed medicines event file (HC-051A).  It includes the following major steps:

1.    From HC-052 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-051G file, select only records for non-telephone 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-051G 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-051A linked to those visits.

6.    Using these record IDs obtain the linked records from the HC-051A file and calculate the weighted mean of the expenditure variable.

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

## 3.2    Example B: Using the CLNK File with the Medical Conditions File (HC-052) and the Prescribed Medicines Event File (HC-051A)

This example calculates the total expenditure for prescribed medicines associated with asthma, using the condition file (HC-052), the CLNK file and the prescribed medicines event file (HC-051A).  It includes the following major steps:

1.    From HC-052 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-051A file and calculate the weighted mean of the expenditure variable.

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

## 3.3    Example C: Using the CLNK File with the Medical Conditions File (HC-052) and Office-Based Medical Provider Visits Event File (HC-051G)

This example calculates the total expenditures for office-based medical provider visits associated with asthma, using the condition file (HC-052), the CLNK file and the office-based medical provider visits event file (HC-051G).  It includes the following major steps:

1.    From HC-052 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-051G file, select only records for non-telephone 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-051G records, identify only those visits which were for asthma and calculate the weighted mean of the expenditure variable.

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

## 3.4 Example D: Using the RXLK File with the Other Medical Expenses Event File (HC-051C)

This example calculates the total prescription expenditures for other medical events reported by the household with type of other medical expense indicated as insulin (OMTYPEX=2), using the RXLK file and the other medical expenses event file (HC-051C). It includes the following major steps:

1.    From HC-051C file select only records for other medical expense type of insulin, for persons with a positive weight.

2.    Use the RXLK file to obtain unique record IDs of prescribed medicine events which are linked to each of the selected other medical expense records.

3.    Use the selected record IDs from the RXLK file to obtain the linked prescribed medicines event records from the HC-051A file, and calculate the weighted sum of the expenditure variable.

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

## 3.5 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 condition file.

## 3.6 Limitations/Caveats of the RXLK File

When using RXLK, 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.

**Attachment 1:
Clinical Classification Code to
ICD-9 Code Crosswalk**

Diagnosis category
ICD-9-CM codes

1        Tuberculosis

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V1201 | 01000 | 01001 | 01002 | 01003 | 01004 | 01005 | 01006 | 01010 | 01011 | 01012 | 01013 |
| 01014 | 01015 | 01016 | 01080 | 01081 | 01082 | 01083 | 01084 | 01085 | 01086 | 01090 | 01091 |
| 01092 | 01093 | 01094 | 01095 | 01096 | 01100 | 01101 | 01102 | 01103 | 01104 | 01105 | 01106 |
| 01110 | 01111 | 01112 | 01113 | 01114 | 01115 | 01116 | 01120 | 01121 | 01122 | 01123 | 01124 |
| 01125 | 01126 | 01130 | 01131 | 01132 | 01133 | 01134 | 01135 | 01136 | 01140 | 01141 | 01142 |
| 01143 | 01144 | 01145 | 01146 | 01150 | 01151 | 01152 | 01153 | 01154 | 01155 | 01156 | 01160 |
| 01161 | 01162 | 01163 | 01164 | 01165 | 01166 | 01170 | 01171 | 01172 | 01173 | 01174 | 01175 |
| 01176 | 01180 | 01181 | 01182 | 01183 | 01184 | 01185 | 01186 | 01190 | 01191 | 01192 | 01193 |
| 01194 | 01195 | 01196 | 01200 | 01201 | 01202 | 01203 | 01204 | 01205 | 01206 | 01210 | 01211 |
| 01212 | 01213 | 01214 | 01215 | 01216 | 01220 | 01221 | 01222 | 01223 | 01224 | 01225 | 01226 |
| 01230 | 01231 | 01232 | 01233 | 01234 | 01235 | 01236 | 01280 | 01281 | 01282 | 01283 | 01284 |
| 01285 | 01286 | 01300 | 01301 | 01302 | 01303 | 01304 | 01305 | 01306 | 01310 | 01311 | 01312 |
| 01313 | 01314 | 01315 | 01316 | 01320 | 01321 | 01322 | 01323 | 01324 | 01325 | 01326 | 01330 |
| 01331 | 01332 | 01333 | 01334 | 01335 | 01336 | 01340 | 01341 | 01342 | 01343 | 01344 | 01345 |
| 01346 | 01350 | 01351 | 01352 | 01353 | 01354 | 01355 | 01356 | 01360 | 01361 | 01362 | 01363 |
| 01364 | 01365 | 01366 | 01380 | 01381 | 01382 | 01383 | 01384 | 01385 | 01386 | 01390 | 01391 |
| 01392 | 01393 | 01394 | 01395 | 01396 | 01400 | 01401 | 01402 | 01403 | 01404 | 01405 | 01406 |
| 01480 | 01481 | 01482 | 01483 | 01484 | 01485 | 01486 | 01500 | 01501 | 01502 | 01503 | 01504 |
| 01505 | 01506 | 01510 | 01511 | 01512 | 01513 | 01514 | 01515 | 01516 | 01520 | 01521 | 01522 |
| 01523 | 01524 | 01525 | 01526 | 01550 | 01551 | 01552 | 01553 | 01554 | 01555 | 01556 | 01560 |
| 01561 | 01562 | 01563 | 01564 | 01565 | 01566 | 01570 | 01571 | 01572 | 01573 | 01574 | 01575 |
| 01576 | 01580 | 01581 | 01582 | 01583 | 01584 | 01585 | 01586 | 01590 | 01591 | 01592 | 01593 |
| 01594 | 01595 | 01596 | 01600 | 01601 | 01602 | 01603 | 01604 | 01605 | 01606 | 01610 | 01611 |
| 01612 | 01613 | 01614 | 01615 | 01616 | 01620 | 01621 | 01622 | 01623 | 01624 | 01625 | 01626 |
| 01630 | 01631 | 01632 | 01633 | 01634 | 01635 | 01636 | 01640 | 01641 | 01642 | 01643 | 01644 |
| 01645 | 01646 | 01650 | 01651 | 01652 | 01653 | 01654 | 01655 | 01656 | 01660 | 01661 | 01662 |
| 01663 | 01664 | 01665 | 01666 | 01670 | 01671 | 01672 | 01673 | 01674 | 01675 | 01676 | 01690 |
| 01691 | 01692 | 01693 | 01694 | 01695 | 01696 | 01700 | 01701 | 01702 | 01703 | 01704 | 01705 |
| 01706 | 01710 | 01711 | 01712 | 01713 | 01714 | 01715 | 01716 | 01720 | 01721 | 01722 | 01723 |
| 01724 | 01725 | 01726 | 01730 | 01731 | 01732 | 01733 | 01734 | 01735 | 01736 | 01740 | 01741 |
| 01742 | 01743 | 01744 | 01745 | 01746 | 01750 | 01751 | 01752 | 01753 | 01754 | 01755 | 01756 |
| 01760 | 01761 | 01762 | 01763 | 01764 | 01765 | 01766 | 01770 | 01771 | 01772 | 01773 | 01774 |
| 01775 | 01776 | 01780 | 01781 | 01782 | 01783 | 01784 | 01785 | 01786 | 01790 | 01791 | 01792 |
| 01793 | 01794 | 01795 | 01796 | 01800 | 01801 | 01802 | 01803 | 01804 | 01805 | 01806 | 01880 |
| 01881 | 01882 | 01883 | 01884 | 01885 | 01886 | 01890 | 01891 | 01892 | 01893 | 01894 | 01895 |
| 01896 | 1370 | 1371 | 1372 | 1373 | 1374 | | | | | | |

**NOTE:**   All ICD-9-CM coding changes from January 1980 through September 1999 are included in this appendix.  However, special treatment is required for code 2510 (Hypoglycemic coma) which resides in diagnosis category 50 Diabetes mellitus, if data prior to October 1993 are used.  After October 1993, code 2510 resides in diagnosis category 51 Other endocrine disorders (as depicted in this appendix).

Diagnosis category
ICD-9-CM codes

2    Septicemia (except in labor)

| 0031 | 0202 | 0223 | 0362 | 0380 | 0381 | 03810 | 03811 | 03819 | 0382 | 0383 | 03840 |
|------|------|------|------|------|------|-------|-------|-------|------|------|-------|
| 03841 | 03842 | 03843 | 03844 | 03849 | 0388 | 0389 | 0545 | 7907 | | | |

3    Bacterial infection, unspecified site

| V090 | V091 | V092 | V093 | V094 | V0950 | V0951 | V096 | V0970 | V0971 | V0980 | V0981 |
|------|------|------|------|------|-------|-------|------|-------|-------|-------|-------|
| V0990 | V0991 | 0200 | 0208 | 0209 | 0218 | 0219 | 0228 | 0229 | 0230 | 0231 | 0232 |
| 0233 | 0238 | 0239 | 024 | 025 | 0260 | 0269 | 0270 | 0271 | 0272 | 0278 | 0279 |
| 0300 | 0301 | 0302 | 0303 | 0308 | 0309 | 0312 | 0318 | 0319 | 03289 | 0329 | 0330 |
| 0331 | 0338 | 0339 | 0341 | 0363 | 03681 | 03689 | 0369 | 037 | 0392 | 0393 | 0394 |
| 0398 | 0399 | 0400 | 0401 | 0402 | 0403 | 04081 | 04089 | 0410 | 04100 | 04101 | 04102 |
| 04103 | 04104 | 04105 | 04109 | 0411 | 04110 | 04111 | 04119 | 0412 | 0413 | 0414 | 0415 |
| 0416 | 0417 | 0418 | 04181 | 04182 | 04183 | 04184 | 04185 | 04186 | 04189 | 0419 | 390 |
| 3929 | 7953 | | | | | | | | | | |

4    Mycoses

| 1100 | 1101 | 1102 | 1103 | 1104 | 1105 | 1106 | 1108 | 1109 | 1110 | 1111 | 1112 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 1113 | 1118 | 1119 | 1120 | 1121 | 1122 | 1123 | 1125 | 11282 | 11284 | 11285 | 11289 |
| 1129 | 1141 | 1143 | 1149 | 11500 | 11509 | 11510 | 11519 | 11590 | 11599 | 1160 | 1161 |
| 1162 | 1170 | 1171 | 1172 | 1173 | 1174 | 1175 | 1176 | 1177 | 1178 | 1179 | 118 |

5    HIV infection

| V08 | 042 | 0420 | 0421 | 0422 | 0429 | 0430 | 0431 | 0432 | 0433 | 0439 | 0440 |
|-----|-----|------|------|------|------|------|------|------|------|------|------|
| 0449 | 07953 | 27910 | 27919 | 79571 | 7958 | | | | | | |

6    Hepatitis

| 0700 | 0701 | 0702 | 07020 | 07021 | 07022 | 07023 | 0703 | 07030 | 07031 | 07032 | 07033 |
|------|------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 0704 | 07041 | 07042 | 07043 | 07044 | 07049 | 0705 | 07051 | 07052 | 07053 | 07054 | 07059 |
| 0706 | 0709 | 57140 | 57141 | 57149 | 5731 | 5732 | 5733 | | | | |

7    Viral infection

| 0500 | 0501 | 0502 | 0509 | 0510 | 0511 | 0512 | 0519 | 0527 | 0528 | 0529 | 05310 |
|------|------|------|------|------|------|------|------|------|------|------|-------|
| 05311 | 05312 | 05313 | 05319 | 05371 | 05379 | 0538 | 0539 | 0540 | 05410 | 05411 | 05412 |
| 05413 | 05419 | 0542 | 0546 | 05471 | 05473 | 05479 | 0548 | 0549 | 05579 | 0558 | 0559 |
| 05600 | 05609 | 05679 | 0568 | 0569 | 0570 | 0578 | 0579 | 0600 | 0601 | 0609 | 061 |
| 0650 | 0651 | 0652 | 0653 | 0654 | 0658 | 0659 | 0660 | 0661 | 0663 | 0668 | 0669 |
| 071 | 0720 | 0723 | 07271 | 07272 | 07279 | 0728 | 0729 | 0737 | 0738 | 0739 | 0740 |
| 0741 | 0743 | 0748 | 075 | 0780 | 0781 | 07810 | 07811 | 07819 | 0782 | 0783 | 0784 |
| 0785 | 0786 | 0787 | 07881 | 07882 | 07888 | 07889 | 0790 | 0791 | 0792 | 0793 | 0794 |
| 07950 | 07951 | 07952 | 07959 | 0796 | 0798 | 07981 | 07988 | 07989 | 0799 | 07998 | 07999 |
| 7908 | | | | | | | | | | | |

Diagnosis category
ICD-9-CM codes

8        Other infections, including parasitic

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V120 | V1200 | V1203 | V1209 | 080 | 0810 | 0811 | 0812 | 0819 | 0820 | 0821 | 0822 |
| 0823 | 0828 | 0829 | 0831 | 0832 | 0838 | 0839 | 0840 | 0841 | 0842 | 0843 | 0844 |
| 0845 | 0846 | 0847 | 0848 | 0849 | 0850 | 0851 | 0852 | 0853 | 0854 | 0855 | 0859 |
| 0860 | 0861 | 0862 | 0863 | 0864 | 0865 | 0869 | 0870 | 0871 | 0879 | 0880 | 0888 |
| 08881 | 08882 | 08889 | 0889 | 1000 | 10089 | 1009 | 101 | 1020 | 1021 | 1022 | 1023 |
| 1024 | 1025 | 1026 | 1027 | 1028 | 1029 | 1030 | 1031 | 1032 | 1033 | 1039 | 1040 |
| 1048 | 1049 | 1200 | 1201 | 1202 | 1203 | 1208 | 1209 | 1210 | 1211 | 1212 | 1213 |
| 1214 | 1215 | 1216 | 1218 | 1219 | 1220 | 1221 | 1222 | 1223 | 1224 | 1225 | 1226 |
| 1227 | 1228 | 1229 | 1230 | 1231 | 1232 | 1233 | 1234 | 1235 | 1236 | 1238 | 1239 |
| 124 | 1250 | 1251 | 1252 | 1253 | 1254 | 1255 | 1256 | 1257 | 1259 | 1260 | 1261 |
| 1262 | 1263 | 1268 | 1269 | 1270 | 1271 | 1272 | 1273 | 1274 | 1275 | 1276 | 1277 |
| 1278 | 1279 | 1280 | 1281 | 1288 | 1289 | 129 | 1305 | 1307 | 1308 | 1309 | 13100 |
| 13101 | 13102 | 13103 | 13109 | 1318 | 1319 | 1320 | 1321 | 1322 | 1323 | 1329 | 1330 |
| 1338 | 1339 | 1340 | 1341 | 1342 | 1348 | 1349 | 135 | 1360 | 1361 | 1362 | 1364 |
| 1365 | 1368 | 1369 | 1398 | | | | | | | | |

9        Sexually transmitted infections (not HIV or hepatitis)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0900 | 0901 | 0902 | 0903 | 09040 | 09041 | 09042 | 09049 | 0905 | 0906 | 0907 | 0909 |
| 0910 | 0911 | 0912 | 0913 | 0914 | 09150 | 09151 | 09152 | 09161 | 09162 | 09169 | 0917 |
| 09181 | 09182 | 09189 | 0919 | 0920 | 0929 | 0930 | 0931 | 09320 | 09321 | 09322 | 09323 |
| 09324 | 09381 | 09382 | 09389 | 0939 | 0940 | 0941 | 0942 | 0943 | 09481 | 09482 | 09483 |
| 09484 | 09485 | 09486 | 09487 | 09489 | 0949 | 0950 | 0951 | 0952 | 0953 | 0954 | 0955 |
| 0956 | 0957 | 0958 | 0959 | 096 | 0970 | 0971 | 0979 | 0980 | 09810 | 09811 | 09812 |
| 09813 | 09814 | 09815 | 09816 | 09817 | 09819 | 0982 | 09830 | 09831 | 09832 | 09833 | 09834 |
| 09835 | 09836 | 09837 | 09839 | 09840 | 09841 | 09842 | 09843 | 09849 | 09850 | 09851 | 09852 |
| 09853 | 09859 | 0986 | 0987 | 09881 | 09882 | 09883 | 09884 | 09885 | 09886 | 09889 | 0990 |
| 0991 | 0992 | 0993 | 0994 | 09940 | 09941 | 09949 | 09950 | 09951 | 09952 | 09953 | 09954 |
| 09955 | 09956 | 09959 | 0998 | 0999 | | | | | | | |

10        Immunizations and screening for infectious disease

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V010 | V011 | V012 | V013 | V014 | V015 | V016 | V017 | V018 | V019 | V020 | V021 |
| V022 | V023 | V024 | V025 | V0251 | V0252 | V0259 | V026 | V0260 | V0261 | V0262 | V0269 |
| V027 | V028 | V029 | V030 | V031 | V032 | V033 | V034 | V035 | V036 | V037 | V038 |
| V0381 | V0382 | V0389 | V039 | V040 | V041 | V042 | V043 | V044 | V045 | V046 | V047 |
| V048 | V050 | V051 | V052 | V053 | V054 | V058 | V059 | V060 | V061 | V062 | V063 |
| V064 | V065 | V066 | V068 | V069 | V286 | V712 | V730 | V731 | V732 | V733 | V734 |
| V735 | V736 | V738 | V7388 | V7389 | V739 | V7398 | V7399 | V740 | V741 | V742 | V743 |
| V744 | V745 | V746 | V748 | V749 | V750 | V751 | V752 | V753 | V754 | V755 | V756 |
| V757 | V758 | V759 | 7955 | 7956 | | | | | | | |

Diagnosis category
ICD-9-CM codes

11      Cancer of head and neck

| V1001 | V1002 | V1021 | 1400 | 1401 | 1403 | 1404 | 1405 | 1406 | 1408 | 1409 | 1410 |
|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1411 | 1412 | 1413 | 1414 | 1415 | 1416 | 1418 | 1419 | 1420 | 1421 | 1422 | 1428 |
| 1429 | 1430 | 1431 | 1438 | 1439 | 1440 | 1441 | 1448 | 1449 | 1450 | 1451 | 1452 |
| 1453 | 1454 | 1455 | 1456 | 1458 | 1459 | 1460 | 1461 | 1462 | 1463 | 1464 | 1465 |
| 1466 | 1467 | 1468 | 1469 | 1470 | 1471 | 1472 | 1473 | 1478 | 1479 | 1480 | 1481 |
| 1482 | 1483 | 1488 | 1489 | 1490 | 1491 | 1498 | 1499 | 1600 | 1601 | 1602 | 1603 |
| 1604 | 1605 | 1608 | 1609 | 1610 | 1611 | 1612 | 1613 | 1618 | 1619 | 1950 | 2300 |
| 2310 | | | | | | | | | | | |

12      Cancer of esophagus

| V1003 | 1500 | 1501 | 1502 | 1503 | 1504 | 1505 | 1508 | 1509 | 2301 |
|-------|------|------|------|------|------|------|------|------|------|

13      Cancer of stomach

| V1004 | 1510 | 1511 | 1512 | 1513 | 1514 | 1515 | 1516 | 1518 | 1519 | 2302 |
|-------|------|------|------|------|------|------|------|------|------|------|

14      Cancer of colon

| V1005 | 1530 | 1531 | 1532 | 1533 | 1534 | 1535 | 1536 | 1537 | 1538 | 1539 | 1590 |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 2303 | | | | | | | | | | | |

15      Cancer of rectum and anus

| V1006 | 1540 | 1541 | 1542 | 1543 | 1548 | 2304 | 2305 | 2306 |
|-------|------|------|------|------|------|------|------|------|

16      Cancer of liver and intrahepatic bile duct

| V1007 | 1550 | 1551 | 1552 | 2308 |
|-------|------|------|------|------|

17      Cancer of pancreas

| 1570 | 1571 | 1572 | 1573 | 1574 | 1578 | 1579 |
|------|------|------|------|------|------|------|

18      Cancer of other GI organs, peritoneum

| V1000 | V1009 | 1520 | 1521 | 1522 | 1523 | 1528 | 1529 | 1560 | 1561 | 1562 | 1568 |
|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 1569 | 1580 | 1588 | 1589 | 1591 | 1598 | 1599 | 2307 | 2309 | | | |

19      Cancer of bronchus, lung

| V1011 | 1622 | 1623 | 1624 | 1625 | 1628 | 1629 | 2312 |
|-------|------|------|------|------|------|------|------|

Diagnosis category
ICD-9-CM codes

20      Cancer, other respiratory and intrathoracic

V1012   V1020   V1022   1620    1630    1631    1638    1639    1650    1658    1659    2311
2318    2319

21      Cancer of bone and connective tissue

1700    1701    1702    1703    1704    1705    1706    1707    1708    1709    1710    1712
1713    1714    1715    1716    1717    1718    1719

22      Melanomas of skin

V1082   1720    1721    1722    1723    1724    1725    1726    1727    1728    1729

23      Other non-epithelial cancer of skin

V1083   1730    1731    1732    1733    1734    1735    1736    1737    1738    1739    2320
2321    2322    2323    2324    2325    2326    2327    2328    2329

24      Cancer of breast

V103    1740    1741    1742    1743    1744    1745    1746    1748    1749    1750    1759
2330

25      Cancer of uterus

V1042   179     1820    1821    1828    2332

26      Cancer of cervix

V1041   1800    1801    1808    1809    2331    7950

27      Cancer of ovary

V1043   1830

28      Cancer of other female genital organs

V1040   V1044   181     1832    1833    1834    1835    1838    1839    1840    1841    1842
1843    1844    1848    1849    2333

29      Cancer of prostate

V1046   185     2334

Diagnosis category
ICD-9-CM codes

30    Cancer of testis

V1047    1860    1869

31    Cancer of other male genital organs

V1045    V1048    V1049    1871    1872    1873    1874    1875    1876    1877    1878    1879
2335    2336

32    Cancer of bladder

V1051    1880    1881    1882    1883    1884    1885    1886    1887    1888    1889    2337

33    Cancer of kidney and renal pelvis

V1052    1890    1891

34    Cancer of other urinary organs

V1050    V1059    1892    1893    1894    1898    1899    2339

35    Cancer of brain and nervous system

V1085    V1086    1910    1911    1912    1913    1914    1915    1916    1917    1918    1919
1920    1921    1922    1923    1928    1929

36    Cancer of thyroid

V1087    193

37    Hodgkin's disease

V1072    20100    20101    20102    20103    20104    20105    20106    20107    20108    20110    20111
20112    20113    20114    20115    20116    20117    20118    20120    20121    20122    20123    20124
20125    20126    20127    20128    20140    20141    20142    20143    20144    20145    20146    20147
20148    20150    20151    20152    20153    20154    20155    20156    20157    20158    20160    20161
20162    20163    20164    20165    20166    20167    20168    20170    20171    20172    20173    20174
20175    20176    20177    20178    20190    20191    20192    20193    20194    20195    20196    20197
20198

38    Non-Hodgkin's lymphoma

V1071    V1079    20000    20001    20002    20003    20004    20005    20006    20007    20008    20010
20011    20012    20013    20014    20015    20016    20017    20018    20020    20021    20022    20023
20024    20025    20026    20027    20028    20080    20081    20082    20083    20084    20085    20086
20087    20088    20200    20201    20202    20203    20204    20205    20206    20207    20208    20210
20211    20212    20213    20214    20215    20216    20217    20218    20220    20221    20222    20223

Diagnosis category
ICD-9-CM codes

| 20224 | 20225 | 20226 | 20227 | 20228 | 20280 | 20281 | 20282 | 20283 | 20284 | 20285 | 20286 |
| 20287 | 20288 | 20290 | 20291 | 20292 | 20293 | 20294 | 20295 | 20296 | 20297 | 20298 | |

39    Leukemias

| V1060 | V1061 | V1062 | V1063 | V1069 | 20240 | 20241 | 20242 | 20243 | 20244 | 20245 | 20246 |
| 20247 | 20248 | 2031 | 20310 | 20311 | 2040 | 20400 | 20401 | 2041 | 20410 | 20411 | 2042 |
| 20420 | 20421 | 2048 | 20480 | 20481 | 2049 | 20490 | 20491 | 2050 | 20500 | 20501 | 2051 |
| 20510 | 20511 | 2052 | 20520 | 20521 | 2053 | 20530 | 20531 | 2058 | 20580 | 20581 | 2059 |
| 20590 | 20591 | 2060 | 20600 | 20601 | 2061 | 20610 | 20611 | 2062 | 20620 | 20621 | 2068 |
| 20680 | 20681 | 2069 | 20690 | 20691 | 2070 | 20700 | 20701 | 2071 | 20710 | 20711 | 2072 |
| 20720 | 20721 | 2078 | 20780 | 20781 | 2080 | 20800 | 20801 | 2081 | 20810 | 20811 | 2082 |
| 20820 | 20821 | 2088 | 20880 | 20881 | 2089 | 20890 | 20891 | | | | |

40    Multiple myeloma

| 2030 | 20300 | 20301 | 2038 | 20380 | 20381 |

41    Cancer, other and unspecified primary

| V1029 | V1081 | V1084 | V1088 | V1089 | V109 | V711 | 1640 | 1641 | 1642 | 1643 | 1648 |
| 1649 | 1760 | 1761 | 1762 | 1763 | 1764 | 1765 | 1768 | 1769 | 1900 | 1901 | 1902 |
| 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1940 | 1941 | 1943 | 1944 | 1945 |
| 1946 | 1948 | 1949 | 1951 | 1952 | 1953 | 1954 | 1955 | 1958 | 20230 | 20231 | 20232 |
| 20233 | 20234 | 20235 | 20236 | 20237 | 20238 | 20250 | 20251 | 20252 | 20253 | 20254 | 20255 |
| 20256 | 20257 | 20258 | 20260 | 20261 | 20262 | 20263 | 20264 | 20265 | 20266 | 20267 | 20268 |
| 2340 | 2348 | 2349 | 7951 | | | | | | | | |

42    Secondary malignancies

| 1960 | 1961 | 1962 | 1963 | 1965 | 1966 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 |
| 1974 | 1975 | 1976 | 1977 | 1978 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| 1987 | 19881 | 19882 | 19889 | | | | | | | | |

43    Malignant neoplasm without specification of site

| 1990 | 1991 |

44    Neoplasms of unspecified nature or uncertain behavior

| 2350 | 2351 | 2352 | 2353 | 2354 | 2355 | 2356 | 2357 | 2358 | 2359 | 2360 | 2361 |
| 2362 | 2363 | 2364 | 2365 | 2366 | 2367 | 23690 | 23691 | 23699 | 2370 | 2371 | 2372 |
| 2373 | 2374 | 2375 | 2376 | 2377 | 23770 | 23771 | 23772 | 2379 | 2380 | 2381 | 2382 |
| 2383 | 2384 | 2385 | 2386 | 2387 | 2388 | 2389 | 2390 | 2391 | 2392 | 2393 | 2394 |
| 2395 | 2396 | 2397 | 2398 | 2399 | | | | | | | |

Diagnosis category
ICD-9-CM codes

45      Maintenance chemotherapy, radiotherapy

V580    V581    V661    V662    V671    V672

46      Benign neoplasm of uterus

2180    2181    2182    2189    2190    2191    2198    2199

47      Other and unspecified benign neoplasm

| V1272 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 2111  | 2112 | 2113 | 2114 | 2115 | 2116 | 2117 | 2118 | 2119 | 2120 | 2121 | 2122 |
| 2123  | 2124 | 2125 | 2126 | 2127 | 2128 | 2129 | 2130 | 2131 | 2132 | 2133 | 2134 |
| 2135  | 2136 | 2137 | 2138 | 2139 | 2140 | 2141 | 2142 | 2143 | 2144 | 2148 | 2149 |
| 2150  | 2152 | 2153 | 2154 | 2155 | 2156 | 2157 | 2158 | 2159 | 2160 | 2161 | 2162 |
| 2163  | 2164 | 2165 | 2166 | 2167 | 2168 | 2169 | 217  | 220  | 2210 | 2211 | 2212 |
| 2218  | 2219 | 2220 | 2221 | 2222 | 2223 | 2224 | 2228 | 2229 | 2230 | 2231 | 2232 |
| 2233  | 22381| 22389| 2239 | 2240 | 2241 | 2242 | 2243 | 2244 | 2245 | 2246 | 2247 |
| 2248  | 2249 | 2250 | 2251 | 2252 | 2253 | 2254 | 2258 | 2259 | 226  | 2270 | 2271 |
| 2273  | 2274 | 2275 | 2276 | 2278 | 2279 | 22800| 22801| 22802| 22803| 22804| 22809|
| 2281  | 2290 | 2298 | 2299 |      |      |      |      |      |      |      |      |

48      Thyroid disorders

| 2400  | 2409 | 2410 | 2411 | 2419 | 24200| 24201| 24210| 24211| 24220| 24221| 24230|
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 24231 | 24240| 24241| 24280| 24281| 24290| 24291| 243  | 2440 | 2441 | 2442 | 2443 |
| 2448  | 2449 | 2450 | 2451 | 2452 | 2453 | 2454 | 2458 | 2459 | 2460 | 2461 | 2462 |
| 2463  | 2468 | 2469 | 7945 |      |      |      |      |      |      |      |      |

49      Diabetes mellitus without complication

25000   25001   7902    7915    7916

50      Diabetes mellitus with complications

| 25002 | 25003| 25010| 25011| 25012| 25013| 25020| 25021| 25022| 25023| 25030| 25031|
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 25032 | 25033| 25040| 25041| 25042| 25043| 25050| 25051| 25052| 25053| 25060| 25061|
| 25062 | 25063| 25070| 25071| 25072| 25073| 25080| 25081| 25082| 25083| 25090| 25091|
| 25092 | 25093|      |      |      |      |      |      |      |      |      |      |

51      Other endocrine disorders

| 2510  | 2511 | 2512 | 2513 | 2514 | 2515 | 2518 | 2519 | 2520 | 2521 | 2528 | 2529 |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 2530  | 2531 | 2532 | 2533 | 2534 | 2535 | 2536 | 2537 | 2538 | 2539 | 2540 | 2541 |
| 2548  | 2549 | 2550 | 2551 | 2552 | 2553 | 2554 | 2555 | 2556 | 2558 | 2559 | 2560 |

Diagnosis category
ICD-9-CM codes

|      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 2561 | 2562 | 2563 | 2564 | 2568 | 2569 | 2570 | 2571 | 2572 | 2578 | 2579 | 2580 |
| 2581 | 2588 | 2589 | 2590 | 2591 | 2592 | 2593 | 2594 | 2598 | 2599 | 7946 |      |

52    Nutritional deficiencies

|      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|
| V121 | 260  | 261  | 262  | 2630 | 2631 | 2632 | 2638 | 2639 | 2640 | 2641 | 2642 |
| 2643 | 2644 | 2645 | 2646 | 2647 | 2648 | 2649 | 2650 | 2651 | 2652 | 2660 | 2661 |
| 2662 | 2669 | 267  | 2680 | 2681 | 2682 | 2689 | 2690 | 2691 | 2692 | 2693 | 2698 |
| 2699 | 7994 |      |      |      |      |      |      |      |      |      |      |

53    Disorders of lipid metabolism

|      |      |      |      |      |
|------|------|------|------|------|
| 2720 | 2721 | 2722 | 2723 | 2724 |

54    Gout and other crystal arthropathies

|       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2740  | 27410 | 27411 | 27419 | 27481 | 27482 | 27489 | 2749  | 71210 | 71211 | 71212 | 71213 |
| 71214 | 71215 | 71216 | 71217 | 71218 | 71219 | 71220 | 71221 | 71222 | 71223 | 71224 | 71225 |
| 71226 | 71227 | 71228 | 71229 | 71230 | 71231 | 71232 | 71233 | 71234 | 71235 | 71236 | 71237 |
| 71238 | 71239 | 71280 | 71281 | 71282 | 71283 | 71284 | 71285 | 71286 | 71287 | 71288 | 71289 |
| 71290 | 71291 | 71292 | 71293 | 71294 | 71295 | 71296 | 71297 | 71298 | 71299 |       |       |

55    Fluid and electrolyte disorders

|      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|
| 2760 | 2761 | 2762 | 2763 | 2764 | 2765 | 2766 | 2767 | 2768 | 2769 |

56    Cystic fibrosis

|       |       |
|-------|-------|
| 27700 | 27701 |

57    Immunity disorders

|       |       |       |       |       |       |       |       |       |       |       |      |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 27900 | 27901 | 27902 | 27903 | 27904 | 27905 | 27906 | 27909 | 27911 | 27912 | 27913 | 2792 |
| 2793  | 2794  | 2798  | 2799  |       |       |       |       |       |       |       |      |

58    Other nutritional, endocrine, and metabolic disorders

|       |       |       |       |       |      |      |      |      |      |       |       |
|-------|-------|-------|-------|-------|------|------|------|------|------|-------|-------|
| V122  | 2700  | 2701  | 2702  | 2703  | 2704 | 2705 | 2706 | 2707 | 2708 | 2709  | 2710  |
| 2711  | 2712  | 2713  | 2714  | 2718  | 2719 | 2725 | 2726 | 2727 | 2728 | 2729  | 2730  |
| 2731  | 2732  | 2733  | 2738  | 2739  | 2750 | 2751 | 2752 | 2753 | 2754 | 27540 | 27541 |
| 27542 | 27549 | 2758  | 2759  | 2771  | 2772 | 2773 | 2774 | 2775 | 2776 | 2778  | 2779  |
| 2780  | 27800 | 27801 | 2781  | 2782  | 2783 | 2784 | 2788 | 7831 | 7832 | 7833  | 7834  |
| 7835  | 7839  | 7947  | 7957  | 79579 |      |      |      |      |      |       |       |

Diagnosis category
ICD-9-CM codes

59      Deficiency and other anemia

| 2800 | 2801 | 2808 | 2809 | 2810 | 2811 | 2812 | 2813 | 2814 | 2818 | 2819 | 2820 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 2821 | 2822 | 2823 | 2824 | 2827 | 2828 | 2829 | 2830 | 2831 | 28310 | 28311 | 28319 |
| 2832 | 2839 | 2840 | 2848 | 2849 | 2850 | 2858 | 2859 | | | | |

60      Acute posthemorrhagic anemia

2851

61      Sickle cell anemia

| 2825 | 28260 | 28261 | 28262 | 28263 | 28269 |
|------|-------|-------|-------|-------|-------|

62      Coagulation and hemorrhagic disorders

| 2860 | 2861 | 2862 | 2863 | 2864 | 2865 | 2866 | 2867 | 2869 | 2870 | 2871 | 2872 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 2873 | 2874 | 2875 | 2878 | 2879 | 7827 | | | | | | |

63      Diseases of white blood cells

| 2880 | 2881 | 2882 | 2883 | 2888 | 2889 |
|------|------|------|------|------|------|

64      Other hematologic conditions

| V123 | V582 | 2890 | 2894 | 28950 | 28951 | 28959 | 2896 | 2897 | 2898 | 2899 | 7900 |
|------|------|------|------|-------|-------|-------|------|------|------|------|------|

65      Mental retardation

| 317 | 3180 | 3181 | 3182 | 319 |
|-----|------|------|------|-----|

66      Alcohol-related mental disorders

| 2910 | 2911 | 2912 | 2913 | 2914 | 2915 | 2918 | 29181 | 29189 | 2919 | 30300 | 30301 |
|------|------|------|------|------|------|------|-------|-------|------|-------|-------|
| 30302 | 30303 | 30390 | 30391 | 30392 | 30393 | 30500 | 30501 | 30502 | 30503 | | |

67      Substance-related mental disorders

| V1582 | 2920 | 29211 | 29212 | 2922 | 29281 | 29282 | 29283 | 29284 | 29289 | 2929 | 30400 |
|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| 30401 | 30402 | 30403 | 30410 | 30411 | 30412 | 30413 | 30420 | 30421 | 30422 | 30423 | 30430 |
| 30431 | 30432 | 30433 | 30440 | 30441 | 30442 | 30443 | 30450 | 30451 | 30452 | 30453 | 30460 |
| 30461 | 30462 | 30463 | 30470 | 30471 | 30472 | 30473 | 30480 | 30481 | 30482 | 30483 | 30490 |
| 30491 | 30492 | 30493 | 3051 | 30510 | 30511 | 30512 | 30513 | 30520 | 30521 | 30522 | 30523 |
| 30530 | 30531 | 30532 | 30533 | 30540 | 30541 | 30542 | 30543 | 30550 | 30551 | 30552 | 30553 |
| 30560 | 30561 | 30562 | 30563 | 30570 | 30571 | 30572 | 30573 | 30580 | 30581 | 30582 | 30583 |
| 30590 | 30591 | 30592 | 30593 | | | | | | | | |

Diagnosis category
ICD-9-CM codes

68      Senility and organic mental disorders

| 2900 | 29010 | 29011 | 29012 | 29013 | 29020 | 29021 | 2903 | 29040 | 29041 | 29042 | 29043 |
|------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 2908 | 2909 | 2930 | 2931 | 29381 | 29382 | 29383 | 29384 | 29389 | 2939 | 2940 | 2941 |
| 2948 | 2949 | 3100 | 3101 | 3102 | 3108 | 3109 | 3310 | 3311 | 3312 | 797 | |

69      Affective disorders

| 29600 | 29601 | 29602 | 29603 | 29604 | 29605 | 29606 | 29610 | 29611 | 29612 | 29613 | 29614 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 29615 | 29616 | 29620 | 29621 | 29622 | 29623 | 29624 | 29625 | 29626 | 29630 | 29631 | 29632 |
| 29633 | 29634 | 29635 | 29636 | 29640 | 29641 | 29642 | 29643 | 29644 | 29645 | 29646 | 29650 |
| 29651 | 29652 | 29653 | 29654 | 29655 | 29656 | 29660 | 29661 | 29662 | 29663 | 29664 | 29665 |
| 29666 | 2967 | 29680 | 29681 | 29682 | 29689 | 29690 | 29699 | 2980 | 3004 | 30111 | 30113 |

70      Schizophrenia and related disorders

| 29500 | 29501 | 29502 | 29503 | 29504 | 29505 | 29510 | 29511 | 29512 | 29513 | 29514 | 29515 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 29520 | 29521 | 29522 | 29523 | 29524 | 29525 | 29530 | 29531 | 29532 | 29533 | 29534 | 29535 |
| 29540 | 29541 | 29542 | 29543 | 29544 | 29545 | 29550 | 29551 | 29552 | 29553 | 29554 | 29555 |
| 29560 | 29561 | 29562 | 29563 | 29564 | 29565 | 29570 | 29571 | 29572 | 29573 | 29574 | 29575 |
| 29580 | 29581 | 29582 | 29583 | 29584 | 29585 | 29590 | 29591 | 29592 | 29593 | 29594 | 29595 |
| 29900 | 29901 | 29910 | 29911 | 29980 | 29981 | 29990 | 29991 | | | | |

71      Other psychoses

| 2970 | 2971 | 2972 | 2973 | 2978 | 2979 | 2981 | 2982 | 2983 | 2984 | 2988 | 2989 |
|------|------|------|------|------|------|------|------|------|------|------|------|

72      Anxiety, somatoform, dissociative, and personality disorders

| 30000 | 30001 | 30002 | 30009 | 30010 | 30011 | 30012 | 30013 | 30014 | 30015 | 30016 | 30019 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 30020 | 30021 | 30022 | 30023 | 30029 | 3003 | 3005 | 3006 | 3007 | 30081 | 30082 | 3010 |
| 30110 | 30112 | 30120 | 30121 | 30122 | 3013 | 3014 | 30150 | 30151 | 30159 | 3016 | 3017 |
| 30181 | 30182 | 30183 | 30184 | 30189 | 3019 | 30740 | 30741 | 30742 | 30743 | 30744 | 30745 |
| 30747 | 30748 | 30749 | 30780 | 30781 | 30789 | 3079 | 3080 | 3081 | 3082 | 3083 | 3084 |
| 3089 | 30981 | 31230 | 31231 | 31232 | 31233 | 31234 | 31235 | 31239 | | | |

73      Preadult disorders

| 30921 | 31200 | 31201 | 31202 | 31203 | 31210 | 31211 | 31212 | 31213 | 31220 | 31221 | 31222 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 31223 | 3124 | 3128 | 31281 | 31282 | 31289 | 3129 | 3130 | 31321 | 31400 | 31401 | 3141 |
| 3142 | 3148 | 3149 | | | | | | | | | |

74      Other mental conditions

| 30089 | 3009 | 3021 | 3022 | 3023 | 3024 | 30250 | 30251 | 30252 | 30253 | 3026 | 30270 |
|-------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| 30271 | 30272 | 30273 | 30274 | 30275 | 30276 | 30279 | 30281 | 30282 | 30283 | 30284 | 30285 |

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 30289 | 3029 | 3060 | 3061 | 3062 | 3063 | 3064 | 30650 | 30651 | 30652 | 30653 | 30659 |
| 3066 | 3067 | 3068 | 3069 | 3070 | 3071 | 30720 | 30721 | 30722 | 30723 | 3073 | 30746 |
| 30750 | 30751 | 30752 | 30753 | 30754 | 30759 | 3076 | 3077 | 3090 | 3091 | 30922 | 30923 |
| 30924 | 30928 | 30929 | 3093 | 3094 | 30982 | 30983 | 30989 | 3099 | 311 | 3131 | 31322 |
| 31323 | 3133 | 31381 | 31382 | 31383 | 31389 | 3139 | 31500 | 31501 | 31502 | 31509 | 3151 |
| 3152 | 31531 | 31532 | 31539 | 3154 | 3155 | 3158 | 3159 | 316 | 7801 | | |

75   Personal history of mental disorder, mental and behavioral problems, observation and screening for mental condition

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| V110 | V111 | V112 | V113 | V118 | V119 | V154 | V1541 | V1542 | V1549 | V400 | V401 |
| V402 | V403 | V409 | V663 | V673 | V701 | V702 | V7101 | V7102 | V7109 | V790 | V791 |
| V792 | V793 | V798 | V799 | | | | | | | | |

76   Meningitis (except that caused by tuberculosis or sexually transmitted disease)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 00321 | 0360 | 0470 | 0471 | 0478 | 0479 | 0490 | 0491 | 0530 | 05472 | 0721 | 10081 |
| 11283 | 1142 | 11501 | 11511 | 11591 | 3200 | 3201 | 3202 | 3203 | 3207 | 3208 | 32081 |
| 32082 | 32089 | 3209 | 3210 | 3211 | 3212 | 3213 | 3214 | 3218 | 3220 | 3221 | 3222 |
| 3229 | | | | | | | | | | | |

77   Encephalitis (except that caused by tuberculosis or sexually transmitted disease)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0361 | 0462 | 0498 | 0499 | 0520 | 0543 | 0550 | 05601 | 0620 | 0621 | 0622 | 0623 |
| 0624 | 0625 | 0628 | 0629 | 0630 | 0631 | 0632 | 0638 | 0639 | 064 | 0662 | 0722 |
| 1300 | 1390 | 3230 | 3231 | 3232 | 3234 | 3235 | 3236 | 3237 | 3238 | 3239 | |

78   Other CNS infection and poliomyelitis

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| V1202 | 04500 | 04501 | 04502 | 04503 | 04510 | 04511 | 04512 | 04513 | 04520 | 04521 | 04522 |
| 04523 | 04590 | 04591 | 04592 | 04593 | 0460 | 0461 | 0463 | 0468 | 0469 | 048 | 138 |
| 3240 | 3241 | 3249 | 326 | | | | | | | | |

79   Parkinson's disease

3320

80   Multiple sclerosis

340

81   Other hereditary and degenerative nervous system conditions

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 3300 | 3301 | 3302 | 3303 | 3308 | 3309 | 3313 | 3314 | 3317 | 33181 | 33189 | 3319 |
| 3330 | 3331 | 3332 | 3333 | 3334 | 3335 | 3336 | 3337 | 33381 | 33382 | 33383 | 33384 |
| 33389 | 33390 | 33391 | 33392 | 33393 | 33399 | 3340 | 3341 | 3342 | 3343 | 3344 | 3348 |
| 3349 | 3350 | 33510 | 33511 | 33519 | 33520 | 33521 | 33522 | 33523 | 33524 | 33529 | 3358 |
| 3359 | 3360 | 3361 | 3362 | 3363 | 3368 | 3369 | 3370 | 3371 | 3373 | 3379 | |

Diagnosis category
ICD-9-CM codes

82      Paralysis

| 3420 | 34200 | 34201 | 34202 | 3421 | 34210 | 34211 | 34212 | 34280 | 34281 | 34282 | 3429 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 34290 | 34291 | 34292 | 3430 | 3431 | 3432 | 3433 | 3434 | 3438 | 3439 | 3440 | 34400 |
| 34401 | 34402 | 34403 | 34404 | 34409 | 3441 | 3442 | 3443 | 34430 | 34431 | 34432 | 3444 |
| 34440 | 34441 | 34442 | 3445 | 34460 | 3448 | 34481 | 34489 | 3449 | 7814 | | |

83      Epilepsy, convulsions

| 3450 | 34500 | 34501 | 3451 | 34510 | 34511 | 3452 | 3453 | 3454 | 34540 | 34541 | 3455 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 34550 | 34551 | 3456 | 34560 | 34561 | 3457 | 34570 | 34571 | 3458 | 34580 | 34581 | 3459 |
| 34590 | 34591 | 7803 | 78031 | 78039 | | | | | | | |

84      Headache, including migraine

| 3460 | 34600 | 34601 | 3461 | 34610 | 34611 | 3462 | 34620 | 34621 | 3468 | 34680 | 34681 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3469 | 34690 | 34691 | 7840 | | | | | | | | |

85      Coma, stupor, and brain damage

| 3481 | 7800 | 78001 | 78003 | 78009 |
|---|---|---|---|---|

86      Cataract

| V431 | 36600 | 36601 | 36602 | 36603 | 36604 | 36609 | 36610 | 36611 | 36612 | 36613 | 36614 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 36615 | 36616 | 36617 | 36618 | 36619 | 36620 | 36621 | 36622 | 36623 | 36630 | 36631 | 36632 |
| 36633 | 36634 | 36641 | 36642 | 36643 | 36644 | 36645 | 36646 | 36650 | 36651 | 36652 | 36653 |
| 3668 | 3669 | | | | | | | | | | |

87      Retinal detachments, defects, vascular occlusion, and retinopathy

| 36100 | 36101 | 36102 | 36103 | 36104 | 36105 | 36106 | 36107 | 36110 | 36111 | 36112 | 36113 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 36114 | 36119 | 3612 | 36130 | 36131 | 36132 | 36133 | 36181 | 36189 | 3619 | 36201 | 36202 |
| 36210 | 36211 | 36212 | 36213 | 36214 | 36215 | 36216 | 36217 | 36218 | 36221 | 36229 | 36230 |
| 36231 | 36232 | 36233 | 36234 | 36235 | 36236 | 36237 | 36240 | 36241 | 36242 | 36243 | 36250 |
| 36251 | 36252 | 36253 | 36254 | 36255 | 36256 | 36257 | 36260 | 36261 | 36262 | 36263 | 36264 |
| 36265 | 36266 | 36270 | 36271 | 36272 | 36273 | 36274 | 36275 | 36276 | 36277 | 36281 | 36282 |
| 36283 | 36284 | 36285 | 36289 | 3629 | | | | | | | |

88      Glaucoma

| 36500 | 36501 | 36502 | 36503 | 36504 | 36510 | 36511 | 36512 | 36513 | 36514 | 36515 | 36520 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 36521 | 36522 | 36523 | 36524 | 36531 | 36532 | 36541 | 36542 | 36543 | 36544 | 36551 | 36552 |
| 36559 | 36560 | 36561 | 36562 | 36563 | 36564 | 36565 | 36581 | 36582 | 36589 | 3659 | |

Diagnosis category
ICD-9-CM codes

89  Blindness and vision defects

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| V410 | 3670 | 3671 | 36720 | 36721 | 36722 | 36731 | 36732 | 3674 | 36751 | 36752 | 36753 |
| 36781 | 36789 | 3679 | 36800 | 36801 | 36802 | 36803 | 36810 | 36811 | 36812 | 36813 | 36814 |
| 36815 | 36816 | 3682 | 36830 | 36831 | 36832 | 36833 | 36834 | 36840 | 36841 | 36842 | 36843 |
| 36844 | 36845 | 36846 | 36847 | 36851 | 36852 | 36853 | 36854 | 36855 | 36859 | 36860 | 36861 |
| 36862 | 36863 | 36869 | 3688 | 3689 | 36900 | 36901 | 36902 | 36903 | 36904 | 36905 | 36906 |
| 36907 | 36908 | 36910 | 36911 | 36912 | 36913 | 36914 | 36915 | 36916 | 36917 | 36918 | 36920 |
| 36921 | 36922 | 36923 | 36924 | 36925 | 3693 | 3694 | 36960 | 36961 | 36962 | 36963 | 36964 |
| 36965 | 36966 | 36967 | 36968 | 36969 | 36970 | 36971 | 36972 | 36973 | 36974 | 36975 | 36976 |
| 3698 | 3699 | | | | | | | | | | |

90  Inflammation, infection of eye (except that caused by tuberculosis or sexually transmitted disease)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0213 | 03281 | 05320 | 05321 | 05322 | 05329 | 05440 | 05441 | 05442 | 05443 | 05444 | 05449 |
| 05571 | 0760 | 0761 | 0769 | 0770 | 0771 | 0772 | 0773 | 0774 | 0778 | 0779 | 07798 |
| 07799 | 11502 | 11512 | 11592 | 1301 | 1302 | 1391 | 36000 | 36001 | 36002 | 36003 | 36004 |
| 36011 | 36012 | 36013 | 36014 | 36019 | 36300 | 36301 | 36303 | 36304 | 36305 | 36306 | 36307 |
| 36308 | 36310 | 36311 | 36312 | 36313 | 36314 | 36315 | 36320 | 36321 | 36322 | 36400 | 36401 |
| 36402 | 36403 | 36404 | 36405 | 36410 | 36411 | 36421 | 36422 | 36423 | 36424 | 3643 | 37020 |
| 37021 | 37022 | 37023 | 37024 | 37031 | 37032 | 37033 | 37034 | 37035 | 37040 | 37044 | 37049 |
| 37050 | 37052 | 37054 | 37055 | 37059 | 3708 | 3709 | 37200 | 37201 | 37202 | 37203 | 37204 |
| 37205 | 37210 | 37211 | 37212 | 37213 | 37214 | 37215 | 37220 | 37221 | 37222 | 37230 | 37231 |
| 37233 | 37239 | 37300 | 37301 | 37302 | 37311 | 37312 | 37313 | 37331 | 37332 | 37333 | 37334 |
| 3734 | 3735 | 3736 | 3738 | 3739 | 37500 | 37501 | 37502 | 37503 | 37530 | 37531 | 37532 |
| 37533 | 37541 | 37542 | 37543 | 37600 | 37601 | 37602 | 37603 | 37604 | 37610 | 37611 | 37612 |
| 37613 | 37730 | 37731 | 37732 | 37733 | 37734 | 37739 | 37900 | 37901 | 37902 | 37903 | 37904 |
| 37905 | 37906 | 37907 | 37909 | | | | | | | | |

91  Other eye disorders

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| V411 | V425 | V430 | V456 | V4561 | V4569 | V522 | V531 | V720 | 36020 | 36021 | 36023 |
| 36024 | 36029 | 36030 | 36031 | 36032 | 36033 | 36034 | 36040 | 36041 | 36042 | 36043 | 36044 |
| 36050 | 36051 | 36052 | 36053 | 36054 | 36055 | 36059 | 36060 | 36061 | 36062 | 36063 | 36064 |
| 36065 | 36069 | 36081 | 36089 | 3609 | 36330 | 36331 | 36332 | 36333 | 36334 | 36335 | 36340 |
| 36341 | 36342 | 36343 | 36350 | 36351 | 36352 | 36353 | 36354 | 36355 | 36356 | 36357 | 36361 |
| 36362 | 36363 | 36370 | 36371 | 36372 | 3638 | 3639 | 36441 | 36442 | 36451 | 36452 | 36453 |
| 36454 | 36455 | 36456 | 36457 | 36459 | 36460 | 36461 | 36462 | 36463 | 36464 | 36470 | 36471 |
| 36472 | 36473 | 36474 | 36475 | 36476 | 36477 | 3648 | 3649 | 37000 | 37001 | 37002 | 37003 |
| 37004 | 37005 | 37006 | 37007 | 37060 | 37061 | 37062 | 37063 | 37064 | 37100 | 37101 | 37102 |
| 37103 | 37104 | 37105 | 37110 | 37111 | 37112 | 37113 | 37114 | 37115 | 37116 | 37120 | 37121 |
| 37122 | 37123 | 37124 | 37130 | 37131 | 37132 | 37133 | 37140 | 37141 | 37142 | 37143 | 37144 |
| 37145 | 37146 | 37148 | 37149 | 37150 | 37151 | 37152 | 37153 | 37154 | 37155 | 37156 | 37157 |
| 37158 | 37160 | 37161 | 37162 | 37170 | 37171 | 37172 | 37173 | 37181 | 37182 | 37189 | 3719 |
| 37240 | 37241 | 37242 | 37243 | 37244 | 37245 | 37250 | 37251 | 37252 | 37253 | 37254 | 37255 |
| 37256 | 37261 | 37262 | 37263 | 37264 | 37271 | 37272 | 37273 | 37274 | 37275 | 3728 | 3729 |
| 3732 | 37400 | 37401 | 37402 | 37403 | 37404 | 37405 | 37410 | 37411 | 37412 | 37413 | 37414 |

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 37420 | 37421 | 37422 | 37423 | 37430 | 37431 | 37432 | 37433 | 37434 | 37441 | 37443 | 37444 |
| 37445 | 37446 | 37450 | 37451 | 37452 | 37453 | 37454 | 37455 | 37456 | 37481 | 37482 | 37483 |
| 37484 | 37485 | 37486 | 37487 | 37489 | 3749 | 37511 | 37512 | 37513 | 37514 | 37515 | 37516 |
| 37520 | 37521 | 37522 | 37551 | 37552 | 37553 | 37554 | 37555 | 37556 | 37557 | 37561 | 37569 |
| 37581 | 37589 | 3759 | 37621 | 37622 | 37630 | 37631 | 37632 | 37633 | 37634 | 37635 | 37636 |
| 37640 | 37641 | 37642 | 37643 | 37644 | 37645 | 37646 | 37647 | 37650 | 37651 | 37652 | 3766 |
| 37681 | 37682 | 37689 | 3769 | 37700 | 37701 | 37702 | 37703 | 37704 | 37710 | 37711 | 37712 |
| 37713 | 37714 | 37715 | 37716 | 37721 | 37722 | 37723 | 37724 | 37741 | 37742 | 37749 | 37751 |
| 37752 | 37753 | 37754 | 37761 | 37762 | 37763 | 37771 | 37772 | 37773 | 37775 | 3779 | 37800 |
| 37801 | 37802 | 37803 | 37804 | 37805 | 37806 | 37807 | 37808 | 37810 | 37811 | 37812 | 37813 |
| 37814 | 37815 | 37816 | 37817 | 37818 | 37820 | 37821 | 37822 | 37823 | 37824 | 37830 | 37831 |
| 37832 | 37833 | 37834 | 37835 | 37840 | 37841 | 37842 | 37843 | 37844 | 37845 | 37850 | 37851 |
| 37852 | 37853 | 37854 | 37855 | 37856 | 37860 | 37861 | 37862 | 37863 | 37871 | 37872 | 37873 |
| 37881 | 37882 | 37883 | 37884 | 37885 | 37886 | 37887 | 3789 | 37911 | 37912 | 37913 | 37914 |
| 37915 | 37916 | 37919 | 37921 | 37922 | 37923 | 37924 | 37925 | 37926 | 37929 | 37931 | 37932 |
| 37933 | 37934 | 37939 | 37940 | 37941 | 37942 | 37943 | 37945 | 37946 | 37949 | 37950 | 37951 |
| 37952 | 37953 | 37954 | 37955 | 37956 | 37957 | 37958 | 37959 | 3798 | 37990 | 37991 | 37992 |
| 37993 | 37999 | | | | | | | | | | |

92    Otitis media and related conditions

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0552 | 38100 | 38101 | 38102 | 38103 | 38104 | 38105 | 38106 | 38110 | 38119 | 38120 | 38129 |
| 3813 | 3814 | 38150 | 38151 | 38152 | 38160 | 38161 | 38162 | 38163 | 3817 | 38181 | 38189 |
| 3819 | 38200 | 38201 | 38202 | 3821 | 3822 | 3823 | 3824 | 3829 | 38300 | 38301 | 38302 |
| 3831 | 38320 | 38321 | 38322 | 38330 | 38331 | 38332 | 38333 | 38381 | 38389 | 3839 | 38420 |
| 38421 | 38422 | 38423 | 38424 | 38425 | 38481 | 38482 | 3849 | 38500 | 38501 | 38502 | 38503 |
| 38509 | 38510 | 38511 | 38512 | 38513 | 38519 | 38521 | 38522 | 38523 | 38524 | 3870 | 3871 |
| 3872 | 3878 | 3879 | | | | | | | | | |

93    Conditions associated with dizziness or vertigo

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 38600 | 38601 | 38602 | 38603 | 38604 | 38610 | 38611 | 38612 | 38619 | 3862 | 38630 | 38631 |
| 38632 | 38633 | 38634 | 38635 | 38640 | 38641 | 38642 | 38643 | 38648 | 38650 | 38651 | 38652 |
| 38653 | 38654 | 38655 | 38656 | 38658 | 3868 | 3869 | 7804 | | | | |

94    Other ear and sense organ disorders

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V412 | V413 | V532 | V721 | 38000 | 38001 | 38002 | 38010 | 38011 | 38012 | 38013 | 38014 |
| 38015 | 38016 | 38021 | 38022 | 38023 | 38030 | 38031 | 38032 | 38039 | 3804 | 38050 | 38051 |
| 38052 | 38053 | 38081 | 38089 | 3809 | 38400 | 38401 | 38409 | 3841 | 38530 | 38531 | 38532 |
| 38533 | 38535 | 38582 | 38583 | 38589 | 3859 | 38800 | 38801 | 38802 | 38810 | 38811 | 38812 |
| 3882 | 38830 | 38831 | 38832 | 38840 | 38841 | 38842 | 38843 | 38844 | 3885 | 38860 | 38861 |
| 38869 | 38870 | 38871 | 38872 | 3888 | 3889 | 38900 | 38901 | 38902 | 38903 | 38904 | 38908 |
| 38910 | 38911 | 38912 | 38914 | 38918 | 3892 | 3897 | 3898 | 3899 | | | |

95    Other nervous system disorders

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V124 | V1240 | V1241 | V1249 | V415 | V452 | V484 | V485 | V493 | V530 | V5301 | V5302 |
| V5309 | 325 | 3321 | 33720 | 33721 | 33722 | 33729 | 3410 | 3411 | 3418 | 3419 | 34461 |
| 347 | 3480 | 3482 | 3483 | 3484 | 3485 | 3488 | 3489 | 3492 | 34981 | 34982 | 34989 |
| 3499 | 3501 | 3502 | 3508 | 3509 | 3510 | 3511 | 3518 | 3519 | 3520 | 3521 | 3522 |
| 3523 | 3524 | 3525 | 3526 | 3529 | 3530 | 3531 | 3532 | 3533 | 3534 | 3535 | 3536 |
| 3538 | 3539 | 3540 | 3541 | 3542 | 3543 | 3544 | 3545 | 3548 | 3549 | 3550 | 3551 |
| 3552 | 3553 | 3554 | 3555 | 3556 | 3557 | 35571 | 35579 | 3558 | 3559 | 3560 | 3561 |
| 3562 | 3563 | 3564 | 3568 | 3569 | 3570 | 3571 | 3572 | 3573 | 3574 | 3575 | 3576 |
| 3577 | 3578 | 3579 | 3580 | 3581 | 3582 | 3588 | 3589 | 3590 | 3591 | 3592 | 3593 |
| 3594 | 3595 | 3596 | 3598 | 3599 | 7810 | 7811 | 7812 | 7813 | 7817 | 7818 | 7820 |
| 7843 | 7845 | 78460 | 78461 | 78469 | 7920 | 7930 | 79400 | 79401 | 79402 | 79409 | 79410 |
| 79411 | 79412 | 79413 | 79414 | 79415 | 79416 | 79417 | 79419 | 7961 | | | |

96    Heart valve disorders

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V422 | V433 | 3940 | 3941 | 3942 | 3949 | 3950 | 3951 | 3952 | 3959 | 3960 | 3961 |
| 3962 | 3963 | 3968 | 3969 | 3970 | 3971 | 3979 | 4240 | 4241 | 4242 | 4243 | 42490 |
| 42491 | 42499 | 7852 | 7853 | | | | | | | | |

97    Peri-, endo-, and myocarditis, cardiomyopathy (except that caused by tuberculosis or sexually transmitted
disease)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03282 | 03640 | 03641 | 03642 | 03643 | 07420 | 07421 | 07422 | 07423 | 11281 | 11503 | 11504 |
| 11513 | 11514 | 11593 | 11594 | 1303 | 3910 | 3911 | 3912 | 3918 | 3919 | 3920 | 393 |
| 3980 | 39890 | 39899 | 4200 | 42090 | 42091 | 42099 | 4210 | 4211 | 4219 | 4220 | 42290 |
| 42291 | 42292 | 42293 | 42299 | 4230 | 4231 | 4232 | 4238 | 4239 | 4250 | 4251 | 4252 |
| 4253 | 4254 | 4255 | 4257 | 4258 | 4259 | 4290 | | | | | |

98    Essential hypertension

| | |
|---|---|
| 4011 | 4019 |

99    Hypertension with complications and secondary hypertension

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4010 | 40200 | 40201 | 40210 | 40211 | 40290 | 40291 | 4030 | 40300 | 40301 | 4031 | 40310 |
| 40311 | 4039 | 40390 | 40391 | 4040 | 40400 | 40401 | 40402 | 40403 | 4041 | 40410 | 40411 |
| 40412 | 40413 | 4049 | 40490 | 40491 | 40492 | 40493 | 40501 | 40509 | 40511 | 40519 | 40591 |
| 40599 | 4372 | | | | | | | | | | |

100    Acute myocardial infarction

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4100 | 41000 | 41001 | 41002 | 4101 | 41010 | 41011 | 41012 | 4102 | 41020 | 41021 | 41022 |
| 4103 | 41030 | 41031 | 41032 | 4104 | 41040 | 41041 | 41042 | 4105 | 41050 | 41051 | 41052 |
| 4106 | 41060 | 41061 | 41062 | 4107 | 41070 | 41071 | 41072 | 4108 | 41080 | 41081 | 41082 |
| 4109 | 41090 | 41091 | 41092 | | | | | | | | |

101    Coronary atherosclerosis and other heart disease

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V4581 | V4582 | 4110 | 4111 | 4118 | 41181 | 41189 | 412 | 4130 | 4131 | 4139 | 4140 |
| 41400 | 41401 | 4148 | 4149 | | | | | | | | |

102    Nonspecific chest pain

78650    78651    78659

103    Pulmonary heart disease

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4150 | 4151 | 41519 | 4160 | 4161 | 4168 | 4169 | 4170 | 4171 | 4178 | 4179 |

104    Other and ill-defined heart disease

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 41410 | 41411 | 41419 | 4291 | 4292 | 4293 | 4295 | 4296 | 42971 | 42979 | 42981 | 42982 |
| 42989 | 4299 | | | | | | | | | |

105    Conduction disorders

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| V450 | V4500 | V4501 | V4502 | V4509 | V533 | V5331 | V5332 | V5339 | 4260 | 42610 | 42611 |
| 42612 | 42613 | 4262 | 4263 | 4264 | 42650 | 42651 | 42652 | 42653 | 42654 | 4266 | 4267 |
| 42681 | 42689 | 4269 | | | | | | | | |

106    Cardiac dysrhythmias

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 4270 | 4271 | 4272 | 42731 | 42732 | 42760 | 42761 | 42769 | 42781 | 42789 | 4279 | 7850 |
| 7851 | | | | | | | | | | |

107    Cardiac arrest and ventricular fibrillation

42741    42742    4275

108    Congestive heart failure, nonhypertensive

39891    4280    4281    4289

109    Acute cerebrovascular disease

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 430 | 431 | 4320 | 4321 | 4329 | 43301 | 43311 | 43321 | 43331 | 43381 | 43391 | 4340 |
| 43400 | 43401 | 4341 | 43410 | 43411 | 4349 | 43490 | 43491 | 436 | | | |

110    Occlusion or stenosis of precerebral arteries

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 4330 | 43300 | 4331 | 43310 | 4332 | 43320 | 4333 | 43330 | 4338 | 43380 | 4339 | 43390 |

111    Other and ill-defined cerebrovascular disease

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4370 | 4371 | 4373 | 4374 | 4375 | 4376 | 4377 | 4378 | 4379 |

Diagnosis category
ICD-9-CM codes

112    Transient cerebral ischemia

4350    4351    4352    4353    4358    4359

113    Late effects of cerebrovascular disease

438     4380    43810   43811   43812   43819   43820   43821   43822   43830   43831   43832
43840   43841   43842   43850   43851   43852   43853   43881   43882   43889   4389

114    Peripheral and visceral atherosclerosis

4400    4401    4402    44020   44021   44022   44023   44029   4408    4409    4439    5570
5571    5579

115    Aortic, peripheral, and visceral artery aneurysms

4410    44100   44101   44102   44103   4411    4412    4413    4414    4415    4416    4417
4419    4420    4421    4422    4423    44281   44282   44283   44284   44289   4429

116    Aortic and peripheral arterial embolism or thrombosis

4440    4441    44421   44422   44481   44489   4449

117    Other circulatory disease

V125    V1250   V1259   V151    V421    V432    V434    V717    4430    4431    44381   44389
4460    4461    4462    44620   44621   44629   4463    4464    4465    4466    4467    4470
4471    4472    4473    4474    4475    4476    4478    4479    4480    4481    4489    4580
4581    4588    4589    4590    45989   4599    7859    79430   79431   79439   7962

118    Phlebitis, thrombophlebitis and thromboembolism

V1251   V1252   4510    45111   45119   4512    45181   45182   45183   45184   45189   4519
452     4530    4531    4532    4533    4538    4539

119    Varicose veins of lower extremity

4540    4541    4542    4549

120    Hemorrhoids

4550    4551    4552    4553    4554    4555    4556    4557    4558    4559

Diagnosis category
ICD-9-CM codes

121     Other diseases of veins and lymphatics

| 4563 | 4564 | 4565 | 4566 | 4568 | 4570 | 4571 | 4572 | 4578 | 4579 | 4591 | 4592 |
| 45981 | | | | | | | | | | | |

122     Pneumonia (except that caused by tuberculosis or sexually transmitted disease)

| 00322 | 0203 | 0204 | 0205 | 0212 | 0221 | 0310 | 0391 | 0521 | 0551 | 0730 | 0830 |
| 1124 | 1140 | 1144 | 1145 | 11505 | 11515 | 11595 | 1304 | 1363 | 4800 | 4801 | 4802 |
| 4808 | 4809 | 481 | 4820 | 4821 | 4822 | 4823 | 48230 | 48231 | 48232 | 48239 | 4824 |
| 48240 | 48241 | 48249 | 4828 | 48281 | 48282 | 48283 | 48284 | 48289 | 4829 | 483 | 4830 |
| 4831 | 4838 | 4841 | 4843 | 4845 | 4846 | 4847 | 4848 | 485 | 486 | 5130 | 5171 |

123     Influenza

| 4870 | 4871 | 4878 |

124     Acute and chronic tonsillitis

| 463 | 4740 | 47400 | 47401 | 47402 | 47410 | 47411 | 47412 | 4742 | 4748 | 4749 | 475 |

125     Acute bronchitis

| 4660 | 4661 | 46611 | 46619 |

126     Other upper respiratory infections

| 0320 | 0321 | 0322 | 0323 | 0340 | 460 | 4610 | 4611 | 4612 | 4613 | 4618 | 4619 |
| 462 | 4640 | 46410 | 46411 | 46420 | 46421 | 46430 | 46431 | 4644 | 4650 | 4658 | 4659 |
| 4730 | 4731 | 4732 | 4733 | 4738 | 4739 | | | | | | |

127     Chronic obstructive pulmonary disease and bronchiectasis

| 490 | 4910 | 4911 | 4912 | 49120 | 49121 | 4918 | 4919 | 4920 | 4928 | 494 | 496 |

128     Asthma

| 49300 | 49301 | 49310 | 49311 | 49320 | 49321 | 49390 | 49391 |

129     Aspiration pneumonitis, food/vomitus

5070

130     Pleurisy, pneumothorax, pulmonary collapse

| 5100 | 5109 | 5110 | 5111 | 5118 | 5119 | 5120 | 5128 | 5180 | 5181 | 5182 |

Diagnosis category
ICD-9-CM codes

131    Respiratory failure, insufficiency, arrest (adult)

V461    5185    51881    51882    51883    51884    7991

132    Lung disease due to external agents

| 4950 | 4951 | 4952 | 4953 | 4954 | 4955 | 4956 | 4957 | 4958 | 4959 | 500 | 501 |
| 502 | 503 | 504 | 505 | 5060 | 5061 | 5062 | 5063 | 5064 | 5069 | 5071 | 5078 |
| 5080 | 5081 | 5088 | 5089 | | | | | | | | |

133    Other lower respiratory disease

| V126 | V426 | 5131 | 514 | 515 | 5160 | 5161 | 5162 | 5163 | 5168 | 5169 | 5172 |
| 5178 | 5183 | 5184 | 51889 | 5194 | 5198 | 5199 | 7825 | 78600 | 78601 | 78602 | 78603 |
| 78604 | 78605 | 78606 | 78607 | 78609 | 7862 | 7863 | 7864 | 78652 | 7866 | 7867 | 7868 |
| 7869 | 7931 | 7942 | | | | | | | | | |

134    Other upper respiratory disease

| V414 | V440 | V550 | 470 | 4710 | 4711 | 4718 | 4719 | 4720 | 4721 | 4722 | 4760 |
| 4761 | 4770 | 4778 | 4779 | 4780 | 4781 | 47820 | 47821 | 47822 | 47824 | 47825 | 47826 |
| 47829 | 47830 | 47831 | 47832 | 47833 | 47834 | 4784 | 4785 | 4786 | 47870 | 47871 | 47874 |
| 47875 | 47879 | 4788 | 4789 | 5191 | 5192 | 5193 | 7841 | 78440 | 78441 | 78449 | 7847 |
| 7848 | 7849 | 7861 | | | | | | | | | |

135    Intestinal infection

| 0010 | 0011 | 0019 | 0020 | 0021 | 0022 | 0023 | 0029 | 0030 | 00320 | 00329 | 0038 |
| 0039 | 0040 | 0041 | 0042 | 0043 | 0048 | 0049 | 0050 | 0051 | 0052 | 0053 | 0054 |
| 0058 | 00581 | 00589 | 0059 | 0060 | 0061 | 0062 | 0063 | 0064 | 0065 | 0066 | 0068 |
| 0069 | 0070 | 0071 | 0072 | 0073 | 0074 | 0078 | 0079 | 0080 | 00800 | 00801 | 00802 |
| 00803 | 00804 | 00809 | 0081 | 0082 | 0083 | 00841 | 00842 | 00843 | 00844 | 00845 | 00846 |
| 00847 | 00849 | 0085 | 0086 | 00861 | 00862 | 00863 | 00864 | 00865 | 00866 | 00867 | 00869 |
| 0088 | 0090 | 0091 | 0092 | 0093 | 0211 | 0222 | | | | | |

136    Disorders of teeth and jaw

| V523 | V534 | V585 | V722 | 5200 | 5201 | 5202 | 5203 | 5204 | 5205 | 5206 | 5207 |
| 5208 | 5209 | 5210 | 5211 | 5212 | 5213 | 5214 | 5215 | 5216 | 5217 | 5218 | 5219 |
| 5220 | 5221 | 5222 | 5223 | 5224 | 5225 | 5226 | 5227 | 5228 | 5229 | 5230 | 5231 |
| 5232 | 5233 | 5234 | 5235 | 5236 | 5238 | 5239 | 5240 | 52400 | 52401 | 52402 | 52403 |
| 52404 | 52405 | 52406 | 52409 | 5241 | 52410 | 52411 | 52412 | 52419 | 5242 | 5243 | 5244 |
| 5245 | 5246 | 52460 | 52461 | 52462 | 52463 | 52469 | 52470 | 52471 | 52472 | 52473 | 52474 |
| 52479 | 5248 | 5249 | 5250 | 5251 | 5252 | 5253 | 5258 | 5259 | 5260 | 5261 | 5262 |
| 5263 | 5264 | 5265 | 52681 | 52689 | 5269 | | | | | | |

Diagnosis category
ICD-9-CM codes

137    Diseases of mouth, excluding dental

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5270 | 5271 | 5272 | 5273 | 5274 | 5275 | 5276 | 5277 | 5278 | 5279 | 5280 | 5281 |
| 5282 | 5283 | 5284 | 5285 | 5286 | 5287 | 5288 | 5289 | 5290 | 5291 | 5292 | 5293 |
| 5294 | 5295 | 5296 | 5298 | 5299 | 7924 | | | | | | |

138    Esophageal disorders

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4561 | 45621 | 5300 | 5301 | 53010 | 53011 | 53019 | 5302 | 5303 | 5304 | 5305 | 5306 |
| 5308 | 53081 | 53083 | 53084 | 53089 | 5309 | | | | | | |

139    Gastroduodenal ulcer (except hemorrhage)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V1271 | 53110 | 53111 | 53130 | 53131 | 53150 | 53151 | 53170 | 53171 | 53190 | 53191 | 53210 |
| 53211 | 53230 | 53231 | 53250 | 53251 | 53270 | 53271 | 53290 | 53291 | 53310 | 53311 | 53330 |
| 53331 | 53350 | 53351 | 53370 | 53371 | 53390 | 53391 | 53410 | 53411 | 53430 | 53431 | 53450 |
| 53451 | 53470 | 53471 | 53490 | 53491 | | | | | | | |

140    Gastritis and duodenitis

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5350 | 53500 | 53501 | 5351 | 53510 | 53511 | 5352 | 53520 | 53521 | 5353 | 53530 | 53531 |
| 5354 | 53540 | 53541 | 5355 | 53550 | 53551 | 5356 | 53560 | 53561 | | | |

141    Other disorders of stomach and duodenum

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5360 | 5361 | 5362 | 5363 | 5368 | 5369 | 5370 | 5371 | 5372 | 5373 | 5374 | 5375 |
| 5376 | 53781 | 53782 | 53783 | 53789 | 5379 | | | | | | |

142    Appendicitis and other appendiceal conditions

| | | | | | | |
|---|---|---|---|---|---|---|
| 5400 | 5401 | 5409 | 541 | 542 | 5430 | 5439 |

143    Abdominal hernia

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 55000 | 55001 | 55002 | 55003 | 55010 | 55011 | 55012 | 55013 | 55090 | 55091 | 55092 | 55093 |
| 55100 | 55101 | 55102 | 55103 | 5511 | 55120 | 55121 | 55129 | 5513 | 5518 | 5519 | 55200 |
| 55201 | 55202 | 55203 | 5521 | 55220 | 55221 | 55229 | 5523 | 5528 | 5529 | 55300 | 55301 |
| 55302 | 55303 | 5531 | 55320 | 55321 | 55329 | 5533 | 5538 | 5539 | | | |

144    Regional enteritis and ulcerative colitis

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5550 | 5551 | 5552 | 5559 | 556 | 5560 | 5561 | 5562 | 5563 | 5564 | 5565 | 5566 |
| 5568 | 5569 | | | | | | | | | | |

145    Intestinal obstruction without hernia

Diagnosis category
ICD-9-CM codes

|      |       |       |       |       |       |       |       |      |
|------|-------|-------|-------|-------|-------|-------|-------|------|
| 5600 | 5601  | 5602  | 56030 | 56031 | 56039 | 56081 | 56089 | 5609 |

146   Diverticulosis and diverticulitis

|       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 56200 | 56201 | 56202 | 56203 | 56210 | 56211 | 56212 | 56213 |

147   Anal and rectal conditions

|      |      |      |     |      |      |      |       |       |       |
|------|------|------|-----|------|------|------|-------|-------|-------|
| 5646 | 5650 | 5651 | 566 | 5690 | 5691 | 5692 | 56941 | 56942 | 56949 |

148   Peritonitis and intestinal abscess

|       |      |      |      |      |      |      |
|-------|------|------|------|------|------|------|
| 03283 | 5670 | 5671 | 5672 | 5678 | 5679 | 5695 |

149   Biliary tract disease

|       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 57400 | 57401 | 57410 | 57411 | 57420 | 57421 | 57430 | 57431 | 57440 | 57441 | 57450 | 57451 |
| 57460 | 57461 | 57470 | 57471 | 57480 | 57481 | 57490 | 57491 | 5750  | 5751  | 57510 | 57511 |
| 57512 | 5752  | 5753  | 5754  | 5755  | 5756  | 5758  | 5759  | 5760  | 5761  | 5762  | 5763  |
| 5764  | 5765  | 5768  | 5769  | 7933  |       |       |       |       |       |       |       |

150   Liver disease, alcohol-related

|      |      |      |      |
|------|------|------|------|
| 5710 | 5711 | 5712 | 5713 |

151   Other liver diseases

|      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|
| V427 | 570  | 5715 | 5716 | 5718 | 5719 | 5720 | 5721 | 5722 | 5723 | 5724 | 5728 |
| 5730 | 5734 | 5738 | 5739 | 7824 | 7891 | 7895 | 7904 | 7905 | 7948 |      |      |

152   Pancreatic disorders (not diabetes)

|      |      |      |      |      |      |
|------|------|------|------|------|------|
| 5770 | 5771 | 5772 | 5778 | 5779 | 5794 |

153   Gastrointestinal hemorrhage

|       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 4560  | 45620 | 5307  | 53082 | 53100 | 53101 | 53120 | 53121 | 53140 | 53141 | 53160 | 53161 |
| 53200 | 53201 | 53220 | 53221 | 53240 | 53241 | 53260 | 53261 | 53300 | 53301 | 53320 | 53321 |
| 53340 | 53341 | 53360 | 53361 | 53400 | 53401 | 53420 | 53421 | 53440 | 53441 | 53460 | 53461 |
| 5693  | 5780  | 5781  | 5789  |       |       |       |       |       |       |       |       |

154   Noninfectious gastroenteritis

5589

155   Other gastrointestinal disorders

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V127 | V1270 | V1279 | V416 | V441 | V442 | V443 | V444 | V453 | V473 | V535 | V551 |
| V552 | V553 | V554 | 5581 | 5582 | 5640 | 5641 | 5645 | 5647 | 5648 | 56481 | 56489 |
| 5649 | 5680 | 56881 | 56882 | 56889 | 5689 | 56981 | 56982 | 56983 | 56984 | 56985 | 56989 |
| 5699 | 5790 | 5791 | 5792 | 5798 | 5799 | 7871 | 7872 | 7873 | 7874 | 7875 | 7876 |
| 7877 | 7879 | 78791 | 78799 | 7892 | 7893 | 78930 | 78931 | 78932 | 78933 | 78934 | 78935 |
| 78936 | 78937 | 78939 | 7894 | 78940 | 78941 | 78942 | 78943 | 78944 | 78945 | 78946 | 78947 |
| 78949 | 7899 | 7921 | 7934 | 7936 | | | | | | | |

**156    Nephritis, nephrosis, renal sclerosis**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5800 | 5804 | 58081 | 58089 | 5809 | 5810 | 5811 | 5812 | 5813 | 58181 | 58189 | 5819 |
| 5820 | 5821 | 5822 | 5824 | 58281 | 58289 | 5829 | 5830 | 5831 | 5832 | 5834 | 5836 |
| 5837 | 58381 | 58389 | 5839 | 587 | | | | | | | |

**157    Acute and unspecified renal failure**

| | | | | | |
|---|---|---|---|---|---|
| 5845 | 5846 | 5847 | 5848 | 5849 | 586 |

**158    Chronic renal failure**

| | | | | | | |
|---|---|---|---|---|---|---|
| V420 | V451 | V560 | V561 | V562 | V568 | 585 |

**159    Urinary tract infections**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03284 | 59000 | 59001 | 59010 | 59011 | 5902 | 5903 | 59080 | 59081 | 5909 | 5950 | 5951 |
| 5952 | 5953 | 5954 | 59581 | 59582 | 59589 | 5959 | 5970 | 59780 | 59781 | 59789 | 59800 |
| 59801 | 5990 | | | | | | | | | | |

**160    Calculus of urinary tract**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| V1301 | 5920 | 5921 | 5929 | 5940 | 5941 | 5942 | 5948 | 5949 | 7880 |

**161    Other diseases of kidney and ureters**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5880 | 5881 | 5888 | 5889 | 5890 | 5891 | 5899 | 591 | 5930 | 5931 | 5932 | 5933 |
| 5934 | 5935 | 5936 | 5937 | 59370 | 59371 | 59372 | 59373 | 59381 | 59382 | 59389 | 5939 |

**162    Other diseases of bladder and urethra**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5960 | 5961 | 5962 | 5963 | 5964 | 5965 | 59651 | 59652 | 59653 | 59654 | 59655 | 59659 |
| 5966 | 5967 | 5968 | 5969 | 5981 | 5982 | 5988 | 5989 | 5991 | 5992 | 5993 | 5994 |
| 5995 | 59981 | 59982 | 59983 | 59984 | | | | | | | |

**163    Genitourinary symptoms and ill-defined conditions**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V130 | V1300 | V1309 | V417 | V435 | V445 | V4450 | V4451 | V4452 | V4459 | V446 | V474 |
| V475 | V536 | V555 | V556 | 5996 | 5997 | 5998 | 59989 | 5999 | 7881 | 7882 | 78820 |
| 78821 | 78829 | 7883 | 78830 | 78831 | 78832 | 78833 | 78834 | 78835 | 78836 | 78837 | 78839 |

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7884 | 78841 | 78842 | 78843 | 7885 | 7886 | 78861 | 78862 | 78869 | 7887 | 7888 | 7889 |
| 7910 | 7911 | 7912 | 7913 | 7914 | 7917 | 7919 | 7935 | 7944 | | | |

164  Hyperplasia of prostate

600

165  Inflammatory conditions of male genital organs

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 6010 | 6011 | 6012 | 6013 | 6014 | 6018 | 6019 | 6031 | 6040 | 60490 | 60491 | 60499 |
| 6071 | 6072 | 6080 | 6084 | | | | | | | |

166  Other male genital disorders

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 6020 | 6021 | 6022 | 6028 | 6029 | 6030 | 6038 | 6039 | 605 | 6060 | 6061 | 6068 |
| 6069 | 6070 | 6073 | 60781 | 60782 | 60783 | 60784 | 60789 | 6079 | 6081 | 6082 | 6083 |
| 60881 | 60883 | 60884 | 60885 | 60886 | 60889 | 6089 | 7922 | | | | |

167  Nonmalignant breast conditions

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 6100 | 6101 | 6102 | 6103 | 6104 | 6108 | 6109 | 6110 | 6111 | 6112 | 6113 | 6114 |
| 6115 | 6116 | 61171 | 61172 | 61179 | 6118 | 6119 | | | | | |

168  Inflammatory diseases of female pelvic organs

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 6140 | 6141 | 6142 | 6143 | 6144 | 6145 | 6146 | 6147 | 6148 | 6149 | 6150 | 6151 |
| 6159 | 6160 | 61610 | 61611 | 6162 | 6163 | 6164 | 61650 | 61651 | 6168 | 6169 | |

169  Endometriosis

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 6170 | 6171 | 6172 | 6173 | 6174 | 6175 | 6176 | 6178 | 6179 |

170  Prolapse of female genital organs

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 6180 | 6181 | 6182 | 6183 | 6184 | 6185 | 6186 | 6187 | 6188 | 6189 |

171  Menstrual disorders

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 6253 | 6260 | 6261 | 6262 | 6263 | 6264 | 6265 | 6266 | 6268 | 6269 |

172  Ovarian cyst

| | | |
|---|---|---|
| 6200 | 6201 | 6202 |

173  Menopausal disorders

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| V074 | 6270 | 6271 | 6272 | 6273 | 6274 | 6278 | 6279 |

Diagnosis category
ICD-9-CM codes

174    Female infertility

6280    6281    6282    6283    6284    6288    6289

175    Other female genital disorders

| V132 | V557 | V723 | 6190 | 6191 | 6192 | 6198 | 6199 | 6203 | 6204 | 6205 | 6206 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 6207 | 6208 | 6209 | 6210 | 6211 | 6212 | 6213 | 6214 | 6215 | 6216 | 6217 | 6218 |
| 6219 | 6220 | 6221 | 6222 | 6223 | 6224 | 6225 | 6226 | 6227 | 6228 | 6229 | 6230 |
| 6231 | 6232 | 6233 | 6234 | 6235 | 6236 | 6237 | 6238 | 6239 | 6240 | 6241 | 6242 |
| 6243 | 6244 | 6245 | 6246 | 6248 | 6249 | 6250 | 6251 | 6252 | 6254 | 6255 | 6256 |
| 6258 | 6259 | 6267 | 6290 | 6291 | 6298 | 6299 | | | | | |

176    Contraceptive and procreative management

| V157 | V2501 | V2502 | V2509 | V251 | V252 | V253 | V2540 | V2541 | V2542 | V2543 | V2549 |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|
| V255 | V258  | V259  | V260  | V261 | V262 | V263 | V264  | V2651 | V2652 | V268  | V269  |
| V455 | V4551 | V4552 | V4559 | | | | | | | | |

177    Spontaneous abortion

| 63400 | 63401 | 63402 | 63410 | 63411 | 63412 | 63420 | 63421 | 63422 | 63430 | 63431 | 63432 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 63440 | 63441 | 63442 | 63450 | 63451 | 63452 | 63460 | 63461 | 63462 | 63470 | 63471 | 63472 |
| 63480 | 63481 | 63482 | 63490 | 63491 | 63492 | | | | | | |

178    Induced abortion

| 63500 | 63501 | 63502 | 63510 | 63511 | 63512 | 63520 | 63521 | 63522 | 63530 | 63531 | 63532 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 63540 | 63541 | 63542 | 63550 | 63551 | 63552 | 63560 | 63561 | 63562 | 63570 | 63571 | 63572 |
| 63580 | 63581 | 63582 | 63590 | 63591 | 63592 | 63600 | 63601 | 63602 | 63610 | 63611 | 63612 |
| 63620 | 63621 | 63622 | 63630 | 63631 | 63632 | 63640 | 63641 | 63642 | 63650 | 63651 | 63652 |
| 63660 | 63661 | 63662 | 63670 | 63671 | 63672 | 63680 | 63681 | 63682 | 63690 | 63691 | 63692 |
| 63700 | 63701 | 63702 | 63710 | 63711 | 63712 | 63720 | 63721 | 63722 | 63730 | 63731 | 63732 |
| 63740 | 63741 | 63742 | 63750 | 63751 | 63752 | 63760 | 63761 | 63762 | 63770 | 63771 | 63772 |
| 63780 | 63781 | 63782 | 63790 | 63791 | 63792 | 6380  | 6381  | 6382  | 6383  | 6384  | 6385  |
| 6386  | 6387  | 6388  | 6389  | | | | | | | | |

179    Postabortion complications

6390    6391    6392    6393    6394    6395    6396    6398    6399

180    Ectopic pregnancy

6330    6331    6332    6338    6339

181    Other complications of pregnancy

| 630 | 631 | 632 | 64300 | 64301 | 64303 | 64310 | 64311 | 64313 | 64320 | 64321 | 64323 |
|-----|-----|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 64380 | 64381 | 64383 | 64390 | 64391 | 64393 | 64600 | 64601 | 64603 | 64610 | 64611 | 64612 |
| 64613 | 64614 | 64620 | 64621 | 64622 | 64623 | 64624 | 64630 | 64631 | 64633 | 64640 | 64641 |
| 64642 | 64643 | 64644 | 64650 | 64651 | 64652 | 64653 | 64654 | 64660 | 64661 | 64662 | 64663 |
| 64664 | 64670 | 64671 | 64673 | 64680 | 64681 | 64682 | 64683 | 64684 | 64690 | 64691 | 64693 |
| 64700 | 64701 | 64702 | 64703 | 64704 | 64710 | 64711 | 64712 | 64713 | 64714 | 64720 | 64721 |
| 64722 | 64723 | 64724 | 64730 | 64731 | 64732 | 64733 | 64734 | 64740 | 64741 | 64742 | 64743 |
| 64744 | 64750 | 64751 | 64752 | 64753 | 64754 | 64760 | 64761 | 64762 | 64763 | 64764 | 64780 |
| 64781 | 64782 | 64783 | 64784 | 64790 | 64791 | 64792 | 64793 | 64794 | 64810 | 64811 | 64812 |
| 64813 | 64814 | 64820 | 64821 | 64822 | 64823 | 64824 | 64830 | 64831 | 64832 | 64833 | 64834 |
| 64840 | 64841 | 64842 | 64843 | 64844 | 64850 | 64851 | 64852 | 64853 | 64854 | 64860 | 64861 |
| 64862 | 64863 | 64864 | 64870 | 64871 | 64872 | 64873 | 64874 | 64890 | 64891 | 64892 | 64893 |
| 64894 | | | | | | | | | | | |

182     Hemorrhage during pregnancy, abruptio placenta, placenta previa

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 64000 | 64001 | 64003 | 64080 | 64081 | 64083 | 64090 | 64091 | 64093 | 64100 | 64101 | 64103 |
| 64110 | 64111 | 64113 | 64120 | 64121 | 64123 | 64130 | 64131 | 64133 | 64180 | 64181 | 64183 |
| 64190 | 64191 | 64193 | | | | | | | | | |

183     Hypertension complicating pregnancy, childbirth and the puerperium

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 64200 | 64201 | 64202 | 64203 | 64204 | 64210 | 64211 | 64212 | 64213 | 64214 | 64220 | 64221 |
| 64222 | 64223 | 64224 | 64230 | 64231 | 64232 | 64233 | 64234 | 64240 | 64241 | 64242 | 64243 |
| 64244 | 64250 | 64251 | 64252 | 64253 | 64254 | 64260 | 64261 | 64262 | 64263 | 64264 | 64270 |
| 64271 | 64272 | 64273 | 64274 | 64290 | 64291 | 64292 | 64293 | 64294 | | | |

184     Early or threatened labor

| | | | | | |
|---|---|---|---|---|---|
| 64400 | 64403 | 64410 | 64413 | 64420 | 64421 |

185     Prolonged pregnancy

| | | |
|---|---|---|
| 64500 | 64501 | 64503 |

186     Diabetes or abnormal glucose tolerance complicating pregnancy, childbirth, or the puerperium

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 64800 | 64801 | 64802 | 64803 | 64804 | 64880 | 64881 | 64882 | 64883 | 64884 |

187     Malposition, malpresentation

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 65200 | 65201 | 65203 | 65210 | 65211 | 65213 | 65220 | 65221 | 65223 | 65230 | 65231 | 65233 |
| 65240 | 65241 | 65243 | 65250 | 65251 | 65253 | 65260 | 65261 | 65263 | 65270 | 65271 | 65273 |
| 65280 | 65281 | 65283 | 65290 | 65291 | 65293 | 66000 | 66001 | 66003 | | | |

188     Fetopelvic disproportion, obstruction

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 65300 | 65301 | 65303 | 65310 | 65311 | 65313 | 65320 | 65321 | 65323 | 65330 | 65331 | 65333 |
| 65340 | 65341 | 65343 | 65350 | 65351 | 65353 | 65360 | 65361 | 65363 | 65370 | 65371 | 65373 |

Diagnosis category
ICD-9-CM codes

|  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 65380 | 65381 | 65383 | 65390 | 65391 | 65393 | 66010 | 66011 | 66013 | 66020 | 66021 | 66023 |
| 66030 | 66031 | 66033 | 66040 | 66041 | 66043 | 66050 | 66051 | 66053 | 66060 | 66061 | 66063 |
| 66070 | 66071 | 66073 | 66080 | 66081 | 66083 | 66090 | 66091 | 66093 |  |  |  |

189   Previous C-section

65420   65421   65423

190   Fetal distress and abnormal forces of labor

|  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 65630 | 65631 | 65633 | 66100 | 66101 | 66103 | 66110 | 66111 | 66113 | 66120 | 66121 | 66123 |
| 66130 | 66131 | 66133 | 66140 | 66141 | 66143 | 66190 | 66191 | 66193 | 66200 | 66201 | 66203 |
| 66210 | 66211 | 66213 | 66220 | 66221 | 66223 | 66230 | 66231 | 66233 |  |  |  |

191   Polyhydramnios and other problems of amniotic cavity

|  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 65700 | 65701 | 65703 | 65800 | 65801 | 65803 | 65810 | 65811 | 65813 | 65820 | 65821 | 65823 |
| 65830 | 65831 | 65833 | 65840 | 65841 | 65843 | 65880 | 65881 | 65883 | 65890 | 65891 | 65893 |
| 7923 |  |  |  |  |  |  |  |  |  |  |  |

192   Umbilical cord complication

|  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 66300 | 66301 | 66303 | 66310 | 66311 | 66313 | 66320 | 66321 | 66323 | 66330 | 66331 | 66333 |
| 66340 | 66341 | 66343 | 66350 | 66351 | 66353 | 66360 | 66361 | 66363 | 66380 | 66381 | 66383 |
| 66390 | 66391 | 66393 |  |  |  |  |  |  |  |  |  |

193   Trauma to perineum and vulva

|  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 66400 | 66401 | 66404 | 66410 | 66411 | 66414 | 66420 | 66421 | 66424 | 66430 | 66431 | 66434 |
| 66440 | 66441 | 66444 | 66450 | 66451 | 66454 | 66480 | 66481 | 66484 | 66490 | 66491 | 66494 |

194   Forceps delivery

66950   66951

195   Other complications of birth, puerperium affecting management of mother

|  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V230 | V231 | V232 | V233 | V234 | V235 | V237 | V238 | V2381 | V2382 | V2383 | V2384 |
| V2389 | V239 | 65103 | 65113 | 65123 | 65130 | 65131 | 65133 | 65140 | 65141 | 65143 | 65150 |
| 65151 | 65153 | 65160 | 65161 | 65163 | 65183 | 65193 | 65400 | 65401 | 65402 | 65403 | 65404 |
| 65410 | 65411 | 65412 | 65413 | 65414 | 65430 | 65431 | 65432 | 65433 | 65434 | 65440 | 65441 |
| 65442 | 65443 | 65444 | 65450 | 65451 | 65452 | 65453 | 65454 | 65460 | 65461 | 65462 | 65463 |
| 65464 | 65470 | 65471 | 65472 | 65473 | 65474 | 65480 | 65481 | 65482 | 65483 | 65484 | 65490 |
| 65491 | 65492 | 65493 | 65494 | 65500 | 65501 | 65503 | 65510 | 65511 | 65513 | 65520 | 65521 |
| 65523 | 65530 | 65531 | 65533 | 65540 | 65541 | 65543 | 65550 | 65551 | 65553 | 65560 | 65561 |
| 65563 | 65570 | 65571 | 65573 | 65580 | 65581 | 65583 | 65590 | 65591 | 65593 | 65600 | 65601 |
| 65603 | 65610 | 65611 | 65613 | 65620 | 65621 | 65623 | 65640 | 65641 | 65643 | 65650 | 65651 |
| 65653 | 65660 | 65661 | 65663 | 65670 | 65671 | 65673 | 65680 | 65681 | 65683 | 65690 | 65691 |

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 65693 | 65900 | 65901 | 65903 | 65910 | 65911 | 65913 | 65920 | 65921 | 65923 | 65930 | 65931 |
| 65933 | 65940 | 65941 | 65943 | 65950 | 65951 | 65953 | 65960 | 65961 | 65963 | 65970 | 65971 |
| 65973 | 65980 | 65981 | 65983 | 65990 | 65991 | 65993 | 66500 | 66501 | 66503 | 66510 | 66511 |
| 66512 | 66514 | 66520 | 66522 | 66524 | 66530 | 66531 | 66534 | 66540 | 66541 | 66544 | 66550 |
| 66551 | 66554 | 66560 | 66561 | 66564 | 66570 | 66571 | 66572 | 66574 | 66580 | 66581 | 66582 |
| 66583 | 66584 | 66590 | 66591 | 66592 | 66593 | 66594 | 66600 | 66602 | 66604 | 66610 | 66612 |
| 66614 | 66620 | 66622 | 66624 | 66630 | 66632 | 66634 | 66700 | 66702 | 66704 | 66710 | 66712 |
| 66714 | 66800 | 66801 | 66802 | 66803 | 66804 | 66810 | 66811 | 66812 | 66813 | 66814 | 66820 |
| 66821 | 66822 | 66823 | 66824 | 66880 | 66881 | 66882 | 66883 | 66884 | 66890 | 66891 | 66892 |
| 66893 | 66894 | 66900 | 66901 | 66902 | 66903 | 66904 | 66910 | 66911 | 66912 | 66913 | 66914 |
| 66920 | 66921 | 66922 | 66923 | 66924 | 66930 | 66932 | 66934 | 66940 | 66941 | 66942 | 66943 |
| 66944 | 66960 | 66961 | 66970 | 66971 | 66980 | 66981 | 66982 | 66983 | 66984 | 66990 | 66991 |
| 66992 | 66993 | 66994 | 67000 | 67002 | 67004 | 67100 | 67101 | 67102 | 67103 | 67104 | 67110 |
| 67111 | 67112 | 67113 | 67114 | 67120 | 67121 | 67122 | 67123 | 67124 | 67130 | 67131 | 67133 |
| 67140 | 67142 | 67144 | 67150 | 67151 | 67152 | 67153 | 67154 | 67180 | 67181 | 67182 | 67183 |
| 67184 | 67190 | 67191 | 67192 | 67193 | 67194 | 67200 | 67202 | 67204 | 67300 | 67301 | 67302 |
| 67303 | 67304 | 67310 | 67311 | 67312 | 67313 | 67314 | 67320 | 67321 | 67322 | 67323 | 67324 |
| 67330 | 67331 | 67332 | 67333 | 67334 | 67380 | 67381 | 67382 | 67383 | 67384 | 67400 | 67401 |
| 67402 | 67403 | 67404 | 67410 | 67412 | 67414 | 67420 | 67422 | 67424 | 67430 | 67432 | 67434 |
| 67440 | 67442 | 67444 | 67480 | 67482 | 67484 | 67490 | 67492 | 67494 | 67500 | 67501 | 67502 |
| 67503 | 67504 | 67510 | 67511 | 67512 | 67513 | 67514 | 67520 | 67521 | 67522 | 67523 | 67524 |
| 67580 | 67581 | 67582 | 67583 | 67584 | 67590 | 67591 | 67592 | 67593 | 67594 | 67600 | 67601 |
| 67602 | 67603 | 67604 | 67610 | 67611 | 67612 | 67613 | 67614 | 67620 | 67621 | 67622 | 67623 |
| 67624 | 67630 | 67631 | 67632 | 67633 | 67634 | 67640 | 67641 | 67642 | 67643 | 67644 | 67650 |
| 67651 | 67652 | 67653 | 67654 | 67660 | 67661 | 67662 | 67663 | 67664 | 67680 | 67681 | 67682 |
| 67683 | 67684 | 67690 | 67691 | 67692 | 67693 | 67694 | 677 | | | | |

196    Normal pregnancy and/or delivery

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| V220 | V221 | V222 | V240 | V241 | V242 | V270 | V271 | V272 | V273 | V274 | V275 |
| V276 | V277 | V279 | V724 | 650 | 65100 | 65101 | 65110 | 65111 | 65120 | 65121 | 65180 |
| 65181 | 65190 | 65191 | | | | | | | | | |

197    Skin and subcutaneous tissue infections

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0201 | 0210 | 0220 | 0311 | 03285 | 035 | 0390 | 6800 | 6801 | 6802 | 6803 | 6804 |
| 6805 | 6806 | 6807 | 6808 | 6809 | 68100 | 68101 | 68102 | 68110 | 68111 | 6819 | 6820 |
| 6821 | 6822 | 6823 | 6824 | 6825 | 6826 | 6827 | 6828 | 6829 | 684 | 6850 | 6851 |
| 6860 | 68600 | 68601 | 68609 | 6861 | 6868 | 6869 | | | | | |

198    Other inflammatory condition of skin

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 690 | 69010 | 69011 | 69012 | 69018 | 6908 | 6940 | 6941 | 6942 | 6943 | 6944 | 6945 |
| 69460 | 69461 | 6948 | 6949 | 6950 | 6951 | 6952 | 6953 | 6954 | 69581 | 69589 | 6959 |
| 6960 | 6961 | 6962 | 6963 | 6964 | 6965 | 6968 | 6970 | 6971 | 6978 | 6979 | 6980 |
| 6981 | 6982 | 6983 | 6984 | 6988 | 6989 | | | | | | |

199    Chronic ulcer of skin

Diagnosis category
ICD-9-CM codes

|      |      |      |      |
|------|------|------|------|
| 7070 | 7071 | 7078 | 7079 |

**200**    Other skin disorders

| V133 | V423 | 700 | 7010 | 7011 | 7012 | 7013 | 7014 | 7015 | 7018 | 7019 | 702 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 7020 | 7021 | 70211 | 70219 | 7028 | 7030 | 7038 | 7039 | 70400 | 70401 | 70402 | 70409 |
| 7041 | 7042 | 7043 | 7048 | 7049 | 7050 | 7051 | 70581 | 70582 | 70583 | 70589 | 7059 |
| 7060 | 7061 | 7062 | 7063 | 7068 | 7069 | 7090 | 70900 | 70901 | 70909 | 7091 | 7092 |
| 7093 | 7094 | 7098 | 7099 | 7808 | 7821 | 7822 | | | | | |

**201**    Infective arthritis and osteomyelitis (except that caused by tuberculosis or sexually transmitted disease)

| 00323 | 00324 | 0261 | 03682 | 05671 | 71100 | 71101 | 71102 | 71103 | 71104 | 71105 | 71106 |
|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 71107 | 71108 | 71109 | 71110 | 71111 | 71112 | 71113 | 71114 | 71115 | 71116 | 71117 | 71118 |
| 71119 | 71120 | 71121 | 71122 | 71123 | 71124 | 71125 | 71126 | 71127 | 71128 | 71129 | 71130 |
| 71131 | 71132 | 71133 | 71134 | 71135 | 71136 | 71137 | 71138 | 71139 | 71140 | 71141 | 71142 |
| 71143 | 71144 | 71145 | 71146 | 71147 | 71148 | 71149 | 71150 | 71151 | 71152 | 71153 | 71154 |
| 71155 | 71156 | 71157 | 71158 | 71159 | 71160 | 71161 | 71162 | 71163 | 71164 | 71165 | 71166 |
| 71167 | 71168 | 71169 | 71170 | 71171 | 71172 | 71173 | 71174 | 71175 | 71176 | 71177 | 71178 |
| 71179 | 71180 | 71181 | 71182 | 71183 | 71184 | 71185 | 71186 | 71187 | 71188 | 71189 | 71190 |
| 71191 | 71192 | 71193 | 71194 | 71195 | 71196 | 71197 | 71198 | 71199 | 73000 | 73001 | 73002 |
| 73003 | 73004 | 73005 | 73006 | 73007 | 73008 | 73009 | 73010 | 73011 | 73012 | 73013 | 73014 |
| 73015 | 73016 | 73017 | 73018 | 73019 | 73020 | 73021 | 73022 | 73023 | 73024 | 73025 | 73026 |
| 73027 | 73028 | 73029 | 73030 | 73031 | 73032 | 73033 | 73034 | 73035 | 73036 | 73037 | 73038 |
| 73039 | 73070 | 73071 | 73072 | 73073 | 73074 | 73075 | 73076 | 73077 | 73078 | 73079 | 73080 |
| 73081 | 73082 | 73083 | 73084 | 73085 | 73086 | 73087 | 73088 | 73089 | 73090 | 73091 | 73092 |
| 73093 | 73094 | 73095 | 73096 | 73097 | 73098 | 73099 | | | | | |

**202**    Rheumatoid arthritis and related disease

| 7140 | 7141 | 7142 | 71430 | 71431 | 71432 | 71433 | 7144 | 71481 | 71489 | 7149 | 7200 |
|------|------|------|-------|-------|-------|-------|------|-------|-------|------|------|

**203**    Osteoarthritis

| V134 | 71500 | 71504 | 71509 | 71510 | 71511 | 71512 | 71513 | 71514 | 71515 | 71516 | 71517 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 71518 | 71520 | 71521 | 71522 | 71523 | 71524 | 71525 | 71526 | 71527 | 71528 | 71530 | 71531 |
| 71532 | 71533 | 71534 | 71535 | 71536 | 71537 | 71538 | 71580 | 71589 | 71590 | 71591 | 71592 |
| 71593 | 71594 | 71595 | 71596 | 71597 | 71598 | | | | | | |

**204**    Other non-traumatic joint disorders

| 7130 | 7131 | 7132 | 7133 | 7134 | 7135 | 7136 | 7137 | 7138 | 71600 | 71601 | 71602 |
|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| 71603 | 71604 | 71605 | 71606 | 71607 | 71608 | 71609 | 71620 | 71621 | 71622 | 71623 | 71624 |
| 71625 | 71626 | 71627 | 71628 | 71629 | 71630 | 71631 | 71632 | 71633 | 71634 | 71635 | 71636 |
| 71637 | 71638 | 71639 | 71640 | 71641 | 71642 | 71643 | 71644 | 71645 | 71646 | 71647 | 71648 |
| 71649 | 71650 | 71651 | 71652 | 71653 | 71654 | 71655 | 71656 | 71657 | 71658 | 71659 | 71660 |
| 71661 | 71662 | 71663 | 71664 | 71665 | 71666 | 71667 | 71668 | 71680 | 71681 | 71682 | 71683 |

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71684 | 71685 | 71686 | 71687 | 71688 | 71689 | 71690 | 71691 | 71692 | 71693 | 71694 | 71695 |
| 71696 | 71697 | 71698 | 71699 | 71810 | 71811 | 71812 | 71813 | 71814 | 71815 | 71817 | 71818 |
| 71819 | 71820 | 71821 | 71822 | 71823 | 71824 | 71825 | 71826 | 71827 | 71828 | 71829 | 71850 |
| 71851 | 71852 | 71853 | 71854 | 71855 | 71856 | 71857 | 71858 | 71859 | 71860 | 71865 | 71880 |
| 71881 | 71882 | 71883 | 71884 | 71885 | 71886 | 71887 | 71888 | 71889 | 71890 | 71891 | 71892 |
| 71893 | 71894 | 71895 | 71897 | 71898 | 71899 | 71900 | 71901 | 71902 | 71903 | 71904 | 71905 |
| 71906 | 71907 | 71908 | 71909 | 71910 | 71911 | 71912 | 71913 | 71914 | 71915 | 71916 | 71917 |
| 71918 | 71919 | 71920 | 71921 | 71922 | 71923 | 71924 | 71925 | 71926 | 71927 | 71928 | 71929 |
| 71930 | 71931 | 71932 | 71933 | 71934 | 71935 | 71936 | 71937 | 71938 | 71939 | 71940 | 71941 |
| 71942 | 71943 | 71944 | 71945 | 71946 | 71947 | 71948 | 71949 | 71950 | 71951 | 71952 | 71953 |
| 71954 | 71955 | 71956 | 71957 | 71958 | 71959 | 71960 | 71961 | 71962 | 71963 | 71964 | 71965 |
| 71966 | 71967 | 71968 | 71969 | 71970 | 71975 | 71976 | 71977 | 71978 | 71979 | 71980 | 71981 |
| 71982 | 71983 | 71984 | 71985 | 71986 | 71987 | 71988 | 71989 | 71990 | 71991 | 71992 | 71993 |
| 71994 | 71995 | 71996 | 71997 | 71998 | 71999 | | | | | | |

205    Spondylosis, intervertebral disc disorders, other back problems

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7201 | 7202 | 72081 | 72089 | 7209 | 7210 | 7211 | 7212 | 7213 | 72141 | 72142 | 7215 |
| 7216 | 7217 | 7218 | 72190 | 72191 | 7220 | 72210 | 72211 | 7222 | 72230 | 72231 | 72232 |
| 72239 | 7224 | 72251 | 72252 | 7226 | 72270 | 72271 | 72272 | 72273 | 72280 | 72281 | 72282 |
| 72283 | 72290 | 72291 | 72292 | 72293 | 7230 | 7231 | 7232 | 7233 | 7234 | 7235 | 7236 |
| 7237 | 7238 | 7239 | 72400 | 72401 | 72402 | 72409 | 7241 | 7242 | 7243 | 7244 | 7245 |
| 7246 | 72470 | 72471 | 72479 | 7248 | 7249 | | | | | | |

206    Osteoporosis

| | | | | |
|---|---|---|---|---|
| 73300 | 73301 | 73302 | 73303 | 73309 |

207    Pathological fracture

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7331 | 73310 | 73311 | 73312 | 73313 | 73314 | 73315 | 73316 | 73319 |

208    Acquired foot deformities

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 7271 | 734 | 7350 | 7351 | 7352 | 7353 | 7354 | 7355 | 7358 | 7359 | 73670 | 73671 |
| 73672 | 73673 | 73674 | 73675 | 73676 | 73679 | | | | | | |

209    Other acquired deformities

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 71840 | 71841 | 71842 | 71843 | 71844 | 71845 | 71846 | 71847 | 71848 | 71849 | 73600 | 73601 |
| 73602 | 73603 | 73604 | 73605 | 73606 | 73607 | 73609 | 7361 | 73620 | 73621 | 73622 | 73629 |
| 73630 | 73631 | 73632 | 73639 | 73641 | 73642 | 7365 | 7366 | 73681 | 73689 | 7369 | 7370 |
| 73710 | 73711 | 73712 | 73719 | 73720 | 73721 | 73722 | 73729 | 73733 | 73734 | 73739 | 73740 |
| 73741 | 73742 | 73743 | 7378 | 7379 | 7380 | 7381 | 73810 | 73811 | 73812 | 73819 | 7382 |
| 7383 | 7384 | 7385 | 7386 | 7387 | 7388 | 7389 | | | | | |

Diagnosis category
ICD-9-CM codes

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210     Systemic lupus erythematosus and connective tissue disorders

7100     7101     7102     7103     7104     7108     7109

211     Other connective tissue disease

| V135 | V436 | V4360 | V4361 | V4362 | V4363 | V4364 | V4365 | V4366 | V4369 | V437 | V454 |
|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| V481 | V482 | V483 | V490 | V491 | V492 | V495 | V4960 | V4961 | V4962 | V4963 | V4964 |
| V4965 | V4966 | V4967 | V4970 | V4971 | V4972 | V4973 | V4974 | V4975 | V4976 | V4977 | V537 |
| 7105 | 725 | 7260 | 72610 | 72611 | 72612 | 72619 | 7262 | 72630 | 72631 | 72632 | 72633 |
| 72639 | 7264 | 7265 | 72660 | 72661 | 72662 | 72663 | 72664 | 72665 | 72669 | 72670 | 72671 |
| 72672 | 72673 | 72679 | 7268 | 72690 | 72691 | 72700 | 72701 | 72702 | 72703 | 72704 | 72705 |
| 72706 | 72709 | 7272 | 7273 | 72740 | 72741 | 72742 | 72743 | 72749 | 72750 | 72751 | 72759 |
| 72760 | 72761 | 72762 | 72763 | 72764 | 72765 | 72766 | 72767 | 72768 | 72769 | 72781 | 72782 |
| 72789 | 7279 | 7280 | 72810 | 72811 | 72812 | 72813 | 72819 | 7282 | 7283 | 7284 | 7285 |
| 7286 | 72871 | 72879 | 72881 | 72882 | 72883 | 72884 | 72885 | 72886 | 72889 | 7289 | 7290 |
| 7291 | 7292 | 72930 | 72931 | 72939 | 7294 | 7295 | 7296 | 72981 | 72982 | 72989 | 7299 |
| 7819 | 7937 | | | | | | | | | | |

212     Other bone disease and musculoskeletal deformities

| V424 | V486 | V487 | V494 | 7310 | 7311 | 7312 | 7318 | 7320 | 7321 | 7322 | 7323 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 7324 | 7325 | 7326 | 7327 | 7328 | 7329 | 73320 | 73321 | 73322 | 73329 | 7333 | 73340 |
| 73341 | 73342 | 73343 | 73344 | 73349 | 7335 | 7336 | 7337 | 73381 | 73382 | 73390 | 73391 |
| 73392 | 73399 | 73730 | 73731 | 73732 | 7390 | 7391 | 7392 | 7393 | 7394 | 7395 | 7396 |
| 7397 | 7398 | 7399 | | | | | | | | | |

213     Cardiac and circulatory congenital anomalies

| 7450 | 74510 | 74511 | 74512 | 74519 | 7452 | 7453 | 7454 | 7455 | 74560 | 74561 | 74569 |
|------|-------|-------|-------|-------|------|------|------|------|-------|-------|-------|
| 7457 | 7458 | 7459 | 74600 | 74601 | 74602 | 74609 | 7461 | 7462 | 7463 | 7464 | 7465 |
| 7466 | 7467 | 74681 | 74682 | 74683 | 74684 | 74685 | 74686 | 74687 | 74689 | 7469 | 7470 |
| 74710 | 74711 | 74720 | 74721 | 74722 | 74729 | 7473 | 74740 | 74741 | 74742 | 74749 | 7475 |
| 7476 | 74760 | 74761 | 74762 | 74763 | 74764 | 74769 | 74781 | 74782 | 74789 | 7479 | |

214     Digestive congenital anomalies

| 7500 | 75010 | 75011 | 75012 | 75013 | 75015 | 75016 | 75019 | 75021 | 75022 | 75023 | 75024 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 75025 | 75026 | 75027 | 75029 | 7503 | 7504 | 7505 | 7506 | 7507 | 7508 | 7509 | 7510 |
| 7511 | 7512 | 7513 | 7514 | 7515 | 75160 | 75161 | 75162 | 75169 | 7517 | 7518 | 7519 |

215     Genitourinary congenital anomalies

| V1361 | 7520 | 75210 | 75211 | 75219 | 7522 | 7523 | 75240 | 75241 | 75242 | 75249 | 7525 |
|-------|------|-------|-------|-------|------|------|-------|-------|-------|-------|------|
| 75251 | 75252 | 7526 | 75261 | 75262 | 75263 | 75264 | 75265 | 75269 | 7527 | 7528 | 7529 |
| 7530 | 7531 | 75310 | 75311 | 75312 | 75313 | 75314 | 75315 | 75316 | 75317 | 75319 | 7532 |
| 75320 | 75321 | 75322 | 75323 | 75329 | 7533 | 7534 | 7535 | 7536 | 7537 | 7538 | 7539 |

Diagnosis category
ICD-9-CM codes

216     Nervous system congenital anomalies

| 7400 | 7401 | 7402 | 74100 | 74101 | 74102 | 74103 | 74190 | 74191 | 74192 | 74193 | 7420 |
|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 7421 | 7422 | 7423 | 7424 | 74251 | 74253 | 74259 | 7428 | 7429 | | | |

217     Other congenital anomalies

| V136 | V1369 | 74300 | 74303 | 74306 | 74310 | 74311 | 74312 | 74320 | 74321 | 74322 | 74330 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 74331 | 74332 | 74333 | 74334 | 74335 | 74336 | 74337 | 74339 | 74341 | 74342 | 74343 | 74344 |
| 74345 | 74346 | 74347 | 74348 | 74349 | 74351 | 74352 | 74353 | 74354 | 74355 | 74356 | 74357 |
| 74358 | 74359 | 74361 | 74362 | 74363 | 74364 | 74365 | 74366 | 74369 | 7438 | 7439 | 74400 |
| 74401 | 74402 | 74403 | 74404 | 74405 | 74409 | 7441 | 74421 | 74422 | 74423 | 74424 | 74429 |
| 7443 | 74441 | 74442 | 74443 | 74446 | 74447 | 74449 | 7445 | 74481 | 74482 | 74483 | 74484 |
| 74489 | 7449 | 7480 | 7481 | 7482 | 7483 | 7484 | 7485 | 74860 | 74861 | 74869 | 7488 |
| 7489 | 74900 | 74901 | 74902 | 74903 | 74904 | 74910 | 74911 | 74912 | 74913 | 74914 | 74920 |
| 74921 | 74922 | 74923 | 74924 | 74925 | 7540 | 7541 | 7542 | 75430 | 75431 | 75432 | 75433 |
| 75435 | 75440 | 75441 | 75442 | 75443 | 75444 | 75450 | 75451 | 75452 | 75453 | 75459 | 75460 |
| 75461 | 75462 | 75469 | 75470 | 75471 | 75479 | 75481 | 75482 | 75489 | 75500 | 75501 | 75502 |
| 75510 | 75511 | 75512 | 75513 | 75514 | 75520 | 75521 | 75522 | 75523 | 75524 | 75525 | 75526 |
| 75527 | 75528 | 75529 | 75530 | 75531 | 75532 | 75533 | 75534 | 75535 | 75536 | 75537 | 75538 |
| 75539 | 7554 | 75550 | 75551 | 75552 | 75553 | 75554 | 75555 | 75556 | 75557 | 75558 | 75559 |
| 75560 | 75561 | 75562 | 75563 | 75564 | 75565 | 75566 | 75567 | 75569 | 7558 | 7559 | 7560 |
| 75610 | 75611 | 75612 | 75613 | 75614 | 75615 | 75616 | 75617 | 75619 | 7562 | 7563 | 7564 |
| 75650 | 75651 | 75652 | 75653 | 75654 | 75655 | 75656 | 75659 | 7566 | 7567 | 75670 | 75671 |
| 75679 | 75681 | 75682 | 75683 | 75689 | 7569 | 7570 | 7571 | 7572 | 75731 | 75732 | 75733 |
| 75739 | 7574 | 7575 | 7576 | 7578 | 7579 | 7580 | 7581 | 7582 | 7583 | 7584 | 7585 |
| 7586 | 7587 | 7588 | 75881 | 75889 | 7589 | 7590 | 7591 | 7592 | 7593 | 7594 | 7595 |
| 7596 | 7597 | 7598 | 75981 | 75982 | 75983 | 75989 | 7599 | 7952 | | | |

218     Liveborn

| V300 | V3000 | V3001 | V301 | V302 | V310 | V3100 | V3101 | V311 | V312 | V320 | V3200 |
|------|-------|-------|------|------|------|-------|-------|------|------|------|-------|
| V3201 | V321 | V322 | V330 | V3300 | V3301 | V331 | V332 | V340 | V3400 | V3401 | V341 |
| V342 | V350 | V3500 | V3501 | V351 | V352 | V360 | V3600 | V3601 | V361 | V362 | V370 |
| V3700 | V3701 | V371 | V372 | V390 | V3900 | V3901 | V391 | V392 | | | |

219     Short gestation, low birth weight, and fetal growth retardation

| 7640 | 76400 | 76401 | 76402 | 76403 | 76404 | 76405 | 76406 | 76407 | 76408 | 76409 | 7641 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 76410 | 76411 | 76412 | 76413 | 76414 | 76415 | 76416 | 76417 | 76418 | 76419 | 7642 | 76420 |
| 76421 | 76422 | 76423 | 76424 | 76425 | 76426 | 76427 | 76428 | 76429 | 7649 | 76490 | 76491 |
| 76492 | 76493 | 76494 | 76495 | 76496 | 76497 | 76498 | 76499 | 7650 | 76500 | 76501 | 76502 |
| 76503 | 76504 | 76505 | 76506 | 76507 | 76508 | 76509 | 7651 | 76510 | 76511 | 76512 | 76513 |
| 76514 | 76515 | 76516 | 76517 | 76518 | 76519 | | | | | | |

220     Intrauterine hypoxia and birth asphyxia

Diagnosis category
ICD-9-CM codes

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7680 | 7681 | 7682 | 7683 | 7684 | 7685 | 7686 | 7689 |

221    Respiratory distress syndrome

769

222    Hemolytic jaundice and perinatal jaundice

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 7730 | 7731 | 7732 | 7733 | 7734 | 7735 | 7740 | 7741 | 7742 | 77430 | 77431 | 77439 |
| 7744 | 7745 | 7746 | 7747 | | | | | | | |

223    Birth trauma

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7670 | 7671 | 7672 | 7673 | 7674 | 7675 | 7676 | 7677 | 7678 | 7679 |

224    Other perinatal conditions

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| V137 | V502 | 7600 | 7601 | 7602 | 7603 | 7604 | 7605 | 7606 | 76070 | 76071 | 76072 |
| 76073 | 76074 | 76075 | 76076 | 76079 | 7608 | 7609 | 7610 | 7611 | 7612 | 7613 | 7614 |
| 7615 | 7616 | 7617 | 7618 | 7619 | 7620 | 7621 | 7622 | 7623 | 7624 | 7625 | 7626 |
| 7627 | 7628 | 7629 | 7630 | 7631 | 7632 | 7633 | 7634 | 7635 | 7636 | 7637 | 7638 |
| 76381 | 76382 | 76383 | 76389 | 7639 | 7660 | 7661 | 7662 | 7700 | 7701 | 7702 | 7703 |
| 7704 | 7705 | 7706 | 7707 | 7708 | 7709 | 7710 | 7711 | 7712 | 7713 | 7714 | 7715 |
| 7716 | 7717 | 7718 | 7720 | 7721 | 7722 | 7723 | 7724 | 7725 | 7726 | 7728 | 7729 |
| 7750 | 7751 | 7752 | 7753 | 7754 | 7755 | 7756 | 7757 | 7758 | 7759 | 7760 | 7761 |
| 7762 | 7763 | 7764 | 7765 | 7766 | 7767 | 7768 | 7769 | 7771 | 7772 | 7773 | 7774 |
| 7775 | 7776 | 7778 | 7779 | 7780 | 7781 | 7782 | 7783 | 7784 | 7785 | 7786 | 7787 |
| 7788 | 7789 | 7790 | 7791 | 7792 | 7793 | 7794 | 7795 | 7796 | 7798 | 7799 | |

225    Joint disorders and dislocations, trauma-related

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 71610 | 71611 | 71612 | 71613 | 71614 | 71615 | 71616 | 71617 | 71618 | 71619 | 7170 | 7171 |
| 7172 | 7173 | 71740 | 71741 | 71742 | 71743 | 71749 | 7175 | 7176 | 7177 | 71781 | 71782 |
| 71783 | 71784 | 71785 | 71789 | 7179 | 71800 | 71801 | 71802 | 71803 | 71804 | 71805 | 71807 |
| 71808 | 71809 | 71830 | 71831 | 71832 | 71833 | 71834 | 71835 | 71836 | 71837 | 71838 | 71839 |
| 8300 | 8301 | 83100 | 83101 | 83102 | 83103 | 83104 | 83109 | 83110 | 83111 | 83112 | 83113 |
| 83114 | 83119 | 83200 | 83201 | 83202 | 83203 | 83204 | 83209 | 83210 | 83211 | 83212 | 83213 |
| 83214 | 83219 | 83300 | 83301 | 83302 | 83303 | 83304 | 83305 | 83309 | 83310 | 83311 | 83312 |
| 83313 | 83314 | 83315 | 83319 | 83400 | 83401 | 83402 | 83410 | 83411 | 83412 | 83500 | 83501 |
| 83502 | 83503 | 83510 | 83511 | 83512 | 83513 | 8360 | 8361 | 8362 | 8363 | 8364 | 83650 |
| 83651 | 83652 | 83653 | 83654 | 83659 | 83660 | 83661 | 83662 | 83663 | 83664 | 83669 | 8370 |
| 8371 | 83800 | 83801 | 83802 | 83803 | 83804 | 83805 | 83806 | 83809 | 83810 | 83811 | 83812 |
| 83813 | 83814 | 83815 | 83816 | 83819 | 83900 | 83901 | 83902 | 83903 | 83904 | 83905 | 83906 |
| 83907 | 83908 | 83910 | 83911 | 83912 | 83913 | 83914 | 83915 | 83916 | 83917 | 83918 | 83920 |
| 83921 | 83930 | 83931 | 83940 | 83941 | 83942 | 83949 | 83950 | 83951 | 83952 | 83959 | 83961 |

**Attachment 1**
**Clinical Classification Software—DIAGNOSES**
**(with all coding changes valid from January 1980 through September 1999 )**

Diagnosis category
ICD-9-CM codes

|       |       |       |      |      |      |
|-------|-------|-------|------|------|------|
| 83969 | 83971 | 83979 | 8398 | 8399 | 9056 |

**226  Fracture of neck of femur (hip)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 82000 | 82001 | 82002 | 82003 | 82009 | 82010 | 82011 | 82012 | 82013 | 82019 | 82020 | 82021 |
| 82022 | 82030 | 82031 | 82032 | 8208 | 8209 | 9053 | | | | |

**227  Spinal cord injury**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 80600 | 80601 | 80602 | 80603 | 80604 | 80605 | 80606 | 80607 | 80608 | 80609 | 80610 | 80611 |
| 80612 | 80613 | 80614 | 80615 | 80616 | 80617 | 80618 | 80619 | 80620 | 80621 | 80622 | 80623 |
| 80624 | 80625 | 80626 | 80627 | 80628 | 80629 | 80630 | 80631 | 80632 | 80633 | 80634 | 80635 |
| 80636 | 80637 | 80638 | 80639 | 8064 | 8065 | 80660 | 80661 | 80662 | 80669 | 80670 | 80671 |
| 80672 | 80679 | 8068 | 8069 | 9072 | 95200 | 95201 | 95202 | 95203 | 95204 | 95205 | 95206 |
| 95207 | 95208 | 95209 | 95210 | 95211 | 95212 | 95213 | 95214 | 95215 | 95216 | 95217 | 95218 |
| 95219 | 9522 | 9523 | 9524 | 9528 | 9529 | 99655 | 99656 | 99668 | | | |

**228  Skull and face fractures**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 80000 | 80001 | 80002 | 80003 | 80004 | 80005 | 80006 | 80009 | 80050 | 80051 | 80052 | 80053 |
| 80054 | 80055 | 80056 | 80059 | 80100 | 80101 | 80102 | 80103 | 80104 | 80105 | 80106 | 80109 |
| 80150 | 80151 | 80152 | 80153 | 80154 | 80155 | 80156 | 80159 | 8020 | 8021 | 80220 | 80221 |
| 80222 | 80223 | 80224 | 80225 | 80226 | 80227 | 80228 | 80229 | 80230 | 80231 | 80232 | 80233 |
| 80234 | 80235 | 80236 | 80237 | 80238 | 80239 | 8024 | 8025 | 8026 | 8027 | 8028 | 8029 |
| 80300 | 80301 | 80302 | 80303 | 80304 | 80305 | 80306 | 80309 | 80350 | 80351 | 80352 | 80353 |
| 80354 | 80355 | 80356 | 80359 | 80400 | 80401 | 80402 | 80403 | 80404 | 80405 | 80406 | 80409 |
| 80450 | 80451 | 80452 | 80453 | 80454 | 80455 | 80456 | 80459 | 9050 | | | |

**229  Fracture of upper limb**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 81000 | 81001 | 81002 | 81003 | 81010 | 81011 | 81012 | 81013 | 81100 | 81101 | 81102 | 81103 |
| 81109 | 81110 | 81111 | 81112 | 81113 | 81119 | 81200 | 81201 | 81202 | 81203 | 81209 | 81210 |
| 81211 | 81212 | 81213 | 81219 | 81220 | 81221 | 81230 | 81231 | 81240 | 81241 | 81242 | 81243 |
| 81244 | 81249 | 81250 | 81251 | 81252 | 81253 | 81254 | 81259 | 81300 | 81301 | 81302 | 81303 |
| 81304 | 81305 | 81306 | 81307 | 81308 | 81310 | 81311 | 81312 | 81313 | 81314 | 81315 | 81316 |
| 81317 | 81318 | 81320 | 81321 | 81322 | 81323 | 81330 | 81331 | 81332 | 81333 | 81340 | 81341 |
| 81342 | 81343 | 81344 | 81350 | 81351 | 81352 | 81353 | 81354 | 81380 | 81381 | 81382 | 81383 |
| 81390 | 81391 | 81392 | 81393 | 81400 | 81401 | 81402 | 81403 | 81404 | 81405 | 81406 | 81407 |
| 81408 | 81409 | 81410 | 81411 | 81412 | 81413 | 81414 | 81415 | 81416 | 81417 | 81418 | 81419 |
| 81500 | 81501 | 81502 | 81503 | 81504 | 81509 | 81510 | 81511 | 81512 | 81513 | 81514 | 81519 |
| 81600 | 81601 | 81602 | 81603 | 81610 | 81611 | 81612 | 81613 | 8170 | 8171 | 8180 | 8181 |
| 8190 | 8191 | 9052 | | | | | | | | |

**230  Fracture of lower limb**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 82100 | 82101 | 82110 | 82111 | 82120 | 82121 | 82122 | 82123 | 82129 | 82130 | 82131 | 82132 |
| 82133 | 82139 | 8220 | 8221 | 82300 | 82301 | 82302 | 82310 | 82311 | 82312 | 82320 | 82321 |
| 82322 | 82330 | 82331 | 82332 | 82380 | 82381 | 82382 | 82390 | 82391 | 82392 | 8240 | 8241 |

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8242 | 8243 | 8244 | 8245 | 8246 | 8247 | 8248 | 8249 | 8250 | 8251 | 82520 | 82521 |
| 82522 | 82523 | 82524 | 82525 | 82529 | 82530 | 82531 | 82532 | 82533 | 82534 | 82535 | 82539 |
| 8260 | 8261 | 8270 | 8271 | 9054 | | | | | | | |

231   Other fractures

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V540 | V664 | V674 | 80500 | 80501 | 80502 | 80503 | 80504 | 80505 | 80506 | 80507 | 80508 |
| 80510 | 80511 | 80512 | 80513 | 80514 | 80515 | 80516 | 80517 | 80518 | 8052 | 8053 | 8054 |
| 8055 | 8056 | 8057 | 8058 | 8059 | 80700 | 80701 | 80702 | 80703 | 80704 | 80705 | 80706 |
| 80707 | 80708 | 80709 | 80710 | 80711 | 80712 | 80713 | 80714 | 80715 | 80716 | 80717 | 80718 |
| 80719 | 8072 | 8073 | 8074 | 8075 | 8076 | 8080 | 8081 | 8082 | 8083 | 80841 | 80842 |
| 80843 | 80849 | 80851 | 80852 | 80853 | 80859 | 8088 | 8089 | 8090 | 8091 | 8280 | 8281 |
| 8290 | 8291 | 9051 | 9055 | | | | | | | | |

232   Sprains and strains

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8400 | 8401 | 8402 | 8403 | 8404 | 8405 | 8406 | 8408 | 8409 | 8410 | 8411 | 8412 |
| 8413 | 8418 | 8419 | 84200 | 84201 | 84202 | 84209 | 84210 | 84211 | 84212 | 84213 | 84219 |
| 8430 | 8431 | 8438 | 8439 | 8440 | 8441 | 8442 | 8443 | 8448 | 8449 | 84500 | 84501 |
| 84502 | 84503 | 84509 | 84510 | 84511 | 84512 | 84513 | 84519 | 8460 | 8461 | 8462 | 8463 |
| 8468 | 8469 | 8470 | 8471 | 8472 | 8473 | 8474 | 8479 | 8480 | 8481 | 8482 | 8483 |
| 84840 | 84841 | 84842 | 84849 | 8485 | 8488 | 8489 | 9057 | | | | |

233   Intracranial injury

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 80010 | 80011 | 80012 | 80013 | 80014 | 80015 | 80016 | 80019 | 80020 | 80021 | 80022 | 80023 |
| 80024 | 80025 | 80026 | 80029 | 80030 | 80031 | 80032 | 80033 | 80034 | 80035 | 80036 | 80039 |
| 80040 | 80041 | 80042 | 80043 | 80044 | 80045 | 80046 | 80049 | 80060 | 80061 | 80062 | 80063 |
| 80064 | 80065 | 80066 | 80069 | 80070 | 80071 | 80072 | 80073 | 80074 | 80075 | 80076 | 80079 |
| 80080 | 80081 | 80082 | 80083 | 80084 | 80085 | 80086 | 80089 | 80090 | 80091 | 80092 | 80093 |
| 80094 | 80095 | 80096 | 80099 | 80110 | 80111 | 80112 | 80113 | 80114 | 80115 | 80116 | 80119 |
| 80120 | 80121 | 80122 | 80123 | 80124 | 80125 | 80126 | 80129 | 80130 | 80131 | 80132 | 80133 |
| 80134 | 80135 | 80136 | 80139 | 80140 | 80141 | 80142 | 80143 | 80144 | 80145 | 80146 | 80149 |
| 80160 | 80161 | 80162 | 80163 | 80164 | 80165 | 80166 | 80169 | 80170 | 80171 | 80172 | 80173 |
| 80174 | 80175 | 80176 | 80179 | 80180 | 80181 | 80182 | 80183 | 80184 | 80185 | 80186 | 80189 |
| 80190 | 80191 | 80192 | 80193 | 80194 | 80195 | 80196 | 80199 | 80310 | 80311 | 80312 | 80313 |
| 80314 | 80315 | 80316 | 80319 | 80320 | 80321 | 80322 | 80323 | 80324 | 80325 | 80326 | 80329 |
| 80330 | 80331 | 80332 | 80333 | 80334 | 80335 | 80336 | 80339 | 80340 | 80341 | 80342 | 80343 |
| 80344 | 80345 | 80346 | 80349 | 80360 | 80361 | 80362 | 80363 | 80364 | 80365 | 80366 | 80369 |
| 80370 | 80371 | 80372 | 80373 | 80374 | 80375 | 80376 | 80379 | 80380 | 80381 | 80382 | 80383 |
| 80384 | 80385 | 80386 | 80389 | 80390 | 80391 | 80392 | 80393 | 80394 | 80395 | 80396 | 80399 |
| 80410 | 80411 | 80412 | 80413 | 80414 | 80415 | 80416 | 80419 | 80420 | 80421 | 80422 | 80423 |
| 80424 | 80425 | 80426 | 80429 | 80430 | 80431 | 80432 | 80433 | 80434 | 80435 | 80436 | 80439 |
| 80440 | 80441 | 80442 | 80443 | 80444 | 80445 | 80446 | 80449 | 80460 | 80461 | 80462 | 80463 |
| 80464 | 80465 | 80466 | 80469 | 80470 | 80471 | 80472 | 80473 | 80474 | 80475 | 80476 | 80479 |
| 80480 | 80481 | 80482 | 80483 | 80484 | 80485 | 80486 | 80489 | 80490 | 80491 | 80492 | 80493 |
| 80494 | 80495 | 80496 | 80499 | 8500 | 8501 | 8502 | 8503 | 8504 | 8505 | 8509 | 85100 |
| 85101 | 85102 | 85103 | 85104 | 85105 | 85106 | 85109 | 85110 | 85111 | 85112 | 85113 | 85114 |

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 85115 | 85116 | 85119 | 85120 | 85121 | 85122 | 85123 | 85124 | 85125 | 85126 | 85129 | 85130 |
| 85131 | 85132 | 85133 | 85134 | 85135 | 85136 | 85139 | 85140 | 85141 | 85142 | 85143 | 85144 |
| 85145 | 85146 | 85149 | 85150 | 85151 | 85152 | 85153 | 85154 | 85155 | 85156 | 85159 | 85160 |
| 85161 | 85162 | 85163 | 85164 | 85165 | 85166 | 85169 | 85170 | 85171 | 85172 | 85173 | 85174 |
| 85175 | 85176 | 85179 | 85180 | 85181 | 85182 | 85183 | 85184 | 85185 | 85186 | 85189 | 85190 |
| 85191 | 85192 | 85193 | 85194 | 85195 | 85196 | 85199 | 85200 | 85201 | 85202 | 85203 | 85204 |
| 85205 | 85206 | 85209 | 85210 | 85211 | 85212 | 85213 | 85214 | 85215 | 85216 | 85219 | 85220 |
| 85221 | 85222 | 85223 | 85224 | 85225 | 85226 | 85229 | 85230 | 85231 | 85232 | 85233 | 85234 |
| 85235 | 85236 | 85239 | 85240 | 85241 | 85242 | 85243 | 85244 | 85245 | 85246 | 85249 | 85250 |
| 85251 | 85252 | 85253 | 85254 | 85255 | 85256 | 85259 | 85300 | 85301 | 85302 | 85303 | 85304 |
| 85305 | 85306 | 85309 | 85310 | 85311 | 85312 | 85313 | 85314 | 85315 | 85316 | 85319 | 85400 |
| 85401 | 85402 | 85403 | 85404 | 85405 | 85406 | 85409 | 85410 | 85411 | 85412 | 85413 | 85414 |
| 85415 | 85416 | 85419 | 9070 | | | | | | | | |

234    Crushing injury or internal injury

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8600 | 8601 | 8602 | 8603 | 8604 | 8605 | 86100 | 86101 | 86102 | 86103 | 86110 | 86111 |
| 86112 | 86113 | 86120 | 86121 | 86122 | 86130 | 86131 | 86132 | 8620 | 8621 | 86221 | 86222 |
| 86229 | 86231 | 86232 | 86239 | 8628 | 8629 | 8630 | 8631 | 86320 | 86321 | 86329 | 86330 |
| 86331 | 86339 | 86340 | 86341 | 86342 | 86343 | 86344 | 86345 | 86346 | 86349 | 86350 | 86351 |
| 86352 | 86353 | 86354 | 86355 | 86356 | 86359 | 86380 | 86381 | 86382 | 86383 | 86384 | 86385 |
| 86389 | 86390 | 86391 | 86392 | 86393 | 86394 | 86395 | 86399 | 86400 | 86401 | 86402 | 86403 |
| 86404 | 86405 | 86409 | 86410 | 86411 | 86412 | 86413 | 86414 | 86415 | 86419 | 86500 | 86501 |
| 86502 | 86503 | 86504 | 86509 | 86510 | 86511 | 86512 | 86513 | 86514 | 86519 | 86600 | 86601 |
| 86602 | 86603 | 86610 | 86611 | 86612 | 86613 | 8670 | 8671 | 8672 | 8673 | 8674 | 8675 |
| 8676 | 8677 | 8678 | 8679 | 86800 | 86801 | 86802 | 86803 | 86804 | 86809 | 86810 | 86811 |
| 86812 | 86813 | 86814 | 86819 | 8690 | 8691 | 90000 | 90001 | 90002 | 90003 | 9001 | 90081 |
| 90082 | 90089 | 9009 | 9010 | 9011 | 9012 | 9013 | 90140 | 90141 | 90142 | 90181 | 90182 |
| 90183 | 90189 | 9019 | 9020 | 90210 | 90211 | 90219 | 90220 | 90221 | 90222 | 90223 | 90224 |
| 90225 | 90226 | 90227 | 90229 | 90231 | 90232 | 90233 | 90234 | 90239 | 90240 | 90241 | 90242 |
| 90249 | 90250 | 90251 | 90252 | 90253 | 90254 | 90255 | 90256 | 90259 | 90281 | 90282 | 90287 |
| 90289 | 9029 | 90300 | 90301 | 90302 | 9031 | 9032 | 9033 | 9034 | 9035 | 9038 | 9039 |
| 9040 | 9041 | 9042 | 9043 | 90440 | 90441 | 90442 | 90450 | 90451 | 90452 | 90453 | 90454 |
| 9046 | 9047 | 9048 | 9049 | 9064 | 9080 | 9081 | 9082 | 9083 | 9084 | 925 | 9251 |
| 9252 | 9260 | 92611 | 92612 | 92619 | 9268 | 9269 | 92700 | 92701 | 92702 | 92703 | 92709 |
| 92710 | 92711 | 92720 | 92721 | 9273 | 9278 | 9279 | 92800 | 92801 | 92810 | 92811 | 92820 |
| 92821 | 9283 | 9288 | 9289 | 9290 | 9299 | | | | | | |

235    Open wounds of head, neck, and trunk

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8700 | 8701 | 8702 | 8703 | 8704 | 8708 | 8709 | 8710 | 8711 | 8712 | 8713 | 8714 |
| 8715 | 8716 | 8717 | 8719 | 87200 | 87201 | 87202 | 87210 | 87211 | 87212 | 87261 | 87262 |
| 87263 | 87264 | 87269 | 87271 | 87272 | 87273 | 87274 | 87279 | 8728 | 8729 | 8730 | 8731 |
| 87320 | 87321 | 87322 | 87323 | 87329 | 87330 | 87331 | 87332 | 87333 | 87339 | 87340 | 87341 |
| 87342 | 87343 | 87344 | 87349 | 87350 | 87351 | 87352 | 87353 | 87354 | 87359 | 87360 | 87361 |
| 87362 | 87363 | 87364 | 87365 | 87369 | 87370 | 87371 | 87372 | 87373 | 87374 | 87375 | 87379 |
| 8738 | 8739 | 87400 | 87401 | 87402 | 87410 | 87411 | 87412 | 8742 | 8743 | 8744 | 8745 |
| 8748 | 8749 | 8750 | 8751 | 8760 | 8761 | 8770 | 8771 | 8780 | 8781 | 8782 | 8783 |

Diagnosis category
ICD-9-CM codes

|      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|
| 8784 | 8785 | 8786 | 8787 | 8788 | 8789 | 8790 | 8791 | 8792 | 8793 | 8794 | 8795 |
| 8796 | 8797 | 8798 | 8799 | 9060 | | | | | | |

**236   Open wounds of extremities**

|       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 88000 | 88001 | 88002 | 88003 | 88009 | 88010 | 88011 | 88012 | 88013 | 88019 | 88020 | 88021 |
| 88022 | 88023 | 88029 | 88100 | 88101 | 88102 | 88110 | 88111 | 88112 | 88120 | 88121 | 88122 |
| 8820  | 8821  | 8822  | 8830  | 8831  | 8832  | 8840  | 8841  | 8842  | 8850  | 8851  | 8860  |
| 8861  | 8870  | 8871  | 8872  | 8873  | 8874  | 8875  | 8876  | 8877  | 8900  | 8901  | 8902  |
| 8910  | 8911  | 8912  | 8920  | 8921  | 8922  | 8930  | 8931  | 8932  | 8940  | 8941  | 8942  |
| 8950  | 8951  | 8960  | 8961  | 8962  | 8963  | 8970  | 8971  | 8972  | 8973  | 8974  | 8975  |
| 8976  | 8977  | 9058  | 9059  | 9061  | | | | | | | |

**237   Complication of device, implant or graft**

|       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 41402 | 41403 | 41404 | 41405 | 44030 | 44031 | 44032 | 56960 | 56961 | 56969 | 99600 | 99601 |
| 99602 | 99603 | 99604 | 99609 | 9961  | 9962  | 99630 | 99631 | 99632 | 99639 | 9964  | 99651 |
| 99652 | 99653 | 99654 | 99655 | 99656 | 99659 | 9966  | 99660 | 99661 | 99662 | 99663 | 99664 |
| 99665 | 99666 | 99667 | 99668 | 99669 | 9967  | 99670 | 99671 | 99672 | 99673 | 99674 | 99675 |
| 99676 | 99677 | 99678 | 99679 | 99680 | 99681 | 99682 | 99683 | 99684 | 99685 | 99686 | 99689 |
| 99690 | 99691 | 99692 | 99693 | 99694 | 99695 | 99696 | 99699 | | | | |

**238   Complications of surgical procedures or medical care**

|       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3490  | 3491  | 41511 | 4294  | 4582  | 5121  | 5190  | 51900 | 51901 | 51902 | 51909 | 53640 |
| 53641 | 53642 | 53649 | 56962 | 5642  | 5643  | 5644  | 5696  | 56962 | 5793  | 9093  | 9954  |
| 99586 | 9970  | 99700 | 99701 | 99702 | 99709 | 9971  | 9972  | 9973  | 9974  | 9975  | 99760 |
| 99761 | 99762 | 99769 | 9979  | 99791 | 99799 | 9980  | 9981  | 99811 | 99812 | 99813 | 9982  |
| 9983  | 9984  | 9985  | 99851 | 99859 | 9986  | 9987  | 9988  | 99881 | 99882 | 99883 | 99889 |
| 9989  | 9990  | 9991  | 9992  | 9993  | 9994  | 9995  | 9996  | 9997  | 9998  | 9999  | |

**239   Superficial injury, contusion**

|       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 9062  | 9063  | 9100  | 9101  | 9102  | 9103  | 9104  | 9105  | 9106  | 9107  | 9108  | 9109  |
| 9110  | 9111  | 9112  | 9113  | 9114  | 9115  | 9116  | 9117  | 9118  | 9119  | 9120  | 9121  |
| 9122  | 9123  | 9124  | 9125  | 9126  | 9127  | 9128  | 9129  | 9130  | 9131  | 9132  | 9133  |
| 9134  | 9135  | 9136  | 9137  | 9138  | 9139  | 9140  | 9141  | 9142  | 9143  | 9144  | 9145  |
| 9146  | 9147  | 9148  | 9149  | 9150  | 9151  | 9152  | 9153  | 9154  | 9155  | 9156  | 9157  |
| 9158  | 9159  | 9160  | 9161  | 9162  | 9163  | 9164  | 9165  | 9166  | 9167  | 9168  | 9169  |
| 9170  | 9171  | 9172  | 9173  | 9174  | 9175  | 9176  | 9177  | 9178  | 9179  | 9180  | 9181  |
| 9182  | 9189  | 9190  | 9191  | 9192  | 9193  | 9194  | 9195  | 9196  | 9197  | 9198  | 9199  |
| 920   | 9210  | 9211  | 9212  | 9213  | 9219  | 9220  | 9221  | 9222  | 9223  | 92231 | 92232 |
| 92233 | 9224  | 9228  | 9229  | 92300 | 92301 | 92302 | 92303 | 92309 | 92310 | 92311 | 92320 |
| 92321 | 9233  | 9238  | 9239  | 92400 | 92401 | 92410 | 92411 | 92420 | 92421 | 9243  | 9244  |
| 9245  | 9248  | 9249  | | | | | | | | | |

**240   Burns**

**Attachment 1**
**Clinical Classification Software—DIAGNOSES**
**(with all coding changes valid from January 1980 through September 1999 )**

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9065 | 9066 | 9067 | 9068 | 9069 | 9400 | 9401 | 9402 | 9403 | 9404 | 9405 | 9409 |
| 94100 | 94101 | 94102 | 94103 | 94104 | 94105 | 94106 | 94107 | 94108 | 94109 | 94110 | 94111 |
| 94112 | 94113 | 94114 | 94115 | 94116 | 94117 | 94118 | 94119 | 94120 | 94121 | 94122 | 94123 |
| 94124 | 94125 | 94126 | 94127 | 94128 | 94129 | 94130 | 94131 | 94132 | 94133 | 94134 | 94135 |
| 94136 | 94137 | 94138 | 94139 | 94140 | 94141 | 94142 | 94143 | 94144 | 94145 | 94146 | 94147 |
| 94148 | 94149 | 94150 | 94151 | 94152 | 94153 | 94154 | 94155 | 94156 | 94157 | 94158 | 94159 |
| 94200 | 94201 | 94202 | 94203 | 94204 | 94205 | 94209 | 94210 | 94211 | 94212 | 94213 | 94214 |
| 94215 | 94219 | 94220 | 94221 | 94222 | 94223 | 94224 | 94225 | 94229 | 94230 | 94231 | 94232 |
| 94233 | 94234 | 94235 | 94239 | 94240 | 94241 | 94242 | 94243 | 94244 | 94245 | 94249 | 94250 |
| 94251 | 94252 | 94253 | 94254 | 94255 | 94259 | 94300 | 94301 | 94302 | 94303 | 94304 | 94305 |
| 94306 | 94309 | 94310 | 94311 | 94312 | 94313 | 94314 | 94315 | 94316 | 94319 | 94320 | 94321 |
| 94322 | 94323 | 94324 | 94325 | 94326 | 94329 | 94330 | 94331 | 94332 | 94333 | 94334 | 94335 |
| 94336 | 94339 | 94340 | 94341 | 94342 | 94343 | 94344 | 94345 | 94346 | 94349 | 94350 | 94351 |
| 94352 | 94353 | 94354 | 94355 | 94356 | 94359 | 94400 | 94401 | 94402 | 94403 | 94404 | 94405 |
| 94406 | 94407 | 94408 | 94410 | 94411 | 94412 | 94413 | 94414 | 94415 | 94416 | 94417 | 94418 |
| 94420 | 94421 | 94422 | 94423 | 94424 | 94425 | 94426 | 94427 | 94428 | 94430 | 94431 | 94432 |
| 94433 | 94434 | 94435 | 94436 | 94437 | 94438 | 94440 | 94441 | 94442 | 94443 | 94444 | 94445 |
| 94446 | 94447 | 94448 | 94450 | 94451 | 94452 | 94453 | 94454 | 94455 | 94456 | 94457 | 94458 |
| 94500 | 94501 | 94502 | 94503 | 94504 | 94505 | 94506 | 94509 | 94510 | 94511 | 94512 | 94513 |
| 94514 | 94515 | 94516 | 94519 | 94520 | 94521 | 94522 | 94523 | 94524 | 94525 | 94526 | 94529 |
| 94530 | 94531 | 94532 | 94533 | 94534 | 94535 | 94536 | 94539 | 94540 | 94541 | 94542 | 94543 |
| 94544 | 94545 | 94546 | 94549 | 94550 | 94551 | 94552 | 94553 | 94554 | 94555 | 94556 | 94559 |
| 9460 | 9461 | 9462 | 9463 | 9464 | 9465 | 9470 | 9471 | 9472 | 9473 | 9474 | 9478 |
| 9479 | 94800 | 94810 | 94811 | 94820 | 94821 | 94822 | 94830 | 94831 | 94832 | 94833 | 94840 |
| 94841 | 94842 | 94843 | 94844 | 94850 | 94851 | 94852 | 94853 | 94854 | 94855 | 94860 | 94861 |
| 94862 | 94863 | 94864 | 94865 | 94866 | 94870 | 94871 | 94872 | 94873 | 94874 | 94875 | 94876 |
| 94877 | 94880 | 94881 | 94882 | 94883 | 94884 | 94885 | 94886 | 94887 | 94888 | 94890 | 94891 |
| 94892 | 94893 | 94894 | 94895 | 94896 | 94897 | 94898 | 94899 | 9490 | 9491 | 9492 | 9493 |
| 9494 | 9495 | | | | | | | | | | |

241     Poisoning by psychotropic agents

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 9690 | 9691 | 9692 | 9693 | 9694 | 9695 | 9696 | 9697 | 9698 | 9699 |

242     Poisoning by other medications and drugs

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 9090 | 9095 | 9600 | 9601 | 9602 | 9603 | 9604 | 9605 | 9606 | 9607 | 9608 | 9609 |
| 9610 | 9611 | 9612 | 9613 | 9614 | 9615 | 9616 | 9617 | 9618 | 9619 | 9620 | 9621 |
| 9622 | 9623 | 9624 | 9625 | 9626 | 9627 | 9628 | 9629 | 9630 | 9631 | 9632 | 9633 |
| 9634 | 9635 | 9638 | 9639 | 9640 | 9641 | 9642 | 9643 | 9644 | 9645 | 9646 | 9647 |
| 9648 | 9649 | 96500 | 96501 | 96502 | 96509 | 9651 | 9654 | 9655 | 9656 | 96561 | 9656 |
| 99657 | 9658 | 9659 | 9660 | 9661 | 9662 | 9663 | 9664 | 9670 | 9671 | 9672 | 9673 |
| 9674 | 9675 | 9676 | 9678 | 9679 | 9680 | 9681 | 9682 | 9683 | 9684 | 9685 | 9686 |
| 9687 | 9689 | 9700 | 9701 | 9708 | 9709 | 9710 | 9711 | 9712 | 9713 | 9719 | 9720 |
| 9721 | 9722 | 9723 | 9724 | 9725 | 9726 | 9727 | 9728 | 9729 | 9730 | 9731 | 9732 |

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9733 | 9734 | 9735 | 9736 | 9738 | 9739 | 9740 | 9741 | 9742 | 9743 | 9744 | 9745 |
| 9746 | 9747 | 9750 | 9751 | 9752 | 9753 | 9754 | 9755 | 9756 | 9757 | 9758 | 9760 |
| 9761 | 9762 | 9763 | 9764 | 9765 | 9766 | 9767 | 9768 | 9769 | 9770 | 9771 | 9772 |
| 9773 | 9774 | 9778 | 9779 | 9780 | 9781 | 9782 | 9783 | 9784 | 9785 | 9786 | 9788 |
| 9789 | 9790 | 9791 | 9792 | 9793 | 9794 | 9795 | 9796 | 9797 | 9799 | 9952 | |

243    Poisoning by nonmedicinal substances

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9091 | 9800 | 9801 | 9802 | 9803 | 9808 | 9809 | 981 | 9820 | 9821 | 9822 | 9823 |
| 9824 | 9828 | 9830 | 9831 | 9832 | 9839 | 9840 | 9841 | 9848 | 9849 | 9850 | 9851 |
| 9852 | 9853 | 9854 | 9855 | 9856 | 9858 | 9859 | 986 | 9870 | 9871 | 9872 | 9873 |
| 9874 | 9875 | 9876 | 9877 | 9878 | 9879 | 9880 | 9881 | 9882 | 9888 | 9889 | 9890 |
| 9891 | 9892 | 9893 | 9894 | 9895 | 9896 | 9897 | 9898 | 98981 | 98982 | 98983 | 98984 |
| 98989 | 9899 | | | | | | | | | | |

244    Other injuries and conditions due to external causes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V155 | V156 | V713 | V714 | V715 | V716 | 7960 | 7990 | 9071 | 9073 | 9074 | 9075 |
| 9079 | 9085 | 9086 | 9089 | 9092 | 9094 | 9099 | 9300 | 9301 | 9302 | 9308 | 9309 |
| 931 | 932 | 9330 | 9331 | 9340 | 9341 | 9348 | 9349 | 9350 | 9351 | 9352 | 936 |
| 937 | 938 | 9390 | 9391 | 9392 | 9393 | 9399 | 9500 | 9501 | 9502 | 9503 | 9509 |
| 9510 | 9511 | 9512 | 9513 | 9514 | 9515 | 9516 | 9517 | 9518 | 9519 | 9530 | 9531 |
| 9532 | 9533 | 9534 | 9535 | 9538 | 9539 | 9540 | 9541 | 9548 | 9549 | 9550 | 9551 |
| 9552 | 9553 | 9554 | 9555 | 9556 | 9557 | 9558 | 9559 | 9560 | 9561 | 9562 | 9563 |
| 9564 | 9565 | 9568 | 9569 | 9570 | 9571 | 9578 | 9579 | 9580 | 9581 | 9582 | 9583 |
| 9584 | 9585 | 9586 | 9587 | 9588 | 9590 | 95901 | 95909 | 9591 | 9592 | 9593 | 9594 |
| 9595 | 9596 | 9597 | 9598 | 9599 | 990 | 9910 | 9911 | 9912 | 9913 | 9914 | 9915 |
| 9916 | 9918 | 9919 | 9920 | 9921 | 9922 | 9923 | 9924 | 9925 | 9926 | 9927 | 9928 |
| 9929 | 9930 | 9931 | 9932 | 9933 | 9934 | 9938 | 9939 | 9940 | 9941 | 9942 | 9943 |
| 9944 | 9945 | 9946 | 9947 | 9948 | 9949 | 9951 | 9955 | 99550 | 99551 | 99552 | 99553 |
| 99554 | 99555 | 99559 | 99580 | 99581 | 99582 | 99583 | 99584 | 99585 | 99589 | | |

245    Syncope

7802

246    Fever of unknown origin

7806

247    Lymphadenitis

| | | | | |
|---|---|---|---|---|
| 2891 | 2892 | 2893 | 683 | 7856 |

Diagnosis category
ICD-9-CM codes

248     Gangrene

44024     7854

249     Shock
78550     78551     78559

250     Nausea and vomiting

7870     78701     78702     78703

251     Abdominal pain

7890     78900     78901     78902     78903     78904     78905     78906     78907     78909     78960     78961
78962     78963     78964     78965     78966     78967     78969

252     Malaise and fatigue

7807     78071     78079

253     Allergic reactions

V071     V140     V141     V142     V143     V144     V145     V146     V147     V148     V149     V150
V727     5186     6910     6918     6920     6921     6922     6923     6924     6925     6926     69270
69271     69272     69273     69274     69279     69281     69282     69283     69289     6929     6930     6931
6938     6939     7080     7081     7082     7083     7084     7085     7088     7089     9950     9953
99560     99561     99562     99563     99564     99565     99566     99567     99568     99569

254     Rehabilitation care, fitting of prostheses, and adjustment of devices

V520     V521     V524     V528     V529     V538     V570     V571     V572     V5721     V5722     V573
V574     V5781     V5789     V579     V5882

255     Administrative/social admission

V200     V201     V202     V600     V601     V602     V603     V604     V605     V606     V608     V609
V610     V611     V6110     V6111     V6112     V6120     V6121     V6122     V6129     V613     V6141     V6149
V616     V617     V618     V619     V620     V621     V622     V623     V624     V625     V626     V6281
V6282     V6283     V6289     V629     V630     V631     V632     V638     V639     V650     V651     V652
V653     V654     V6540     V6541     V6542     V6543     V6544     V6545     V6549     V655     V658     V659
V680     V681     V682     V6881     V6889     V689

256     Medical examination/evaluation

Diagnosis category
ICD-9-CM codes

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V290 | V291 | V292 | V293 | V298 | V299 | V700 | V703 | V704 | V705 | V706 | V707 |
| V708 | V709 | V718 | V719 | V725 | V726 | V728 | V7281 | V7282 | V7283 | V7284 | V7285 |
| V729 | | | | | | | | | | | |

257   Other aftercare

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V51 | V539 | V548 | V549 | V558 | V559 | V583 | V584 | V5841 | V5849 | V5861 | V5862 |
| V5869 | V588 | V5881 | V5889 | V589 | V660 | V665 | V666 | V667 | V669 | V670 | V6751 |
| V6759 | V676 | V679 | | | | | | | | | |

258   Other screening for suspected conditions (not mental disorders or infectious disease)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V280 | V281 | V282 | V283 | V284 | V285 | V288 | V289 | V760 | V761 | V7610 | V7611 |
| V7612 | V7619 | V762 | V763 | V7641 | V7642 | V7643 | V7644 | V7645 | V7649 | V768 | V769 |
| V770 | V771 | V772 | V773 | V774 | V775 | V776 | V777 | V778 | V779 | V780 | V781 |
| V782 | V783 | V788 | V789 | V800 | V801 | V802 | V803 | V810 | V811 | V812 | V813 |
| V814 | V815 | V816 | V820 | V821 | V822 | V823 | V824 | V825 | V826 | V828 | V829 |

259   Residual codes, unclassified

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| V070 | V072 | V073 | V0731 | V0739 | V078 | V079 | V131 | V138 | V139 | V152 | V153 |
| V1581 | V1584 | V1585 | V1586 | V1589 | V159 | V160 | V161 | V162 | V163 | V164 | V1640 |
| V1641 | V1642 | V1643 | V1649 | V165 | V1651 | V1659 | V166 | V167 | V168 | V169 | V170 |
| V171 | V172 | V173 | V174 | V175 | V176 | V177 | V178 | V180 | V181 | V182 | V183 |
| V184 | V185 | V186 | V1861 | V1869 | V187 | V188 | V190 | V191 | V192 | V193 | V194 |
| V195 | V196 | V197 | V198 | V210 | V211 | V212 | V218 | V219 | V418 | V419 | V428 |
| V4281 | V4282 | V4283 | V4289 | V429 | V438 | V4381 | V4382 | V4383 | V4389 | V447 | V448 |
| V449 | V4571 | V4572 | V4573 | V4583 | V4589 | V460 | V468 | V469 | V470 | V471 | V472 |
| V479 | V480 | V488 | V489 | V498 | V499 | V500 | V501 | V503 | V5041 | V5042 | V5049 |
| V508 | V509 | V590 | V5901 | V5902 | V5909 | V591 | V592 | V593 | V594 | V595 | V596 |
| V598 | V599 | V615 | V640 | V641 | V642 | V643 | V644 | V690 | V691 | V692 | V693 |
| V698 | V699 | 3020 | 78002 | 78050 | 78051 | 78052 | 78053 | 78054 | 78055 | 78056 | 78057 |
| 78059 | 7809 | 7815 | 7816 | 7823 | 78261 | 78262 | 7828 | 7829 | 7830 | 7836 | 7842 |
| 7901 | 7903 | 7906 | 7909 | 79091 | 79092 | 79093 | 79094 | 79099 | 7929 | 7932 | 7938 |
| 7939 | 7949 | 7954 | 7963 | 7964 | 7965 | 7969 | 7980 | 7981 | 7982 | 7989 | 7992 |
| 7993 | 7998 | 7999 | | | | | | | | | |

**Attachment 2:  Sample SAS Jobs for Linking Examples**

```
NOTE: Copyright (c) 1999-2001 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 8.2 (TS2M0)
      Licensed to SOCIAL & SCIENTIFIC SYSTEMS INC/AHRQ, Site 0038838053.
NOTE: This session is executing on the WIN_95  platform.




NOTE: SAS initialization used:
      real time           5.00 seconds

1          OPTIONS LS=132 PS=59;
2
3          TITLE1 "HC-051I";
4          TITLE2 'Sample SAS Job for Example A';
5
6          LIBNAME IN V8 'C:\DATA';
NOTE: Libref IN was successfully assigned as follows:
      Engine:        V8
      Physical Name: C:\DATA
7
8          ********************************************************************************************
9          * Calculate the expenditures for prescribed medicines associated with medical visits for asthma.
10         *******************************************************************************************;
11
12         PROC FORMAT;
13           VALUE EVENTYPE
14               1 = "1 MVIS"
15               2 = "2 OPAT"
16               3 = "3 EROM"
17               4 = "4 STAZ"
18               5 = "5 DVIS"
19               6 = "6 OMED"
20               7 = "7 HVIS"
21               8 = "8 PMED";
NOTE: Format EVENTYPE has been output.
22
23         RUN;

NOTE: PROCEDURE FORMAT used:
      real time           0.39 seconds




24
25         *-------------------------------------------------------------------------------
26         * Get condition records coded as asthma.
27         *-------------------------------------------------------------------------------;
28         DATA ASCONDS;
29           SET IN.H52 (KEEP=CONDIDX CCCODEX);
30           IF CCCODEX="128";
31
32         RUN;

NOTE: There were 72624 observations read from the data set IN.H52.
NOTE: The data set WORK.ASCONDS has 1156 observations and 2 variables.
NOTE: DATA statement used:
      real time           8.50 seconds
```

```
33
34          *-----------------------------------------------------------------------------------
35          * Get the events linked to each of the asthma condition records.
36          *---------------------------------------------------------------------------------;
37             PROC SORT DATA=ASCONDS; BY CONDIDX; RUN;

NOTE: There were 1156 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCONDS has 1156 observations and 2 variables.
NOTE: PROCEDURE SORT used:
      real time           0.17 seconds


38
39          proc print data=asconds (obs=50);
40            title3 "sample print of work.asconds - sorted by condidx";
41            title4 "COND (H52) records where cccodex=128";
42          run;

NOTE: There were 50 observations read from the data set WORK.ASCONDS.
NOTE: The PROCEDURE PRINT printed page 1.
NOTE: PROCEDURE PRINT used:
      real time           0.71 seconds


43
44             PROC SORT DATA=IN.H51IF1 OUT=CLNK; BY CONDIDX; RUN;

NOTE: There were 217414 observations read from the data set IN.H51IF1.
NOTE: The data set WORK.CLNK has 217414 observations and 5 variables.
NOTE: PROCEDURE SORT used:
      real time           6.98 seconds


45
46          DATA ASCLNKS;
47            MERGE CLNK   (IN=INCLNK   KEEP=CONDIDX EVNTIDX EVENTYPE)
48                  ASCONDS(IN=INASCOND KEEP=CONDIDX);
49            BY CONDIDX;
50            IF INCLNK & INASCOND;
51          RUN;

NOTE: There were 217414 observations read from the data set WORK.CLNK.
NOTE: There were 1156 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCLNKS has 4737 observations and 3 variables.
NOTE: DATA statement used:
      real time           3.39 seconds


52
53          proc print data=asclnks (obs=75);
54            by condidx;
55            id condidx;
56            format eventype eventype.;
57            title3 "sample print of work.asclnks - sorted by condidx";
58            title4 "events linked to asthma condition records";
59          run;
```

NOTE: There were 75 observations read from the data set WORK.ASCLNKS.
NOTE: The PROCEDURE PRINT printed pages 2-3.
NOTE: PROCEDURE PRINT used:
      real time           0.33 seconds


```
60
61          PROC SORT DATA=ASCLNKS; BY EVNTIDX; RUN;
```

NOTE: There were 4737 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 4737 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time           0.05 seconds


```
62
63          proc print data=asclnks (obs=50);
64            format eventype eventype.;
65            title3 "sample print of work.asclnks - sorted by evntidx";
66          run;
```

NOTE: There were 50 observations read from the data set WORK.ASCLNKS.
NOTE: The PROCEDURE PRINT printed page 4.
NOTE: PROCEDURE PRINT used:
      real time           0.04 seconds


```
67
68          DATA ASCLNKS;
69            SET ASCLNKS (KEEP=EVNTIDX EVENTYPE);
70            BY EVNTIDX;
71            IF FIRST.EVNTIDX;
72          RUN;
```

NOTE: There were 4737 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 4712 observations and 2 variables.
NOTE: DATA statement used:
      real time           0.05 seconds


```
73
74          proc print data=asclnks (obs=50);
75            title3 "sample print of unique evntidxs from work.asclnks";
76            format eventype eventype.;
77          run;
```

NOTE: There were 50 observations read from the data set WORK.ASCLNKS.
NOTE: The PROCEDURE PRINT printed page 5.
NOTE: PROCEDURE PRINT used:
      real time           0.05 seconds


```
78
79          *-----------------------------------------------------------------------------------------
80          * Get non-telephone office based visits (i.e. MVIS events) for persons with positive weights.
81          *----------------------------------------------------------------------------------------;
```

```
82          DATA MVIS;
83            SET IN.H51G (KEEP=EVNTIDX PERWT00F SEETLKPV);
84            IF PERWT00F > 0 & SEETLKPV NE 2;
85          RUN;
```

NOTE: There were 102530 observations read from the data set IN.H51G.
NOTE: The data set WORK.MVIS has 98816 observations and 3 variables.
NOTE: DATA statement used:
      real time           14.16 seconds


```
86
87          PROC SORT DATA=MVIS; BY EVNTIDX; RUN;
```

NOTE: There were 98816 observations read from the data set WORK.MVIS.
NOTE: The data set WORK.MVIS has 98816 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time            0.76 seconds


```
88
89          *-------------------------------------------------------------------------------------
90          * Identify MVIS events which were for asthma.
91          *------------------------------------------------------------------------------------;
92          DATA ASMVIS;
93            MERGE ASCLNKS (IN=INASCLNK)
94                  MVIS    (IN=INMVIS KEEP=EVNTIDX);
95            BY EVNTIDX;
96            IF INASCLNK & INMVIS;
97          RUN;
```

NOTE: There were 4712 observations read from the data set WORK.ASCLNKS.
NOTE: There were 98816 observations read from the data set WORK.MVIS.
NOTE: The data set WORK.ASMVIS has 1509 observations and 2 variables.
NOTE: DATA statement used:
      real time            0.44 seconds


```
98
99          proc print data=asmvis (obs=50);
100           format eventype eventype.;
101           title3 "sample print of work.asmvis";
102           title4 "unique evntidxs from work.asclnks that are non-telephone MVIS (HC-051G) events";
103         run;
```

NOTE: There were 50 observations read from the data set WORK.ASMVIS.
NOTE: The PROCEDURE PRINT printed page 6.
NOTE: PROCEDURE PRINT used:
      real time            0.05 seconds


```
104
105         *----------------------------------------------------------------------------------
106         * Get PMED IDs linked to the MVIS events which were for asthma.
107         *---------------------------------------------------------------------------------;
108         PROC SORT DATA=IN.H51IF2 OUT=RXLK; BY EVENTIDX; RUN;
```

```
NOTE: There were 42089 observations read from the data set IN.H51IF2.
NOTE: The data set WORK.RXLK has 42089 observations and 5 variables.
NOTE: PROCEDURE SORT used:
      real time            0.82 seconds


109
110         proc print data=rxlk (obs=140);
111            by eventidx;
112            id eventidx;
113            var linkidx eventype;
114            format eventype eventype.;
115            title3 "sample print of work.rxlk - sorted by eventidx";
116            title4 "Rx+event link file records (HC-51IF2)";
117         run;

NOTE: There were 140 observations read from the data set WORK.RXLK.
NOTE: The PROCEDURE PRINT printed pages 7-11.
NOTE: PROCEDURE PRINT used:
      real time            0.05 seconds


118
119         DATA PMEDIDS;
120           MERGE RXLK   (IN=INRXLK KEEP=EVENTIDX LINKIDX EVENTYPE RENAME=(EVENTIDX=EVNTIDX))
121                 ASMVIS(IN=INASMVIS KEEP=EVNTIDX);
122           BY EVNTIDX;
123           IF INRXLK & INASMVIS;
124         RUN;

NOTE: There were 42089 observations read from the data set WORK.RXLK.
NOTE: There were 1509 observations read from the data set WORK.ASMVIS.
NOTE: The data set WORK.PMEDIDS has 1439 observations and 3 variables.
NOTE: DATA statement used:
      real time            0.22 seconds


125
126         proc print data=pmedids (obs=50);
127            by evntidx;
128            id evntidx;
129            format eventype eventype.;
130            title3 "sample print of work.pmedids - sorted by evntidx";
131            title4 "work.rxlk records for evntidxs in work.asmvis";
132         run;

NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE PRINT printed pages 12-13.
NOTE: PROCEDURE PRINT used:
      real time            0.04 seconds


133
134         PROC SORT DATA=PMEDIDS; BY LINKIDX; RUN;

NOTE: There were 1439 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 1439 observations and 3 variables.
```

```
NOTE: PROCEDURE SORT used:
      real time           0.05 seconds


135
136          proc print data=pmedids (obs=50);
137            format eventype eventype.;
138            title3 "sample print of work.pmedids - sorted by linkidx";
139          run;

NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE PRINT printed page 14.
NOTE: PROCEDURE PRINT used:
      real time           0.00 seconds


140
141          DATA PMEDIDS;
142            SET PMEDIDS (KEEP=LINKIDX);
143            BY LINKIDX;
144            IF FIRST.LINKIDX;
145          RUN;

NOTE: There were 1439 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 1336 observations and 1 variables.
NOTE: DATA statement used:
      real time           0.00 seconds


146
147          proc print data=pmedids (obs=50);
148            title3 "sample print of unique linkidxs in work.pmedids";
149          run;

NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE PRINT printed page 15.
NOTE: PROCEDURE PRINT used:
      real time           0.28 seconds


150
151          *------------------------------------------------------------------------------
152          * Get PMED records linked to MVIS events which were for asthma.
153          *------------------------------------------------------------------------------;
154          PROC SORT DATA=IN.H51A OUT=PMED; BY LINKIDX; RUN;

NOTE: There were 182677 observations read from the data set IN.H51A.
NOTE: The data set WORK.PMED has 182677 observations and 52 variables.
NOTE: PROCEDURE SORT used:
      real time           1:30.78


155
156          DATA MVPMEDS;
157            MERGE PMED (KEEP=LINKIDX RXRECIDX  RXXP00X PERWT00F RXNAME)
158                  PMEDIDS (IN=A);
159            BY LINKIDX;
```

```
160          IF A;
161          RUN;

NOTE: There were 182677 observations read from the data set WORK.PMED.
NOTE: There were 1336 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.MVPMEDS has 3351 observations and 5 variables.
NOTE: DATA statement used:
      real time            23.07 seconds


162
163          proc print data=mvpmeds (obs=200);
164            var rxrecidx rxname RXXP00X  PERWT00F;
165            by linkidx;
166            id linkidx;
167            title3 "sample print of work.mvpmeds";
168            title4 "PMED (HC-051A) records for unique linkidxs in work.pmedids";
169          run;

NOTE: There were 200 observations read from the data set WORK.MVPMEDS.
NOTE: The PROCEDURE PRINT printed pages 16-22.
NOTE: PROCEDURE PRINT used:
      real time             0.05 seconds


170
171          PROC MEANS DATA=MVPMEDS N SUM;
172            VAR RXXP00X;
173            TITLE3 "Total Rx expenditures associated with medical visits (excluding telephone) for asthma";
174          RUN;

NOTE: There were 3351 observations read from the data set WORK.MVPMEDS.
NOTE: The PROCEDURE MEANS printed page 23.
NOTE: PROCEDURE MEANS used:
      real time             0.55 seconds


175
176          PROC MEANS DATA=MVPMEDS  N SUM;
177            VAR RXXP00X;
178            WEIGHT PERWT00F;
179            TITLE3 "Total Rx expenditures associated with medical visits (excluding telephone) for asthma";
180            TITLE5 "Weighted";
181          RUN;

NOTE: There were 3351 observations read from the data set WORK.MVPMEDS.
NOTE: The PROCEDURE MEANS printed page 24.
NOTE: PROCEDURE MEANS used:
      real time             0.00 seconds


182
183
184

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414
NOTE: The SAS System used:          2:37.91
```

Sample SAS Job for Example A
sample print of work.asconds - sorted by condidx
COND (H52) records where cccodex=128

| Obs | CONDIDX | CCCODEX |
|-----|---------|---------|
| 1 | 700020160021 | 128 |
| 2 | 700030270103 | 128 |
| 3 | 700160460057 | 128 |
| 4 | 700250310022 | 128 |
| 5 | 700400180023 | 128 |
| 6 | 700600150036 | 128 |
| 7 | 700620410027 | 128 |
| 8 | 700650190014 | 128 |
| 9 | 700710230197 | 128 |
| 10 | 700710470076 | 128 |
| 11 | 700710470139 | 128 |
| 12 | 700710470220 | 128 |
| 13 | 700840260044 | 128 |
| 14 | 700920230022 | 128 |
| 15 | 700920230072 | 128 |
| 16 | 701040310031 | 128 |
| 17 | 701070510018 | 128 |
| 18 | 701290210090 | 128 |
| 19 | 701750470029 | 128 |
| 20 | 701790470012 | 128 |
| 21 | 701860280028 | 128 |
| 22 | 701950340024 | 128 |
| 23 | 702140270063 | 128 |
| 24 | 702140410061 | 128 |
| 25 | 702470440015 | 128 |
| 26 | 702510110017 | 128 |
| 27 | 702630600025 | 128 |
| 28 | 702800530017 | 128 |
| 29 | 702800600016 | 128 |
| 30 | 702970120037 | 128 |
| 31 | 703290450025 | 128 |
| 32 | 703480330115 | 128 |
| 33 | 703620260038 | 128 |
| 34 | 703720350022 | 128 |
| 35 | 703740330010 | 128 |
| 36 | 703760300019 | 128 |
| 37 | 704370650012 | 128 |
| 38 | 704410120049 | 128 |
| 39 | 704460370015 | 128 |
| 40 | 704650140053 | 128 |
| 41 | 705050370023 | 128 |
| 42 | 705050440022 | 128 |
| 43 | 705150120020 | 128 |
| 44 | 705300280039 | 128 |
| 45 | 705330450013 | 128 |
| 46 | 705380510029 | 128 |
| 47 | 705420300016 | 128 |
| 48 | 705440380013 | 128 |
| 49 | 705480280016 | 128 |
| 50 | 705560320026 | 128 |

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

| CONDIDX | EVNTIDX | EVENTYPE |
|---|---|---|
| 700020160021 | 700020160244 | 1 MVIS |
| 700030270103 | 700030270153 | 1 MVIS |
| 700160460057 | 700160460349 | 3 EROM |
| | 700160460356 | 8 PMED |
| 700250310022 | 700250310055 | 1 MVIS |
| | 700250310062 | 8 PMED |
| 700400180023 | 700400180068 | 8 PMED |
| 700600150036 | 700600150096 | 8 PMED |
| | 700600150109 | 8 PMED |
| | 700600150123 | 8 PMED |
| | 700600150130 | 8 PMED |
| | 700600150178 | 8 PMED |
| | 700600150185 | 8 PMED |
| 700650190014 | 700650190159 | 8 PMED |
| | 700650190166 | 8 PMED |
| | 700650190197 | 8 PMED |
| | 700650190217 | 1 MVIS |
| | 700650190231 | 8 PMED |
| | 700650190248 | 8 PMED |
| | 700650190286 | 8 PMED |
| | 700650190293 | 8 PMED |
| | 700650190306 | 8 PMED |
| 700710470139 | 700710470131 | 1 MVIS |
| | 700710470148 | 1 MVIS |
| | 700710470186 | 8 PMED |
| | 700710470244 | 8 PMED |
| | 700710470282 | 8 PMED |
| | 700710470302 | 8 PMED |
| 700710470220 | 700710470213 | 1 MVIS |
| | 700710470268 | 8 PMED |
| | 700710470275 | 8 PMED |
| 700840260044 | 700840260136 | 1 MVIS |
| | 700840260198 | 8 PMED |
| | 700840260287 | 8 PMED |
| 700920230022 | 700920230207 | 1 MVIS |
| | 700920230214 | 1 MVIS |
| | 700920230221 | 1 MVIS |
| | 700920230238 | 8 PMED |
| | 700920230269 | 8 PMED |

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

```
        CONDIDX         EVNTIDX         EVENTYPE

      700920230072    700920230276      1 MVIS
                      700920230283      1 MVIS
                      700920230290      8 PMED
                      700920230303      8 PMED
                      700920230310      8 PMED
                      700920230327      8 PMED

      701040310031    701040310062      1 MVIS
                      701040310079      8 PMED
                      701040310093      1 MVIS
                      701040310106      8 PMED

      701290210090    701290210146      1 MVIS
                      701290210153      1 MVIS
                      701290210160      1 MVIS
                      701290210177      1 MVIS
                      701290210184      1 MVIS
                      701290210191      8 PMED
                      701290210204      8 PMED
                      701290210211      8 PMED
                      701290210228      8 PMED

      701750470029    701750470078      1 MVIS
                      701750470085      1 MVIS
                      701750470092      1 MVIS
                      701750470105      1 MVIS
                      701750470112      1 MVIS
                      701750470129      1 MVIS
                      701750470136      8 PMED
                      701750470143      8 PMED
                      701750470150      8 PMED

      701790470012    701790470202      8 PMED

      701950340024    701950340049      8 PMED
                      701950340056      8 PMED

      702140270063    702140270133      1 MVIS
                      702140270157      8 PMED

      702140410061    702140410133      1 MVIS

      702510110017    702510110257      1 MVIS
                      702510110264      1 MVIS
```

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

| Obs | CONDIDX | EVNTIDX | EVENTYPE |
|---|---|---|---|
| 1 | 700020160021 | 700020160244 | 1 MVIS |
| 2 | 700030270103 | 700030270153 | 1 MVIS |
| 3 | 700160460057 | 700160460349 | 3 EROM |
| 4 | 700160460057 | 700160460356 | 8 PMED |
| 5 | 700250310022 | 700250310055 | 1 MVIS |
| 6 | 700250310022 | 700250310062 | 8 PMED |
| 7 | 700400180023 | 700400180068 | 8 PMED |
| 8 | 700600150036 | 700600150096 | 8 PMED |
| 9 | 700600150036 | 700600150109 | 8 PMED |
| 10 | 700600150036 | 700600150123 | 8 PMED |
| 11 | 700600150036 | 700600150130 | 8 PMED |
| 12 | 700600150036 | 700600150178 | 8 PMED |
| 13 | 700600150036 | 700600150185 | 8 PMED |
| 14 | 700650190014 | 700650190159 | 8 PMED |
| 15 | 700650190014 | 700650190166 | 8 PMED |
| 16 | 700650190014 | 700650190197 | 8 PMED |
| 17 | 700650190014 | 700650190217 | 1 MVIS |
| 18 | 700650190014 | 700650190231 | 8 PMED |
| 19 | 700650190014 | 700650190248 | 8 PMED |
| 20 | 700650190014 | 700650190286 | 8 PMED |
| 21 | 700650190014 | 700650190293 | 8 PMED |
| 22 | 700650190014 | 700650190306 | 8 PMED |
| 23 | 700710470139 | 700710470131 | 1 MVIS |
| 24 | 700710470139 | 700710470148 | 1 MVIS |
| 25 | 700710470139 | 700710470186 | 8 PMED |
| 26 | 700710470220 | 700710470213 | 1 MVIS |
| 27 | 700710470139 | 700710470244 | 8 PMED |
| 28 | 700710470220 | 700710470268 | 8 PMED |
| 29 | 700710470220 | 700710470275 | 8 PMED |
| 30 | 700710470139 | 700710470282 | 8 PMED |
| 31 | 700710470139 | 700710470302 | 8 PMED |
| 32 | 700840260044 | 700840260136 | 1 MVIS |
| 33 | 700840260044 | 700840260198 | 8 PMED |
| 34 | 700840260044 | 700840260287 | 8 PMED |
| 35 | 700920230022 | 700920230207 | 1 MVIS |
| 36 | 700920230022 | 700920230214 | 1 MVIS |
| 37 | 700920230022 | 700920230221 | 1 MVIS |
| 38 | 700920230022 | 700920230238 | 8 PMED |
| 39 | 700920230022 | 700920230269 | 8 PMED |
| 40 | 700920230072 | 700920230276 | 1 MVIS |
| 41 | 700920230072 | 700920230283 | 1 MVIS |
| 42 | 700920230072 | 700920230290 | 8 PMED |
| 43 | 700920230072 | 700920230303 | 8 PMED |
| 44 | 700920230072 | 700920230310 | 8 PMED |
| 45 | 700920230072 | 700920230327 | 8 PMED |
| 46 | 701040310031 | 701040310062 | 1 MVIS |
| 47 | 701040310031 | 701040310079 | 8 PMED |
| 48 | 701040310031 | 701040310093 | 1 MVIS |
| 49 | 701040310031 | 701040310106 | 8 PMED |
| 50 | 701290210090 | 701290210146 | 1 MVIS |

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

| Obs | EVNTIDX | EVENTYPE |
|-----|---------|----------|
| 1 | 700020160244 | 1 MVIS |
| 2 | 700030270153 | 1 MVIS |
| 3 | 700160460349 | 3 EROM |
| 4 | 700160460356 | 8 PMED |
| 5 | 700250310055 | 1 MVIS |
| 6 | 700250310062 | 8 PMED |
| 7 | 700400180068 | 8 PMED |
| 8 | 700600150096 | 8 PMED |
| 9 | 700600150109 | 8 PMED |
| 10 | 700600150123 | 8 PMED |
| 11 | 700600150130 | 8 PMED |
| 12 | 700600150178 | 8 PMED |
| 13 | 700600150185 | 8 PMED |
| 14 | 700650190159 | 8 PMED |
| 15 | 700650190166 | 8 PMED |
| 16 | 700650190197 | 8 PMED |
| 17 | 700650190217 | 1 MVIS |
| 18 | 700650190231 | 8 PMED |
| 19 | 700650190248 | 8 PMED |
| 20 | 700650190286 | 8 PMED |
| 21 | 700650190293 | 8 PMED |
| 22 | 700650190306 | 8 PMED |
| 23 | 700710470131 | 1 MVIS |
| 24 | 700710470148 | 1 MVIS |
| 25 | 700710470186 | 8 PMED |
| 26 | 700710470213 | 1 MVIS |
| 27 | 700710470244 | 8 PMED |
| 28 | 700710470268 | 8 PMED |
| 29 | 700710470275 | 8 PMED |
| 30 | 700710470282 | 8 PMED |
| 31 | 700710470302 | 8 PMED |
| 32 | 700840260136 | 1 MVIS |
| 33 | 700840260198 | 8 PMED |
| 34 | 700840260287 | 8 PMED |
| 35 | 700920230207 | 1 MVIS |
| 36 | 700920230214 | 1 MVIS |
| 37 | 700920230221 | 1 MVIS |
| 38 | 700920230238 | 8 PMED |
| 39 | 700920230269 | 8 PMED |
| 40 | 700920230276 | 1 MVIS |
| 41 | 700920230283 | 1 MVIS |
| 42 | 700920230290 | 8 PMED |
| 43 | 700920230303 | 8 PMED |
| 44 | 700920230310 | 8 PMED |
| 45 | 700920230327 | 8 PMED |
| 46 | 701040310062 | 1 MVIS |
| 47 | 701040310079 | 8 PMED |
| 48 | 701040310093 | 1 MVIS |
| 49 | 701040310106 | 8 PMED |
| 50 | 701290210146 | 1 MVIS |

Sample SAS Job for Example A
sample print of work.asmvis
unique evntidxs from work.asclnks that are non-telephone MVIS (HC-051G) events

| Obs | EVNTIDX | EVENTYPE |
|---|---|---|
| 1 | 700020160244 | 1 MVIS |
| 2 | 700030270153 | 1 MVIS |
| 3 | 700250310055 | 1 MVIS |
| 4 | 700650190217 | 1 MVIS |
| 5 | 700710470131 | 1 MVIS |
| 6 | 700710470148 | 1 MVIS |
| 7 | 700710470213 | 1 MVIS |
| 8 | 700840260136 | 1 MVIS |
| 9 | 700920230207 | 1 MVIS |
| 10 | 700920230214 | 1 MVIS |
| 11 | 700920230221 | 1 MVIS |
| 12 | 700920230276 | 1 MVIS |
| 13 | 700920230283 | 1 MVIS |
| 14 | 701040310062 | 1 MVIS |
| 15 | 701040310093 | 1 MVIS |
| 16 | 701290210146 | 1 MVIS |
| 17 | 701290210153 | 1 MVIS |
| 18 | 701290210160 | 1 MVIS |
| 19 | 701290210177 | 1 MVIS |
| 20 | 701290210184 | 1 MVIS |
| 21 | 701750470078 | 1 MVIS |
| 22 | 701750470085 | 1 MVIS |
| 23 | 701750470092 | 1 MVIS |
| 24 | 701750470105 | 1 MVIS |
| 25 | 701750470112 | 1 MVIS |
| 26 | 701750470129 | 1 MVIS |
| 27 | 702140270133 | 1 MVIS |
| 28 | 702140410133 | 1 MVIS |
| 29 | 702510110257 | 1 MVIS |
| 30 | 702510110264 | 1 MVIS |
| 31 | 702510110459 | 1 MVIS |
| 32 | 702630600060 | 1 MVIS |
| 33 | 702970120198 | 1 MVIS |
| 34 | 702970120201 | 1 MVIS |
| 35 | 702970120218 | 1 MVIS |
| 36 | 704410120052 | 1 MVIS |
| 37 | 704410120069 | 1 MVIS |
| 38 | 704410120076 | 1 MVIS |
| 39 | 704410120083 | 1 MVIS |
| 40 | 705150120301 | 1 MVIS |
| 41 | 705480280281 | 1 MVIS |
| 42 | 705480280298 | 1 MVIS |
| 43 | 705480280414 | 1 MVIS |
| 44 | 705700290090 | 1 MVIS |
| 45 | 705820230365 | 1 MVIS |
| 46 | 705820230512 | 1 MVIS |
| 47 | 705820230601 | 1 MVIS |
| 48 | 705820230618 | 1 MVIS |
| 49 | 705820230625 | 1 MVIS |
| 50 | 705820230632 | 1 MVIS |

Sample SAS Job for Example A
sample print of work.rxlk - sorted by eventidx
Rx+event link file records (HC-51IF2)

| EVENTIDX | LINKIDX | EVENTYPE |
|----------|---------|----------|
| 700020160244 | 700020160268 | 1 MVIS |
| 700020160251 | 700020160275 | 3 EROM |
| 700030100160 | 700030100177 | 1 MVIS |
| 700030100191 | 700030100211 | 1 MVIS |
| 700030270108 | 700030270122 | 1 MVIS |
|  | 700030270139 | 1 MVIS |
| 700030270153 | 700030270177 | 1 MVIS |
| 700030340033 | 700030340040 | 1 MVIS |
|  | 700030340057 | 1 MVIS |
| 700030570065 | 700030570089 | 1 MVIS |
| 700040210067 | 700040210074 | 1 MVIS |
| 700050110128 | 700050110135 | 1 MVIS |
| 700050230123 | 700050230130 | 1 MVIS |
| 700060190073 | 700060190100 | 1 MVIS |
| 700060260080 | 700060260179 | 1 MVIS |
|  | 700060260186 | 1 MVIS |
|  | 700060260193 | 1 MVIS |
| 700060260244 | 700060260364 | 1 MVIS |
| 700060260251 | 700060260371 | 1 MVIS |
|  | 700060260388 | 1 MVIS |
| 700070210087 | 700070210152 | 1 MVIS |
| 700070450049 | 700070450070 | 1 MVIS |
|  | 700070450087 | 1 MVIS |
| 700070450056 | 700070450070 | 1 MVIS |
|  | 700070450087 | 1 MVIS |
| 700070510088 | 700070510095 | 1 MVIS |
| 700130330073 | 700130330100 | 1 MVIS |
| 700140160115 | 700140160122 | 1 MVIS |

Sample SAS Job for Example A
sample print of work.rxlk - sorted by eventidx
Rx+event link file records (HC-51IF2)

| EVENTIDX | LINKIDX | EVENTYPE |
|---|---|---|
| 700140230362 | 700140230519 | 1 MVIS |
| 700140230468 | 700140230475 | 6 OMED |
| 700140230824 | 700140230831 | 6 OMED |
| 700160150065 | 700160150116 | 1 MVIS |
| 700160220010 | 700160220027 | 1 MVIS |
| 700160390010 | 700160390027 | 1 MVIS |
|  | 700160390034 | 1 MVIS |
| 700160460185 | 700160460229 | 1 MVIS |
|  | 700160460236 | 1 MVIS |
|  | 700160460243 | 1 MVIS |
| 700160460192 | 700160460250 | 1 MVIS |
|  | 700160460267 | 1 MVIS |
| 700160460349 | 700160460356 | 3 EROM |
| 700170170223 | 700170170292 | 1 MVIS |
|  | 700170170305 | 1 MVIS |
|  | 700170170312 | 1 MVIS |
|  | 700170170329 | 1 MVIS |
| 700170170285 | 700170170292 | 6 OMED |
| 700170170336 | 700170170374 | 1 MVIS |
| 700170170343 | 700170170374 | 1 MVIS |
| 700170170350 | 700170170374 | 1 MVIS |
| 700170170367 | 700170170374 | 1 MVIS |
| 700170240090 | 700170240134 | 1 MVIS |
| 700170240141 | 700170240223 | 1 MVIS |
|  | 700170240230 | 1 MVIS |
|  | 700170240247 | 1 MVIS |
|  | 700170240254 | 1 MVIS |
|  | 700170240261 | 1 MVIS |
| 700170240209 | 700170240216 | 6 OMED |
| 700170240278 | 700170240312 | 1 MVIS |
|  | 700170240329 | 1 MVIS |

Sample SAS Job for Example A
sample print of work.rxlk - sorted by eventidx
Rx+event link file records (HC-51IF2)

|   EVENTIDX    |   LINKIDX    |  EVENTYPE |
|---------------|--------------|-----------|
| 700170240278  | 700170240336 | 1 MVIS    |
|               | 700170240343 | 1 MVIS    |
|               | 700170240367 | 1 MVIS    |
|               | 700170240381 | 1 MVIS    |
|               |              |           |
| 700170240285  | 700170240312 | 1 MVIS    |
|               | 700170240329 | 1 MVIS    |
|               | 700170240336 | 1 MVIS    |
|               | 700170240343 | 1 MVIS    |
|               | 700170240367 | 1 MVIS    |
|               | 700170240381 | 1 MVIS    |
|               |              |           |
| 700170240292  | 700170240312 | 1 MVIS    |
|               | 700170240329 | 1 MVIS    |
|               | 700170240336 | 1 MVIS    |
|               | 700170240343 | 1 MVIS    |
|               | 700170240367 | 1 MVIS    |
|               | 700170240381 | 1 MVIS    |
|               |              |           |
| 700170240305  | 700170240312 | 1 MVIS    |
|               | 700170240329 | 1 MVIS    |
|               | 700170240336 | 1 MVIS    |
|               | 700170240343 | 1 MVIS    |
|               | 700170240367 | 1 MVIS    |
|               | 700170240381 | 1 MVIS    |
|               |              |           |
| 700200440060  | 700200440077 | 1 MVIS    |
|               |              |           |
| 700210130019  | 700210130033 | 1 MVIS    |
|               |              |           |
| 700210270050  | 700210270074 | 1 MVIS    |
|               | 700210270081 | 1 MVIS    |
|               |              |           |
| 700210270101  | 700210270125 | 1 MVIS    |
|               | 700210270132 | 1 MVIS    |
|               |              |           |
| 700210270118  | 700210270132 | 1 MVIS    |
|               |              |           |
| 700210270156  | 700210270187 | 1 MVIS    |
|               | 700210270194 | 1 MVIS    |
|               | 700210270207 | 1 MVIS    |
|               | 700210270214 | 1 MVIS    |
|               |              |           |
| 700250170048  | 700250170055 | 1 MVIS    |
|               | 700250170062 | 1 MVIS    |
|               |              |           |
| 700250310055  | 700250310062 | 1 MVIS    |
|               | 700250310079 | 1 MVIS    |

Sample SAS Job for Example A
sample print of work.rxlk - sorted by eventidx
Rx+event link file records (HC-51IF2)

| EVENTIDX | LINKIDX | EVENTYPE |
|----------|---------|----------|
| 700250480024 | 700250480031 | 1 MVIS |
| 700280240520 | 700280240582 | 1 MVIS |
| 700280240537 | 700280240599 | 1 MVIS |
|  | 700280240602 | 1 MVIS |
|  | 700280240619 | 1 MVIS |
| 700280240544 | 700280240626 | 1 MVIS |
| 700280240551 | 700280240633 | 1 MVIS |
| 700280240575 | 700280240633 | 4 STAZ |
| 700280241218 | 700280241225 | 1 MVIS |
| 700300260145 | 700300260152 | 1 MVIS |
| 700300260241 | 700300260289 | 1 MVIS |
| 700300260258 | 700300260296 | 1 MVIS |
| 700320160339 | 700320160391 | 3 EROM |
|  | 700320160404 | 3 EROM |
|  | 700320160411 | 3 EROM |
| 700320160346 | 700320160428 | 1 MVIS |
| 700320160360 | 700320160435 | 1 MVIS |
| 700380130115 | 700380130122 | 1 MVIS |
| 700380130177 | 700380130235 | 1 MVIS |
|  | 700380130242 | 1 MVIS |
|  | 700380130259 | 1 MVIS |
| 700380130204 | 700380130273 | 1 MVIS |
| 700380250141 | 700380250292 | 1 MVIS |
| 700380250158 | 700380250305 | 1 MVIS |
| 700380250189 | 700380250292 | 1 MVIS |
| 700380250278 | 700380250305 | 4 STAZ |
| 700390180407 | 700390180414 | 6 OMED |
| 700390180541 | 700390180596 | 1 MVIS |

Sample SAS Job for Example A

Sample SAS Job for Example A
sample print of work.rxlk - sorted by eventidx
Rx+event link file records (HC-51IF2)

| EVENTIDX | LINKIDX | EVENTYPE |
|---|---|---|
| 700390180541 | 700390180609 | 1 MVIS |
| | 700390180616 | 1 MVIS |
| | 700390180623 | 1 MVIS |
| 700390180678 | 700390180743 | 5 DVIS |
| 700390180729 | 700390180736 | 6 OMED |
| 700400180037 | 700400180068 | 1 MVIS |
| 700430180041 | 700430180058 | 1 MVIS |
| 700450110312 | 700450110374 | 1 MVIS |
| 700450170070 | 700450170087 | 3 EROM |
| | 700450170094 | 3 EROM |
| 700450170107 | 700450170114 | 1 MVIS |
| | 700450170121 | 1 MVIS |
| | 700450170138 | 1 MVIS |
| 700450330225 | 700450330256 | 1 MVIS |
| 700450330294 | 700450330338 | 5 DVIS |
| | 700450330345 | 5 DVIS |

Sample SAS Job for Example A
sample print of work.pmedids - sorted by evntidx
work.rxlk records for evntidxs in work.asmvis

| EVNTIDX | LINKIDX | EVENTYPE |
|---------|---------|----------|
| 700020160244 | 700020160268 | 1 MVIS |
| 700030270153 | 700030270177 | 1 MVIS |
| 700250310055 | 700250310062 | 1 MVIS |
|  | 700250310079 | 1 MVIS |
| 700650190217 | 700650190224 | 1 MVIS |
|  | 700650190231 | 1 MVIS |
|  | 700650190248 | 1 MVIS |
|  | 700650190255 | 1 MVIS |
|  | 700650190262 | 1 MVIS |
|  | 700650190279 | 1 MVIS |
| 700710470131 | 700710470186 | 1 MVIS |
| 700710470213 | 700710470268 | 1 MVIS |
|  | 700710470275 | 1 MVIS |
|  | 700710470282 | 1 MVIS |
| 700840260136 | 700840260143 | 1 MVIS |
|  | 700840260150 | 1 MVIS |
|  | 700840260167 | 1 MVIS |
|  | 700840260174 | 1 MVIS |
|  | 700840260181 | 1 MVIS |
|  | 700840260198 | 1 MVIS |
| 700920230276 | 700920230290 | 1 MVIS |
|  | 700920230303 | 1 MVIS |
|  | 700920230310 | 1 MVIS |
| 700920230283 | 700920230290 | 1 MVIS |
|  | 700920230310 | 1 MVIS |
|  | 700920230327 | 1 MVIS |
| 701040310062 | 701040310079 | 1 MVIS |
| 701040310093 | 701040310106 | 1 MVIS |
| 701290210146 | 701290210191 | 1 MVIS |
|  | 701290210204 | 1 MVIS |
|  | 701290210211 | 1 MVIS |
|  | 701290210228 | 1 MVIS |
| 701750470078 | 701750470136 | 1 MVIS |
|  | 701750470143 | 1 MVIS |
| 701750470129 | 701750470136 | 1 MVIS |

Sample SAS Job for Example A
sample print of work.pmedids - sorted by evntidx
work.rxlk records for evntidxs in work.asmvis

| EVNTIDX | LINKIDX | EVENTYPE |
|---|---|---|
| 702140270133 | 702140270157 | 1 MVIS |
| 702630600060 | 702630600104 | 1 MVIS |
| 702970120198 | 702970120225 | 1 MVIS |
|  | 702970120232 | 1 MVIS |
|  | 702970120249 | 1 MVIS |
|  | 702970120256 | 1 MVIS |
|  | 702970120263 | 1 MVIS |
|  | 702970120270 | 1 MVIS |
| 704410120052 | 704410120090 | 1 MVIS |
| 705150120301 | 705150120370 | 1 MVIS |
|  | 705150120387 | 1 MVIS |
|  | 705150120394 | 1 MVIS |
|  | 705150120407 | 1 MVIS |
|  | 705150120414 | 1 MVIS |
|  | 705150120421 | 1 MVIS |

Sample SAS Job for Example A

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

| Obs | EVNTIDX | LINKIDX | EVENTYPE |
|-----|---------|---------|----------|
| 1 | 700020160244 | 700020160268 | 1 MVIS |
| 2 | 700030270153 | 700030270177 | 1 MVIS |
| 3 | 700250310055 | 700250310062 | 1 MVIS |
| 4 | 700250310055 | 700250310079 | 1 MVIS |
| 5 | 700650190217 | 700650190224 | 1 MVIS |
| 6 | 700650190217 | 700650190231 | 1 MVIS |
| 7 | 700650190217 | 700650190248 | 1 MVIS |
| 8 | 700650190217 | 700650190255 | 1 MVIS |
| 9 | 700650190217 | 700650190262 | 1 MVIS |
| 10 | 700650190217 | 700650190279 | 1 MVIS |
| 11 | 700710470131 | 700710470186 | 1 MVIS |
| 12 | 700710470213 | 700710470268 | 1 MVIS |
| 13 | 700710470213 | 700710470275 | 1 MVIS |
| 14 | 700710470213 | 700710470282 | 1 MVIS |
| 15 | 700840260136 | 700840260143 | 1 MVIS |
| 16 | 700840260136 | 700840260150 | 1 MVIS |
| 17 | 700840260136 | 700840260167 | 1 MVIS |
| 18 | 700840260136 | 700840260174 | 1 MVIS |
| 19 | 700840260136 | 700840260181 | 1 MVIS |
| 20 | 700840260136 | 700840260198 | 1 MVIS |
| 21 | 700920230276 | 700920230290 | 1 MVIS |
| 22 | 700920230283 | 700920230290 | 1 MVIS |
| 23 | 700920230276 | 700920230303 | 1 MVIS |
| 24 | 700920230276 | 700920230310 | 1 MVIS |
| 25 | 700920230283 | 700920230310 | 1 MVIS |
| 26 | 700920230283 | 700920230327 | 1 MVIS |
| 27 | 701040310062 | 701040310079 | 1 MVIS |
| 28 | 701040310093 | 701040310106 | 1 MVIS |
| 29 | 701290210146 | 701290210191 | 1 MVIS |
| 30 | 701290210146 | 701290210204 | 1 MVIS |
| 31 | 701290210146 | 701290210211 | 1 MVIS |
| 32 | 701290210146 | 701290210228 | 1 MVIS |
| 33 | 701750470078 | 701750470136 | 1 MVIS |
| 34 | 701750470129 | 701750470136 | 1 MVIS |
| 35 | 701750470078 | 701750470143 | 1 MVIS |
| 36 | 702140270133 | 702140270157 | 1 MVIS |
| 37 | 702630600060 | 702630600104 | 1 MVIS |
| 38 | 702970120198 | 702970120225 | 1 MVIS |
| 39 | 702970120198 | 702970120232 | 1 MVIS |
| 40 | 702970120198 | 702970120249 | 1 MVIS |
| 41 | 702970120198 | 702970120256 | 1 MVIS |
| 42 | 702970120198 | 702970120263 | 1 MVIS |
| 43 | 702970120198 | 702970120270 | 1 MVIS |
| 44 | 704410120052 | 704410120090 | 1 MVIS |
| 45 | 705150120301 | 705150120370 | 1 MVIS |
| 46 | 705150120301 | 705150120387 | 1 MVIS |
| 47 | 705150120301 | 705150120394 | 1 MVIS |
| 48 | 705150120301 | 705150120407 | 1 MVIS |
| 49 | 705150120301 | 705150120414 | 1 MVIS |
| 50 | 705150120301 | 705150120421 | 1 MVIS |

Sample SAS Job for Example A
sample print of unique linkidxs in work.pmedids

| Obs | LINKIDX |
|-----|---------|
| 1 | 700020160268 |
| 2 | 700030270177 |
| 3 | 700250310062 |
| 4 | 700250310079 |
| 5 | 700650190224 |
| 6 | 700650190231 |
| 7 | 700650190248 |
| 8 | 700650190255 |
| 9 | 700650190262 |
| 10 | 700650190279 |
| 11 | 700710470186 |
| 12 | 700710470268 |
| 13 | 700710470275 |
| 14 | 700710470282 |
| 15 | 700840260143 |
| 16 | 700840260150 |
| 17 | 700840260167 |
| 18 | 700840260174 |
| 19 | 700840260181 |
| 20 | 700840260198 |
| 21 | 700920230290 |
| 22 | 700920230303 |
| 23 | 700920230310 |
| 24 | 700920230327 |
| 25 | 701040310079 |
| 26 | 701040310106 |
| 27 | 701290210191 |
| 28 | 701290210204 |
| 29 | 701290210211 |
| 30 | 701290210228 |
| 31 | 701750470136 |
| 32 | 701750470143 |
| 33 | 702140270157 |
| 34 | 702630600104 |
| 35 | 702970120225 |
| 36 | 702970120232 |
| 37 | 702970120249 |
| 38 | 702970120256 |
| 39 | 702970120263 |
| 40 | 702970120270 |
| 41 | 704410120090 |
| 42 | 705150120370 |
| 43 | 705150120387 |
| 44 | 705150120394 |
| 45 | 705150120407 |
| 46 | 705150120414 |
| 47 | 705150120421 |
| 48 | 705150120438 |
| 49 | 705150120445 |
| 50 | 705150120452 |

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---|---|---|---|---|
| 700020160268 | 700020160268001 | MOTRIN | 12.62 | 14309.468408 |
| 700030270177 | 700030270177001 | TRIPLE ANTIBIOTIC | 3.13 | 11255.554274 |
| 700250310062 | 700250310062001 | ALBUTEROL SULFATE | 3.83 | 4141.903714 |
| 700250310079 | 700250310079001 | AMOXICILLIN | 5.28 | 4141.903714 |
| 700650190224 | 700650190224001 | CLARITIN | 60.69 | 8288.535695 |
| | 700650190224002 | CLARITIN | 60.69 | 8288.535695 |
| | 700650190224003 | CLARITIN | 62.46 | 8288.535695 |
| | 700650190224004 | CLARITIN | 60.10 | 8288.535695 |
| 700650190231 | 700650190231001 | ALBUTEROL | 17.99 | 8288.535695 |
| | 700650190231002 | ALBUTEROL | 17.99 | 8288.535695 |
| | 700650190231003 | ALBUTEROL | 16.64 | 8288.535695 |
| | 700650190231004 | ALBUTEROL | 16.64 | 8288.535695 |
| 700650190248 | 700650190248001 | FLOVENT | 54.59 | 8288.535695 |
| | 700650190248002 | FLOVENT | 54.59 | 8288.535695 |
| | 700650190248003 | FLOVENT | 54.59 | 8288.535695 |
| | 700650190248004 | FLOVENT | 54.59 | 8288.535695 |
| 700650190255 | 700650190255001 | RHINOCORT | 34.03 | 8288.535695 |
| | 700650190255002 | RHINOCORT | 34.03 | 8288.535695 |
| | 700650190255003 | RHINOCORT | 34.03 | 8288.535695 |
| | 700650190255004 | RHINOCORT | 34.03 | 8288.535695 |
| 700650190262 | 700650190262001 | VERAPAMIL HCL | 20.68 | 8288.535695 |
| | 700650190262002 | VERAPAMIL HCL | 20.68 | 8288.535695 |
| | 700650190262003 | VERAPAMIL HCL | 20.68 | 8288.535695 |
| | 700650190262004 | VERAPAMIL HCL | 20.68 | 8288.535695 |
| 700650190279 | 700650190279001 | ZESTRIL | 25.00 | 8288.535695 |
| | 700650190279002 | ZESTRIL | 25.00 | 8288.535695 |
| | 700650190279003 | ZESTRIL | 25.00 | 8288.535695 |
| | 700650190279004 | ZESTRIL | 25.00 | 8288.535695 |
| 700710470186 | 700710470186001 | SEREVENT DISKUS | 63.44 | 9015.740428 |
| | 700710470186002 | SEREVENT DISKUS | 63.44 | 9015.740428 |
| 700710470268 | 700710470268001 | AMOXIL | 10.00 | 9015.740428 |
| 700710470275 | 700710470275001 | PEDIAPRED | 22.98 | 9015.740428 |
| 700710470282 | 700710470282001 | ALBUTEROL | 18.99 | 9015.740428 |
| 700840260143 | 700840260143001 | MISOPROSTOL | 150.94 | 27728.284639 |

Sample SAS Job for Example A

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---|---|---|---|---|
| 700840260150 | 700840260150001 | LISINOPRIL | 77.37 | 27728.284639 |
| 700840260167 | 700840260167001 | SULINDAC | 55.52 | 27728.284639 |
| 700840260174 | 700840260174001 | ADALAT | 31.95 | 27728.284639 |
| 700840260181 | 700840260181001 | LEVOTHYROXINE | 15.57 | 27728.284639 |
| 700840260198 | 700840260198001 | AEROBID | 67.01 | 27728.284639 |
| 700920230290 | 700920230290001 | PREDISONE | 10.88 | 5006.337153 |
| 700920230303 | 700920230303001 | AEROCHAMBER | 30.12 | 5006.337153 |
| 700920230310 | 700920230310001 | VENTOLIN | 64.24 | 5006.337153 |
|  | 700920230310002 | VENTOLIN | 64.24 | 5006.337153 |
| 700920230327 | 700920230327001 | AZMACORT | 49.09 | 5006.337153 |
| 701040310079 | 701040310079001 | ALBUTEROL | 17.44 | 4142.210684 |
| 701040310106 | 701040310106001 | ALBUTEROL | 17.44 | 4142.210684 |
| 701290210191 | 701290210191001 | PREDNISOLONE | 7.77 | 7299.943487 |
|  | 701290210191002 | PREDNISOLONE | 7.77 | 7299.943487 |
| 701290210204 | 701290210204001 | SINGULAIR (UNIT OF USE) | 84.33 | 7299.943487 |
| 701290210211 | 701290210211001 | BECLOVENT | 134.82 | 7299.943487 |
|  | 701290210211002 | BECLOVENT | 134.82 | 7299.943487 |
|  | 701290210211003 | BECLOVENT | 134.82 | 7299.943487 |
| 701290210228 | 701290210228001 | NEBULIZER | 77.38 | 7299.943487 |
| 701750470136 | 701750470136001 | FLOVENT | 99.44 | 4668.209540 |
|  | 701750470136002 | FLOVENT | 99.44 | 4668.209540 |
| 701750470143 | 701750470143001 | ALBUTEROL | 9.65 | 4668.209540 |
| 702140270157 | 702140270157001 | VENTOLIN | 64.24 | 18941.563378 |
|  | 702140270157002 | VENTOLIN | 64.24 | 18941.563378 |
| 702630600104 | 702630600104001 | ALBUTEROL | 17.50 | 5284.005215 |
|  | 702630600104002 | ALBUTEROL | 17.50 | 5284.005215 |
|  | 702630600104003 | ALBUTEROL | 17.50 | 5284.005215 |
|  | 702630600104004 | ALBUTEROL | 17.50 | 5284.005215 |
|  | 702630600104005 | ALBUTEROL | 17.50 | 5284.005215 |
| 702970120225 | 702970120225001 | ACCOLATE | 59.34 | 15096.510751 |

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 702970120232 | 702970120232001 | PULMICORT | 217.02 | 15096.510751 |
| 702970120249 | 702970120249001 | ZYRTEC | 101.39 | 15096.510751 |
| | 702970120249002 | ZYRTEC | 54.44 | 15096.510751 |
| | 702970120249003 | ZYRTEC | 101.39 | 15096.510751 |
| | 702970120249004 | ZYRTEC | 101.39 | 15096.510751 |
| | 702970120249005 | ZYRTEC | 54.44 | 15096.510751 |
| 702970120256 | 702970120256001 | VENTOLIN | 29.02 | 15096.510751 |
| 702970120263 | 702970120263001 | PREDNISONE | 8.84 | 15096.510751 |
| | 702970120263002 | PREDNISONE | 8.84 | 15096.510751 |
| 702970120270 | 702970120270001 | METHYLPREDNISOLONE (UNIT OF USE) | 13.24 | 15096.510751 |
| 704410120090 | 704410120090001 | ROBITUSSIN | 24.19 | 3520.146263 |
| 705150120370 | 705150120370001 | PREVACID | 111.99 | 3391.455336 |
| | 705150120370002 | PREVACID | 111.99 | 3391.455336 |
| 705150120387 | 705150120387001 | SULFADIAZINE | 12.64 | 3391.455336 |
| 705150120394 | 705150120394001 | HOMATROPINE/HYDROCODONE | 5.43 | 3391.455336 |
| 705150120407 | 705150120407001 | BIAXIN | 72.68 | 3391.455336 |
| 705150120414 | 705150120414001 | PATANOL | 59.99 | 3391.455336 |
| 705150120421 | 705150120421001 | FLONASE | 50.48 | 3391.455336 |
| 705150120438 | 705150120438001 | PRAVACHOL | 335.80 | 3391.455336 |
| 705150120445 | 705150120445001 | PREDNISONE | 6.98 | 3391.455336 |
| 705150120452 | 705150120452001 | ZYRTEC | 17.86 | 3391.455336 |
| 705150120469 | 705150120469001 | ALLEGRA-D | 64.36 | 3391.455336 |
| 705150120476 | 705150120476001 | CROMOLYN | 24.34 | 3391.455336 |
| 705150120483 | 705150120483001 | LIVOSTIN | 39.41 | 3391.455336 |
| 705480280394 | 705480280394001 | ESTRATAB | 16.78 | 13477.023448 |
| 705700290103 | 705700290103001 | Z-PAK | 37.27 | 26722.792484 |
| 705700290110 | 705700290110001 | CLARITIN | 69.34 | 26722.792484 |
| 705700290127 | 705700290127001 | RELION/NOVO | 15.00 | 26722.792484 |

Sample SAS Job for Example A

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 705820230790 | 705820230790001 | PREDNISONE | 6.05 | 16052.116072 |
| | 705820230790002 | PREDNISONE | 6.05 | 16052.116072 |
| | 705820230790003 | PREDNISONE | 6.05 | 16052.116072 |
| 705960430170 | 705960430170001 | PREDNISONE | 3.90 | 659.650918 |
| 705960430187 | 705960430187001 | ALBUTEROL | 16.37 | 659.650918 |
| 705960430194 | 705960430194001 | FLOVENT | 59.13 | 659.650918 |
| 706130120050 | 706130120050001 | Ibuprofen | 18.67 | 15913.710072 |
| 706130120067 | 706130120067001 | ALBUTEROL | 42.88 | 15913.710072 |
| 706220240568 | 706220240568001 | ALLEGRA | 49.44 | 17318.346064 |
| 706220240575 | 706220240575001 | FLOVENT | 63.57 | 17318.346064 |
| 706220240582 | 706220240582001 | ALBUTEROL | 28.97 | 17318.346064 |
| 706440430073 | 706440430073001 | PROPOXY-N W/APAP | 15.19 | 6825.819171 |
| | 706440430073002 | PROPOXY-N W/APAP | 15.19 | 6825.819171 |
| 706440430080 | 706440430080001 | PROMETHAZINE DM | 3.49 | 6825.819171 |
| | 706440430080002 | PROMETHAZINE DM | 3.49 | 6825.819171 |
| 706440430131 | 706440430131001 | PROMETHAZINE DM | 3.49 | 6825.819171 |
| 706440430148 | 706440430148001 | CEFTIN | 65.56 | 6825.819171 |
| 706970200685 | 706970200685001 | KLONOPIN | 33.03 | 6486.389241 |
| | 706970200685002 | KLONOPIN | 36.87 | 6486.389241 |
| | 706970200685003 | KLONOPIN | 36.87 | 6486.389241 |
| 706970200692 | 706970200692001 | UNIPHYL | 6.98 | 6486.389241 |
| | 706970200692002 | UNIPHYL | 6.98 | 6486.389241 |
| | 706970200692003 | UNIPHYL | 6.98 | 6486.389241 |
| | 706970200692004 | UNIPHYL | 6.98 | 6486.389241 |
| 706970200705 | 706970200705001 | KLONOPIN | 37.80 | 6486.389241 |
| | 706970200705002 | KLONOPIN | 37.80 | 6486.389241 |
| | 706970200705003 | KLONOPIN | 37.80 | 6486.389241 |
| | 706970200705004 | KLONOPIN | 37.80 | 6486.389241 |
| 707140430404 | 707140430404001 | HISTINEX DM (A.F., S.F.,BERRY) | 9.29 | 14053.576563 |
| 707610340089 | 707610340089001 | ALBUTEROL | 6.37 | 15037.945696 |
| 707610340096 | 707610340096001 | INTAL | 48.27 | 15037.945696 |

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 707610340109 | 707610340109001 | VISINE A EYE DROPS | 13.13 | 15037.945696 |
| 707610340130 | 707610340130001 | VICKS VAPOR RUB | 9.19 | 15037.945696 |
| 707740290101 | 707740290101001 | PROVENTIL HFA (M.D.I.) | 30.44 | 7688.745440 |
| 707740290118 | 707740290118001 | PULMICORT | 119.10 | 7688.745440 |
| 707740290170 | 707740290170001 | MINOCYCLINE | 37.50 | 7688.745440 |
| 707740290187 | 707740290187001 | HYDROCORTISONE VALERATE | 31.16 | 7688.745440 |
| 707740290194 | 707740290194001 | PROVENTIL HFA (M.D.I.) | 30.44 | 7688.745440 |
| 707740290207 | 707740290207001 | BIAXIN FILMTAB | 75.30 | 7688.745440 |
| 707740290214 | 707740290214001 | APAP/HYDROCODONE BITARTRATE | 9.53 | 7688.745440 |
| 707740290221 | 707740290221001 | PULMICORT | 119.10 | 7688.745440 |
| 707740290238 | 707740290238001 | CLARITIN-D | 39.07 | 7688.745440 |
| 707740360194 | 707740360194001 | PANFIL G | 87.63 | 7631.214436 |
| 707740360207 | 707740360207001 | PREDNISOLONE | 9.56 | 7631.214436 |
| 707740430101 | 707740430101001 | PANFIL G | 28.98 | 7381.782920 |
| 707740430118 | 707740430118001 | ZITHROMAX | 34.85 | 7381.782920 |
| 707740430132 | 707740430132001 | XOPENEX (P.F.) | 179.50 | 7381.782920 |
| 708190130432 | 708190130432001 | ALBUTEROL | 31.74 | 16932.495560 |
| 709600400116 | 709600400116001 | ALBUTEROL | 10.42 | 3403.718615 |
| 709600400243 | 709600400243001 | BIAXIN FILMTAB | 67.94 | 3403.718615 |
| 709600400250 | 709600400250001 | ALBUTEROL INHALER | 21.50 | 3403.718615 |
| 709600400267 | 709600400267001 | FLOVENT | 42.67 | 3403.718615 |
| 709600400274 | 709600400274001 | CROMOLYN SODIUM (VIAL) | 31.93 | 3403.718615 |
| 709600400281 | 709600400281001 | ALBUTEROL SULFATE | 9.37 | 3403.718615 |
| 709940230949 | 709940230949001 | NASONEX | 47.32 | 8301.175199 |
| 709940230956 | 709940230956001 | PREDNISONE | 4.37 | 8301.175199 |

Sample SAS Job for Example A

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 710310170212 | 710310170212001 | CLARITIN-D | 71.68 | 13053.216890 |
| 710310170229 | 710310170229001 | TEQUIN | 43.99 | 13053.216890 |
| 711550170396 | 711550170396001 | ALPRAZOLAM | 28.91 | 3792.271371 |
|  | 711550170396002 | ALPRAZOLAM | 28.91 | 3792.271371 |
|  | 711550170396003 | ALPRAZOLAM | 28.91 | 3792.271371 |
|  | 711550170396004 | ALPRAZOLAM | 28.91 | 3792.271371 |
| 711550170409 | 711550170409001 | ACCOLATE | 44.69 | 3792.271371 |
|  | 711550170409002 | ACCOLATE | 44.69 | 3792.271371 |
| 711550170416 | 711550170416001 | PREDNISONE | 9.98 | 3792.271371 |
|  | 711550170416002 | PREDNISONE | 9.98 | 3792.271371 |
| 711550170447 | 711550170447001 | LOTREL | 80.69 | 3792.271371 |
|  | 711550170447002 | LOTREL | 74.69 | 3792.271371 |
|  | 711550170447003 | LOTREL | 80.69 | 3792.271371 |
|  | 711550170447004 | LOTREL | 74.69 | 3792.271371 |
| 711550170454 | 711550170454001 | ALBUTEROL | 28.98 | 3792.271371 |
|  | 711550170454002 | ALBUTEROL | 28.98 | 3792.271371 |
|  | 711550170454003 | ALBUTEROL | 28.98 | 3792.271371 |
| 711550170529 | 711550170529001 | LOTREL | 80.69 | 3792.271371 |
|  | 711550170529002 | LOTREL | 80.69 | 3792.271371 |
|  | 711550170529003 | LOTREL | 80.69 | 3792.271371 |
| 711550170536 | 711550170536001 | ALPRAZOLAM | 22.83 | 3792.271371 |
|  | 711550170536002 | ALPRAZOLAM | 22.83 | 3792.271371 |
|  | 711550170536003 | ALPRAZOLAM | 22.83 | 3792.271371 |
| 711550170543 | 711550170543001 | PREDNISONE | 9.98 | 3792.271371 |
|  | 711550170543002 | PREDNISONE | 9.98 | 3792.271371 |
|  | 711550170543003 | PREDNISONE | 9.98 | 3792.271371 |
| 711550170550 | 711550170550001 | AEROCHAMBER | 31.63 | 3792.271371 |
|  | 711550170550002 | AEROCHAMBER | 31.63 | 3792.271371 |
|  | 711550170550003 | AEROCHAMBER | 31.63 | 3792.271371 |
| 711550170567 | 711550170567001 | ACCOLATE | 46.69 | 3792.271371 |
|  | 711550170567002 | ACCOLATE | 46.69 | 3792.271371 |
|  | 711550170567003 | ACCOLATE | 46.69 | 3792.271371 |
| 711550170574 | 711550170574001 | LOPERAMIDE HCL | 23.98 | 3792.271371 |
|  | 711550170574002 | LOPERAMIDE HCL | 23.98 | 3792.271371 |
|  | 711550170574003 | LOPERAMIDE HCL | 23.98 | 3792.271371 |
| 712370190686 | 712370190686001 | PULMICORT | 119.10 | 4557.939313 |

Sample SAS Job for Example A

Sample SAS Job for Example A
sample print of work.mvpmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 712370190686 | 712370190686002 | PULMICORT | 119.10 | 4557.939313 |
| | 712370190686003 | PULMICORT | 119.10 | 4557.939313 |
| 713630160110 | 713630160110001 | PROVENTIL HFA (M.D.I.) | 33.43 | 15294.859620 |
| | 713630160110002 | PROVENTIL HFA (M.D.I.) | 33.43 | 15294.859620 |
| | 713630160110003 | PROVENTIL HFA (M.D.I.) | 33.43 | 15294.859620 |
| 713650180537 | 713650180537001 | ZESTORETIC | 39.19 | 5442.223911 |
| | 713650180537002 | ZESTORETIC | 39.19 | 5442.223911 |
| | 713650180537003 | ZESTORETIC | 39.19 | 5442.223911 |
| | 713650180537004 | ZESTORETIC | 39.19 | 5442.223911 |
| 713650180575 | 713650180575001 | PRAVACHOL | 195.25 | 5442.223911 |
| | 713650180575002 | PRAVACHOL | 195.25 | 5442.223911 |
| | 713650180575003 | PRAVACHOL | 195.25 | 5442.223911 |
| 713650180619 | 713650180619001 | FLOVENT | 55.46 | 5442.223911 |
| | 713650180619002 | FLOVENT | 55.46 | 5442.223911 |
| | 713650180619003 | FLOVENT | 55.46 | 5442.223911 |
| | 713650180619004 | FLOVENT | 55.46 | 5442.223911 |

Sample SAS Job for Example A

Sample SAS Job for Example A
Total Rx expenditures associated with medical visits (excluding telephone) for asthma

The MEANS Procedure

Analysis Variable : RXXP00X SUM OF PAYMENTS RXSF00X-RXOU00X(IMPUTED)

```
              N           Sum
      --------------------
      3351       160483.82
      --------------------
```

Sample SAS Job for Example A

Sample SAS Job for Example A
Total Rx expenditures associated with medical visits (excluding telephone) for asthma


Weighted


The MEANS Procedure

Analysis Variable : RXXP00X SUM OF PAYMENTS RXSF00X-RXOU00X(IMPUTED)


```
        N           Sum
-------------------------
      3351      1702472286
-------------------------
```

```
NOTE: Copyright (c) 1999-2001 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 8.2 (TS2M0)
      Licensed to SOCIAL & SCIENTIFIC SYSTEMS INC/AHRQ, Site 0038838053.
NOTE: This session is executing on the WIN_95  platform.



NOTE: SAS initialization used:
      real time           4.67 seconds

1           OPTIONS LS=132 PS=59;
2
3           TITLE1 "HC-051I";
4           TITLE2 'Sample SAS Job for Example B';
5
6           LIBNAME IN 'C:\data';
NOTE: Directory for library IN contains files of mixed engine types.
NOTE: Libref IN was successfully assigned as follows:
      Engine:        V8
      Physical Name: C:\data
7
8           ********************************************************************************
9           * Calculate the expenditures for prescribed medicines associated with asthma.
10          *******************************************************************************;
11          PROC FORMAT;
12            VALUE EVENTYPE
13                1 = "1 MVIS"
14                2 = "2 OPAT"
15                3 = "3 EROM"
16                4 = "4 STAZ"
17                5 = "5 DVIS"
18                6 = "6 OMED"
19                7 = "7 HVIS"
20                8 = "8 PMED";
NOTE: Format EVENTYPE has been output.
21        RUN;

NOTE: PROCEDURE FORMAT used:
      real time           0.26 seconds


22
23          *-------------------------------------------------------------------------------
24          * Get condition records coded as asthma.
25          *------------------------------------------------------------------------------;
26          DATA ASCONDS;
27            SET IN.H52 (KEEP=CONDIDX CCCODEX);
28            IF CCCODEX="128";
29        RUN;

NOTE: There were 72624 observations read from the data set IN.H52.
NOTE: The data set WORK.ASCONDS has 1156 observations and 2 variables.
NOTE: DATA statement used:
      real time           9.00 seconds


30
```

```
31          *------------------------------------------------------------------------
32          * Get the events linked to each of the asthma condition records.
33          *-----------------------------------------------------------------------;
34          PROC SORT DATA=ASCONDS; BY CONDIDX; RUN;
```

NOTE: There were 1156 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCONDS has 1156 observations and 2 variables.
NOTE: PROCEDURE SORT used:
      real time           0.15 seconds


```
35
36          proc print data=asconds (obs=50);
37            title3 "sample print of work.asconds - sorted by condidx";
38            title4 "COND (H52) records where cccodex=128";
39          run;
```

NOTE: There were 50 observations read from the data set WORK.ASCONDS.
NOTE: The PROCEDURE PRINT printed page 1.
NOTE: PROCEDURE PRINT used:
      real time           0.44 seconds


```
40
41          PROC SORT DATA=IN.H51IF1 OUT=CLNK; BY CONDIDX; RUN;
```

NOTE: There were 217414 observations read from the data set IN.H51IF1.
NOTE: The data set WORK.CLNK has 217414 observations and 5 variables.
NOTE: PROCEDURE SORT used:
      real time           6.98 seconds


```
42
43          DATA ASCLNKS;
44            MERGE CLNK   (IN=INCLNK   KEEP=CONDIDX EVNTIDX EVENTYPE)
45                  ASCONDS(IN=INASCOND KEEP=CONDIDX);
46            BY CONDIDX;
47            IF INCLNK & INASCOND;
48          RUN;
```

NOTE: There were 217414 observations read from the data set WORK.CLNK.
NOTE: There were 1156 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCLNKS has 4737 observations and 3 variables.
NOTE: DATA statement used:
      real time           3.40 seconds


```
49
50          proc print data=asclnks (obs=75);
51            by condidx;
52            id condidx;
53            format eventype eventype.;
54            title3 "sample print of work.asclnks - sorted by condidx";
55            title4 "events linked to asthma condition records";
56          run;
```

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

```
NOTE: The PROCEDURE PRINT printed pages 2-3.
NOTE: PROCEDURE PRINT used:
      real time           0.32 seconds


57
58          PROC SORT DATA=ASCLNKS; BY EVNTIDX; RUN;

NOTE: There were 4737 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 4737 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time           0.05 seconds


59
60          proc print data=asclnks (obs=50);
61            format eventype eventype.;
62            title3 "sample print of work.asclnks - sorted by evntidx";
63          run;

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


64
65          DATA ASCLNKS;
66            SET ASCLNKS (KEEP=EVNTIDX EVENTYPE);
67            BY EVNTIDX;
68            IF FIRST.EVNTIDX;
69          RUN;

NOTE: There were 4737 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 4712 observations and 2 variables.
NOTE: DATA statement used:
      real time           0.05 seconds


70
71          proc print data=asclnks (obs=50);
72            format eventype eventype.;
73            title3 "sample print of unique evntidxs from work.asclnks";
74          run;

NOTE: There were 50 observations read from the data set WORK.ASCLNKS.
NOTE: The PROCEDURE PRINT printed page 5.
NOTE: PROCEDURE PRINT used:
      real time           0.04 seconds


75
76          *-----------------------------------------------------------------------------
77          * Get PMED records linked to asthma condition records.
78          *-----------------------------------------------------------------------------;
79          PROC SORT DATA=IN.H51A OUT=PMED; BY LINKIDX; RUN;
```

```
NOTE: There were 182677 observations read from the data set IN.H51A.
NOTE: The data set WORK.PMED has 182677 observations and 52 variables.
NOTE: PROCEDURE SORT used:
      real time            1:30.07


80
81          DATA ASPMEDS;
82            MERGE PMED (KEEP=LINKIDX RXRECIDX RXNAME RXXP00X  PERWT00F)
83                  ASCLNKS (IN=INASCLNK KEEP=EVNTIDX RENAME=(EVNTIDX=LINKIDX));
84            BY LINKIDX;
85            IF INASCLNK & PERWT00F>0;
86          RUN;

NOTE: There were 182677 observations read from the data set WORK.PMED.
NOTE: There were 4712 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASPMEDS has 6307 observations and 5 variables.
NOTE: DATA statement used:
      real time            23.62 seconds


87
88          proc print data=aspmeds (obs=300);
89            by linkidx;
90            id linkidx;
91            var rxrecidx rxname RXXP00X  PERWT00F;
92            title3 "sample print of work.aspmeds";
93            title4 "PMED (HC-051A) records which link to condition records coded as asthma";
94          run;

NOTE: There were 300 observations read from the data set WORK.ASPMEDS.
NOTE: The PROCEDURE PRINT printed pages 6-15.
NOTE: PROCEDURE PRINT used:
      real time            0.04 seconds


95
96          PROC MEANS DATA=ASPMEDS N SUM;
97            VAR RXXP00X;
98            TITLE3 "Total Rx expenditures associated with asthma";
99          RUN;

NOTE: There were 6307 observations read from the data set WORK.ASPMEDS.
NOTE: The PROCEDURE MEANS printed page 16.
NOTE: PROCEDURE MEANS used:
      real time            0.50 seconds


100
101         PROC MEANS DATA=ASPMEDS N SUM;
102           VAR RXXP00X;
103           WEIGHT PERWT00F;
104           TITLE3 "Total Rx expenditures associated with asthma";
105           TITLE5 "Weighted";
106         RUN;

NOTE: There were 6307 observations read from the data set WORK.ASPMEDS.
```

```
NOTE: The PROCEDURE MEANS printed page 17.
NOTE: PROCEDURE MEANS used:
      real time           0.04 seconds


107
108


NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414
NOTE: The SAS System used:
      real time           2:20.39
```

Sample SAS Job for Example B
sample print of work.asconds - sorted by condidx
COND (H52) records where cccodex=128

| Obs | CONDIDX | CCCODEX |
|-----|---------|---------|
| 1 | 700020160021 | 128 |
| 2 | 700030270103 | 128 |
| 3 | 700160460057 | 128 |
| 4 | 700250310022 | 128 |
| 5 | 700400180023 | 128 |
| 6 | 700600150036 | 128 |
| 7 | 700620410027 | 128 |
| 8 | 700650190014 | 128 |
| 9 | 700710230197 | 128 |
| 10 | 700710470076 | 128 |
| 11 | 700710470139 | 128 |
| 12 | 700710470220 | 128 |
| 13 | 700840260044 | 128 |
| 14 | 700920230022 | 128 |
| 15 | 700920230072 | 128 |
| 16 | 701040310031 | 128 |
| 17 | 701070510018 | 128 |
| 18 | 701290210090 | 128 |
| 19 | 701750470029 | 128 |
| 20 | 701790470012 | 128 |
| 21 | 701860280028 | 128 |
| 22 | 701950340024 | 128 |
| 23 | 702140270063 | 128 |
| 24 | 702140410061 | 128 |
| 25 | 702470440015 | 128 |
| 26 | 702510110017 | 128 |
| 27 | 702630600025 | 128 |
| 28 | 702800530017 | 128 |
| 29 | 702800600016 | 128 |
| 30 | 702970120037 | 128 |
| 31 | 703290450025 | 128 |
| 32 | 703480330115 | 128 |
| 33 | 703620260038 | 128 |
| 34 | 703720350022 | 128 |
| 35 | 703740330010 | 128 |
| 36 | 703760300019 | 128 |
| 37 | 704370650012 | 128 |
| 38 | 704410120049 | 128 |
| 39 | 704460370015 | 128 |
| 40 | 704650140053 | 128 |
| 41 | 705050370023 | 128 |
| 42 | 705050440022 | 128 |
| 43 | 705150120020 | 128 |
| 44 | 705300280039 | 128 |
| 45 | 705330450013 | 128 |
| 46 | 705380510029 | 128 |
| 47 | 705420300016 | 128 |
| 48 | 705440380013 | 128 |
| 49 | 705480280016 | 128 |
| 50 | 705560320026 | 128 |

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

| CONDIDX | EVNTIDX | EVENTYPE |
|---|---|---|
| 700020160021 | 700020160244 | 1 MVIS |
| | | |
| 700030270103 | 700030270153 | 1 MVIS |
| | | |
| 700160460057 | 700160460349 | 3 EROM |
| | 700160460356 | 8 PMED |
| | | |
| 700250310022 | 700250310055 | 1 MVIS |
| | 700250310062 | 8 PMED |
| | | |
| 700400180023 | 700400180068 | 8 PMED |
| | | |
| 700600150036 | 700600150096 | 8 PMED |
| | 700600150109 | 8 PMED |
| | 700600150123 | 8 PMED |
| | 700600150130 | 8 PMED |
| | 700600150178 | 8 PMED |
| | 700600150185 | 8 PMED |
| | | |
| 700650190014 | 700650190159 | 8 PMED |
| | 700650190166 | 8 PMED |
| | 700650190197 | 8 PMED |
| | 700650190217 | 1 MVIS |
| | 700650190231 | 8 PMED |
| | 700650190248 | 8 PMED |
| | 700650190286 | 8 PMED |
| | 700650190293 | 8 PMED |
| | 700650190306 | 8 PMED |
| | | |
| 700710470139 | 700710470131 | 1 MVIS |
| | 700710470148 | 1 MVIS |
| | 700710470186 | 8 PMED |
| | 700710470244 | 8 PMED |
| | 700710470282 | 8 PMED |
| | 700710470302 | 8 PMED |
| | | |
| 700710470220 | 700710470213 | 1 MVIS |
| | 700710470268 | 8 PMED |
| | 700710470275 | 8 PMED |
| | | |
| 700840260044 | 700840260136 | 1 MVIS |
| | 700840260198 | 8 PMED |
| | 700840260287 | 8 PMED |
| | | |
| 700920230022 | 700920230207 | 1 MVIS |
| | 700920230214 | 1 MVIS |
| | 700920230221 | 1 MVIS |
| | 700920230238 | 8 PMED |
| | 700920230269 | 8 PMED |

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

| CONDIDX | EVNTIDX | EVENTYPE |
|---------|---------|----------|
| 700920230072 | 700920230276 | 1 MVIS |
|  | 700920230283 | 1 MVIS |
|  | 700920230290 | 8 PMED |
|  | 700920230303 | 8 PMED |
|  | 700920230310 | 8 PMED |
|  | 700920230327 | 8 PMED |
| 701040310031 | 701040310062 | 1 MVIS |
|  | 701040310079 | 8 PMED |
|  | 701040310093 | 1 MVIS |
|  | 701040310106 | 8 PMED |
| 701290210090 | 701290210146 | 1 MVIS |
|  | 701290210153 | 1 MVIS |
|  | 701290210160 | 1 MVIS |
|  | 701290210177 | 1 MVIS |
|  | 701290210184 | 1 MVIS |
|  | 701290210191 | 8 PMED |
|  | 701290210204 | 8 PMED |
|  | 701290210211 | 8 PMED |
|  | 701290210228 | 8 PMED |
| 701750470029 | 701750470078 | 1 MVIS |
|  | 701750470085 | 1 MVIS |
|  | 701750470092 | 1 MVIS |
|  | 701750470105 | 1 MVIS |
|  | 701750470112 | 1 MVIS |
|  | 701750470129 | 1 MVIS |
|  | 701750470136 | 8 PMED |
|  | 701750470143 | 8 PMED |
|  | 701750470150 | 8 PMED |
| 701790470012 | 701790470202 | 8 PMED |
| 701950340024 | 701950340049 | 8 PMED |
|  | 701950340056 | 8 PMED |
| 702140270063 | 702140270133 | 1 MVIS |
|  | 702140270157 | 8 PMED |
| 702140410061 | 702140410133 | 1 MVIS |
| 702510110017 | 702510110257 | 1 MVIS |
|  | 702510110264 | 1 MVIS |

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

| Obs | CONDIDX | EVNTIDX | EVENTYPE |
|-----|---------|---------|----------|
| 1 | 700020160021 | 700020160244 | 1 MVIS |
| 2 | 700030270103 | 700030270153 | 1 MVIS |
| 3 | 700160460057 | 700160460349 | 3 EROM |
| 4 | 700160460057 | 700160460356 | 8 PMED |
| 5 | 700250310022 | 700250310055 | 1 MVIS |
| 6 | 700250310022 | 700250310062 | 8 PMED |
| 7 | 700400180023 | 700400180068 | 8 PMED |
| 8 | 700600150036 | 700600150096 | 8 PMED |
| 9 | 700600150036 | 700600150109 | 8 PMED |
| 10 | 700600150036 | 700600150123 | 8 PMED |
| 11 | 700600150036 | 700600150130 | 8 PMED |
| 12 | 700600150036 | 700600150178 | 8 PMED |
| 13 | 700600150036 | 700600150185 | 8 PMED |
| 14 | 700650190014 | 700650190159 | 8 PMED |
| 15 | 700650190014 | 700650190166 | 8 PMED |
| 16 | 700650190014 | 700650190197 | 8 PMED |
| 17 | 700650190014 | 700650190217 | 1 MVIS |
| 18 | 700650190014 | 700650190231 | 8 PMED |
| 19 | 700650190014 | 700650190248 | 8 PMED |
| 20 | 700650190014 | 700650190286 | 8 PMED |
| 21 | 700650190014 | 700650190293 | 8 PMED |
| 22 | 700650190014 | 700650190306 | 8 PMED |
| 23 | 700710470139 | 700710470131 | 1 MVIS |
| 24 | 700710470139 | 700710470148 | 1 MVIS |
| 25 | 700710470139 | 700710470186 | 8 PMED |
| 26 | 700710470220 | 700710470213 | 1 MVIS |
| 27 | 700710470139 | 700710470244 | 8 PMED |
| 28 | 700710470220 | 700710470268 | 8 PMED |
| 29 | 700710470220 | 700710470275 | 8 PMED |
| 30 | 700710470139 | 700710470282 | 8 PMED |
| 31 | 700710470139 | 700710470302 | 8 PMED |
| 32 | 700840260044 | 700840260136 | 1 MVIS |
| 33 | 700840260044 | 700840260198 | 8 PMED |
| 34 | 700840260044 | 700840260287 | 8 PMED |
| 35 | 700920230022 | 700920230207 | 1 MVIS |
| 36 | 700920230022 | 700920230214 | 1 MVIS |
| 37 | 700920230022 | 700920230221 | 1 MVIS |
| 38 | 700920230022 | 700920230238 | 8 PMED |
| 39 | 700920230022 | 700920230269 | 8 PMED |
| 40 | 700920230072 | 700920230276 | 1 MVIS |
| 41 | 700920230072 | 700920230283 | 1 MVIS |
| 42 | 700920230072 | 700920230290 | 8 PMED |
| 43 | 700920230072 | 700920230303 | 8 PMED |
| 44 | 700920230072 | 700920230310 | 8 PMED |
| 45 | 700920230072 | 700920230327 | 8 PMED |
| 46 | 701040310031 | 701040310062 | 1 MVIS |
| 47 | 701040310031 | 701040310079 | 8 PMED |
| 48 | 701040310031 | 701040310093 | 1 MVIS |
| 49 | 701040310031 | 701040310106 | 8 PMED |
| 50 | 701290210090 | 701290210146 | 1 MVIS |

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

| Obs | EVNTIDX | EVENTYPE |
|-----|---------|----------|
| 1 | 700020160244 | 1 MVIS |
| 2 | 700030270153 | 1 MVIS |
| 3 | 700160460349 | 3 EROM |
| 4 | 700160460356 | 8 PMED |
| 5 | 700250310055 | 1 MVIS |
| 6 | 700250310062 | 8 PMED |
| 7 | 700400180068 | 8 PMED |
| 8 | 700600150096 | 8 PMED |
| 9 | 700600150109 | 8 PMED |
| 10 | 700600150123 | 8 PMED |
| 11 | 700600150130 | 8 PMED |
| 12 | 700600150178 | 8 PMED |
| 13 | 700600150185 | 8 PMED |
| 14 | 700650190159 | 8 PMED |
| 15 | 700650190166 | 8 PMED |
| 16 | 700650190197 | 8 PMED |
| 17 | 700650190217 | 1 MVIS |
| 18 | 700650190231 | 8 PMED |
| 19 | 700650190248 | 8 PMED |
| 20 | 700650190286 | 8 PMED |
| 21 | 700650190293 | 8 PMED |
| 22 | 700650190306 | 8 PMED |
| 23 | 700710470131 | 1 MVIS |
| 24 | 700710470148 | 1 MVIS |
| 25 | 700710470186 | 8 PMED |
| 26 | 700710470213 | 1 MVIS |
| 27 | 700710470244 | 8 PMED |
| 28 | 700710470268 | 8 PMED |
| 29 | 700710470275 | 8 PMED |
| 30 | 700710470282 | 8 PMED |
| 31 | 700710470302 | 8 PMED |
| 32 | 700840260136 | 1 MVIS |
| 33 | 700840260198 | 8 PMED |
| 34 | 700840260287 | 8 PMED |
| 35 | 700920230207 | 1 MVIS |
| 36 | 700920230214 | 1 MVIS |
| 37 | 700920230221 | 1 MVIS |
| 38 | 700920230238 | 8 PMED |
| 39 | 700920230269 | 8 PMED |
| 40 | 700920230276 | 1 MVIS |
| 41 | 700920230283 | 1 MVIS |
| 42 | 700920230290 | 8 PMED |
| 43 | 700920230303 | 8 PMED |
| 44 | 700920230310 | 8 PMED |
| 45 | 700920230327 | 8 PMED |
| 46 | 701040310062 | 1 MVIS |
| 47 | 701040310079 | 8 PMED |
| 48 | 701040310093 | 1 MVIS |
| 49 | 701040310106 | 8 PMED |
| 50 | 701290210146 | 1 MVIS |

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-051A) records which link to condition records coded as asthma

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 700160460356 | 700160460356001 | ALBUTEROL INHALER | 21.50 | 2266.249744 |
|  | 700160460356002 | ALBUTEROL INHALER | 21.50 | 2266.249744 |
| 700250310062 | 700250310062001 | ALBUTEROL SULFATE | 3.83 | 4141.903714 |
| 700400180068 | 700400180068001 | ALBUTEROL | 21.41 | 21060.815185 |
| 700600150096 | 700600150096001 | FLOVENT | 46.94 | 33813.691425 |
|  | 700600150096002 | FLOVENT | 46.94 | 33813.691425 |
|  | 700600150096003 | FLOVENT | 46.94 | 33813.691425 |
|  | 700600150096004 | FLOVENT | 46.94 | 33813.691425 |
|  | 700600150096005 | FLOVENT | 46.94 | 33813.691425 |
| 700600150109 | 700600150109001 | ALBUTEROL | 21.43 | 33813.691425 |
| 700600150123 | 700600150123001 | FLOVENT | 198.88 | 33813.691425 |
| 700600150130 | 700600150130001 | ALBUTEROL | 21.41 | 33813.691425 |
| 700600150178 | 700600150178001 | FLOVENT | 46.94 | 33813.691425 |
| 700600150185 | 700600150185001 | ALBUTEROL | 21.41 | 33813.691425 |
| 700650190159 | 700650190159001 | CLARITIN | 58.96 | 8288.535695 |
| 700650190166 | 700650190166001 | ALBUTEROL | 6.37 | 8288.535695 |
|  | 700650190166002 | ALBUTEROL | 6.37 | 8288.535695 |
| 700650190197 | 700650190197001 | VERAPAMIL HCL | 20.68 | 8288.535695 |
|  | 700650190197002 | VERAPAMIL HCL | 20.68 | 8288.535695 |
| 700650190231 | 700650190231001 | ALBUTEROL | 17.99 | 8288.535695 |
|  | 700650190231002 | ALBUTEROL | 17.99 | 8288.535695 |
|  | 700650190231003 | ALBUTEROL | 16.64 | 8288.535695 |
|  | 700650190231004 | ALBUTEROL | 16.64 | 8288.535695 |
| 700650190248 | 700650190248001 | FLOVENT | 54.59 | 8288.535695 |
|  | 700650190248002 | FLOVENT | 54.59 | 8288.535695 |
|  | 700650190248003 | FLOVENT | 54.59 | 8288.535695 |
|  | 700650190248004 | FLOVENT | 54.59 | 8288.535695 |
| 700650190286 | 700650190286001 | ALBUTEROL | 21.41 | 8288.535695 |
| 700650190293 | 700650190293001 | CLARITIN | 62.71 | 8288.535695 |
| 700650190306 | 700650190306001 | VERAPAMIL HCL | 76.20 | 8288.535695 |
|  | 700650190306002 | VERAPAMIL HCL | 76.20 | 8288.535695 |
| 700710470186 | 700710470186001 | SEREVENT DISKUS | 63.44 | 9015.740428 |

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-051A) records which link to condition records coded as asthma

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 700710470186 | 700710470186002 | SEREVENT DISKUS | 63.44 | 9015.740428 |
| 700710470244 | 700710470244001 | SEREVENT DISKUS | 63.44 | 9015.740428 |
| 700710470268 | 700710470268001 | AMOXIL | 10.00 | 9015.740428 |
| 700710470275 | 700710470275001 | PEDIAPRED | 22.98 | 9015.740428 |
| 700710470282 | 700710470282001 | ALBUTEROL | 18.99 | 9015.740428 |
| 700710470302 | 700710470302001 | CLARITIN | 59.11 | 9015.740428 |
| 700840260198 | 700840260198001 | AEROBID | 67.01 | 27728.284639 |
| 700840260287 | 700840260287001 | FLUNISOLIDE | 9.57 | 27728.284639 |
| | 700840260287002 | FLUNISOLIDE | 9.57 | 27728.284639 |
| 700920230238 | 700920230238001 | VENTOLIN | 7.23 | 5006.337153 |
| | 700920230238002 | VENTOLIN | 7.23 | 5006.337153 |
| 700920230269 | 700920230269001 | VENTOLIN | 7.23 | 5006.337153 |
| 700920230290 | 700920230290001 | PREDISONE | 10.88 | 5006.337153 |
| 700920230303 | 700920230303001 | AEROCHAMBER | 30.12 | 5006.337153 |
| 700920230310 | 700920230310001 | VENTOLIN | 64.24 | 5006.337153 |
| | 700920230310002 | VENTOLIN | 64.24 | 5006.337153 |
| 700920230327 | 700920230327001 | AZMACORT | 49.09 | 5006.337153 |
| 701040310079 | 701040310079001 | ALBUTEROL | 17.44 | 4142.210684 |
| 701040310106 | 701040310106001 | ALBUTEROL | 17.44 | 4142.210684 |
| 701290210191 | 701290210191001 | PREDNISOLONE | 7.77 | 7299.943487 |
| | 701290210191002 | PREDNISOLONE | 7.77 | 7299.943487 |
| 701290210204 | 701290210204001 | SINGULAIR (UNIT OF USE) | 84.33 | 7299.943487 |
| 701290210211 | 701290210211001 | BECLOVENT | 134.82 | 7299.943487 |
| | 701290210211002 | BECLOVENT | 134.82 | 7299.943487 |
| | 701290210211003 | BECLOVENT | 134.82 | 7299.943487 |
| 701290210228 | 701290210228001 | NEBULIZER | 77.38 | 7299.943487 |
| 701750470136 | 701750470136001 | FLOVENT | 99.44 | 4668.209540 |
| | 701750470136002 | FLOVENT | 99.44 | 4668.209540 |

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-051A) records which link to condition records coded as asthma

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---|---|---|---|---|
| 701750470143 | 701750470143001 | ALBUTEROL | 9.65 | 4668.209540 |
| 701750470150 | 701750470150001 | FLOVENT | 46.94 | 4668.209540 |
| | 701750470150002 | FLOVENT | 46.94 | 4668.209540 |
| 701790470202 | 701790470202001 | FLOVENT | 55.29 | 11329.944540 |
| | 701790470202002 | FLOVENT | 55.29 | 11329.944540 |
| | 701790470202003 | FLOVENT | 55.29 | 11329.944540 |
| | 701790470202004 | FLOVENT | 55.29 | 11329.944540 |
| | 701790470202005 | FLOVENT | 55.29 | 11329.944540 |
| | 701790470202006 | FLOVENT | 55.29 | 11329.944540 |
| 701950340049 | 701950340049001 | ASACOL | 123.54 | 22178.852828 |
| | 701950340049002 | ASACOL | 123.54 | 22178.852828 |
| | 701950340049003 | ASACOL | 123.54 | 22178.852828 |
| 701950340056 | 701950340056001 | ASACOL | 117.77 | 22178.852828 |
| | 701950340056002 | ASACOL | 117.77 | 22178.852828 |
| 702140270157 | 702140270157001 | VENTOLIN | 64.24 | 18941.563378 |
| | 702140270157002 | VENTOLIN | 64.24 | 18941.563378 |
| 702630600104 | 702630600104001 | ALBUTEROL | 17.50 | 5284.005215 |
| | 702630600104002 | ALBUTEROL | 17.50 | 5284.005215 |
| | 702630600104003 | ALBUTEROL | 17.50 | 5284.005215 |
| | 702630600104004 | ALBUTEROL | 17.50 | 5284.005215 |
| | 702630600104005 | ALBUTEROL | 17.50 | 5284.005215 |
| 702630600128 | 702630600128001 | ALBUTEROL | 17.50 | 5284.005215 |
| 702630600142 | 702630600142001 | AZMACORT | 55.35 | 5284.005215 |
| | 702630600142002 | AZMACORT | 55.35 | 5284.005215 |
| 702970120225 | 702970120225001 | ACCOLATE | 59.34 | 15096.510751 |
| 702970120232 | 702970120232001 | PULMICORT | 217.02 | 15096.510751 |
| 702970120249 | 702970120249001 | ZYRTEC | 101.39 | 15096.510751 |
| | 702970120249002 | ZYRTEC | 54.44 | 15096.510751 |
| | 702970120249003 | ZYRTEC | 101.39 | 15096.510751 |
| | 702970120249004 | ZYRTEC | 101.39 | 15096.510751 |
| | 702970120249005 | ZYRTEC | 54.44 | 15096.510751 |
| 702970120256 | 702970120256001 | VENTOLIN | 29.02 | 15096.510751 |
| 702970120263 | 702970120263001 | PREDNISONE | 8.84 | 15096.510751 |
| | 702970120263002 | PREDNISONE | 8.84 | 15096.510751 |
| 702970120270 | 702970120270001 | METHYLPREDNISOLONE (UNIT OF USE) | 13.24 | 15096.510751 |

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-051A) records which link to condition records coded as asthma

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 702970120294 | 702970120294001 | ZYRTEC | 102.39 | 15096.510751 |
|  | 702970120294002 | ZYRTEC | 102.39 | 15096.510751 |
| 702970120307 | 702970120307001 | ALLEGRA | 103.38 | 15096.510751 |
|  | 702970120307002 | ALLEGRA | 103.38 | 15096.510751 |
| 702970120314 | 702970120314001 | ALBUTEROL | 11.00 | 15096.510751 |
| 703480330225 | 703480330225001 | KIE | 11.97 | 18679.846555 |
| 703480330232 | 703480330232001 | VENTOLIN | 29.02 | 18679.846555 |
| 703620260108 | 703620260108001 | MINOCYCLINE | 10.00 | 9696.909242 |
| 703740330227 | 703740330227001 | KIE | 11.97 | 9138.998321 |
| 703740330234 | 703740330234001 | DESMOPRESSIN ACETATE | 98.02 | 9138.998321 |
|  | 703740330234002 | DESMOPRESSIN ACETATE | 98.02 | 9138.998321 |
|  | 703740330234003 | DESMOPRESSIN ACETATE | 98.02 | 9138.998321 |
|  | 703740330234004 | DESMOPRESSIN ACETATE | 98.02 | 9138.998321 |
|  | 703740330234005 | DESMOPRESSIN ACETATE | 98.02 | 9138.998321 |
| 703760300132 | 703760300132001 | NASACORT | 43.64 | 8670.962915 |
| 704370650084 | 704370650084001 | CLARITIN | 69.34 | 11691.009918 |
|  | 704370650084002 | CLARITIN | 69.34 | 11691.009918 |
|  | 704370650084003 | CLARITIN | 69.34 | 11691.009918 |
| 704370650091 | 704370650091001 | VANCENASE AQ DOUBLE STRENGTH | 55.78 | 11691.009918 |
|  | 704370650091002 | VANCENASE AQ DOUBLE STRENGTH | 55.78 | 11691.009918 |
| 704370650104 | 704370650104001 | ALBUTEROL | 21.41 | 11691.009918 |
| 704370650142 | 704370650142001 | ALBUTEROL | 21.41 | 11691.009918 |
| 704370650166 | 704370650166001 | CLARITIN | 69.34 | 11691.009918 |
|  | 704370650166002 | CLARITIN | 69.34 | 11691.009918 |
|  | 704370650166003 | CLARITIN | 69.34 | 11691.009918 |
| 704370650180 | 704370650180001 | VANCENASE AQ DOUBLE STRENGTH | 55.78 | 11691.009918 |
|  | 704370650180002 | VANCENASE AQ DOUBLE STRENGTH | 55.78 | 11691.009918 |
| 704410120090 | 704410120090001 | ROBITUSSIN | 24.19 | 3520.146263 |
| 704460370405 | 704460370405001 | VANCERIL | 75.73 | 8776.359930 |
| 704650140676 | 704650140676001 | MAXAIR | 105.41 | 4373.124642 |
|  | 704650140676002 | MAXAIR | 105.41 | 4373.124642 |
|  | 704650140676003 | MAXAIR | 105.41 | 4373.124642 |

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-051A) records which link to condition records coded as asthma

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 704650140676 | 704650140676004 | MAXAIR | 105.41 | 4373.124642 |
| 704650140950 | 704650140950001 | ALBUTEROL INHALER | 17.50 | 4373.124642 |
|  | 704650140950002 | ALBUTEROL INHALER | 17.50 | 4373.124642 |
|  | 704650140950003 | ALBUTEROL INHALER | 17.50 | 4373.124642 |
|  | 704650140950004 | ALBUTEROL INHALER | 17.50 | 4373.124642 |
| 705050370099 | 705050370099001 | ALBUTEROL | 9.97 | 11276.406996 |
| 705050370140 | 705050370140001 | ALBUTEROL | 9.97 | 11276.406996 |
| 705050370157 | 705050370157001 | ALBUTEROL INHALER | 19.79 | 11276.406996 |
| 705050440037 | 705050440037001 | ALBUTEROL | 9.97 | 11276.406996 |
| 705050440051 | 705050440051001 | ALBUTEROL | 9.97 | 11276.406996 |
| 705050440068 | 705050440068001 | ALBUTEROL INHALER | 19.79 | 11276.406996 |
| 705300280084 | 705300280084001 | PROVENTIL HFA (M.D.I.) | 27.62 | 7789.910172 |
|  | 705300280084002 | PROVENTIL HFA (M.D.I.) | 26.75 | 7789.910172 |
|  | 705300280084003 | PROVENTIL HFA (M.D.I.) | 27.62 | 7789.910172 |
|  | 705300280084004 | PROVENTIL HFA (M.D.I.) | 26.75 | 7789.910172 |
| 705300280091 | 705300280091001 | ACCOLATE | 54.59 | 7789.910172 |
|  | 705300280091002 | ACCOLATE | 54.59 | 7789.910172 |
| 705300280159 | 705300280159001 | ACCOLATE | 54.59 | 7789.910172 |
| 705300280166 | 705300280166001 | PROVENTIL HFA (M.D.I.) | 27.62 | 7789.910172 |
|  | 705300280166002 | PROVENTIL HFA (M.D.I.) | 27.62 | 7789.910172 |
|  | 705300280166003 | PROVENTIL HFA (M.D.I.) | 28.15 | 7789.910172 |
| 705330450121 | 705330450121001 | AEROBID | 67.01 | 5224.833045 |
|  | 705330450121002 | AEROBID | 67.01 | 5224.833045 |
| 705330450138 | 705330450138001 | ALBUTEROL | 17.99 | 5224.833045 |
|  | 705330450138002 | ALBUTEROL | 17.99 | 5224.833045 |
| 705330450145 | 705330450145001 | ALBUTEROL | 31.74 | 5224.833045 |
|  | 705330450145002 | ALBUTEROL | 31.74 | 5224.833045 |
| 705380510112 | 705380510112001 | ALBUTEROL SULFATE | 10.47 | 10215.233912 |
| 705380510136 | 705380510136001 | VANCENASE AQ | 66.06 | 10215.233912 |
|  | 705380510136002 | VANCENASE AQ | 66.06 | 10215.233912 |
| 705380510143 | 705380510143001 | ALBUTEROL | 21.41 | 10215.233912 |
|  | 705380510143002 | ALBUTEROL | 21.41 | 10215.233912 |

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-051A) records which link to condition records coded as asthma

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 705380510143 | 705380510143003 | ALBUTEROL | 21.41 | 10215.233912 |
| 705420300028 | 705420300028001 | CVS ALLERGY | 2.19 | 13917.850228 |
| 705420300059 | 705420300059001 | ALBUTEROL | 21.41 | 13917.850228 |
| 705480280394 | 705480280394001 | ESTRATAB | 16.78 | 13477.023448 |
| 705480280438 | 705480280438001 | SEREVENT | 20.00 | 13477.023448 |
|  | 705480280438002 | SEREVENT | 20.00 | 13477.023448 |
| 705480280445 | 705480280445001 | BECLOVENT | 44.94 | 13477.023448 |
|  | 705480280445002 | BECLOVENT | 44.94 | 13477.023448 |
|  | 705480280445003 | BECLOVENT | 44.94 | 13477.023448 |
|  | 705480280445004 | BECLOVENT | 44.94 | 13477.023448 |
|  | 705480280445005 | BECLOVENT | 44.94 | 13477.023448 |
|  | 705480280445006 | BECLOVENT | 44.94 | 13477.023448 |
| 705480280534 | 705480280534001 | SEREVENT | 60.68 | 13477.023448 |
| 705480280558 | 705480280558001 | VANCERIL | 43.00 | 13477.023448 |
| 705480280623 | 705480280623001 | VANCERIL | 43.00 | 13477.023448 |
|  | 705480280623002 | VANCERIL | 43.00 | 13477.023448 |
| 705700290103 | 705700290103001 | Z-PAK | 37.27 | 26722.792484 |
| 705700290110 | 705700290110001 | CLARITIN | 69.34 | 26722.792484 |
| 705700290127 | 705700290127001 | RELION/NOVO | 15.00 | 26722.792484 |
| 705720660177 | 705720660177001 | ALBUTEROL SULFATE | 16.93 | 14375.567988 |
| 705750220120 | 705750220120001 | AEROBID | 58.57 | 6414.816769 |
| 705750220137 | 705750220137001 | SEREVENT | 58.42 | 6414.816769 |
| 705770170109 | 705770170109001 | ALBUTEROL (REFILL) | 39.58 | 11540.793201 |
| 705770170123 | 705770170123001 | VANCERIL | 38.99 | 11540.793201 |
| 705770170130 | 705770170130001 | ALBUTEROL | 21.41 | 11540.793201 |
| 705770170154 | 705770170154001 | VANCERIL | 40.09 | 11540.793201 |
|  | 705770170154002 | VANCERIL | 40.54 | 11540.793201 |
|  | 705770170154003 | VANCERIL | 40.54 | 11540.793201 |
|  | 705770170154004 | VANCERIL | 40.09 | 11540.793201 |
| 705770170161 | 705770170161001 | SEREVENT | 63.42 | 11540.793201 |

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-051A) records which link to condition records coded as asthma

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---|---|---|---|---|
| 705770170161 | 705770170161002 | SEREVENT | 63.42 | 11540.793201 |
| | 705770170161003 | SEREVENT | 63.42 | 11540.793201 |
| | 705770170161004 | SEREVENT | 63.42 | 11540.793201 |
| 705770170192 | 705770170192001 | SEREVENT | 62.73 | 11540.793201 |
| | 705770170192002 | SEREVENT | 62.73 | 11540.793201 |
| 705770170205 | 705770170205001 | FLONASE | 50.99 | 11540.793201 |
| | 705770170205002 | FLONASE | 48.68 | 11540.793201 |
| 705770170212 | 705770170212001 | VANCERIL | 40.41 | 11540.793201 |
| | 705770170212002 | VANCERIL | 40.41 | 11540.793201 |
| 705770170229 | 705770170229001 | ALBUTEROL | 21.41 | 11540.793201 |
| 705820230416 | 705820230416001 | SINGULAIR (UNIT OF USE) | 66.23 | 16052.116072 |
| | 705820230416002 | SINGULAIR (UNIT OF USE) | 66.23 | 16052.116072 |
| | 705820230416003 | SINGULAIR (UNIT OF USE) | 66.23 | 16052.116072 |
| | 705820230416004 | SINGULAIR (UNIT OF USE) | 188.01 | 16052.116072 |
| 705820230423 | 705820230423001 | COMBIVENT | 37.02 | 16052.116072 |
| | 705820230423002 | COMBIVENT | 37.02 | 16052.116072 |
| 705820230574 | 705820230574001 | SINGULAIR (UNIT OF USE) | 202.11 | 16052.116072 |
| | 705820230574002 | SINGULAIR (UNIT OF USE) | 202.11 | 16052.116072 |
| | 705820230574003 | SINGULAIR (UNIT OF USE) | 202.11 | 16052.116072 |
| | 705820230574004 | SINGULAIR (UNIT OF USE) | 202.11 | 16052.116072 |
| 705820230581 | 705820230581001 | COMBIVENT | 37.02 | 16052.116072 |
| | 705820230581002 | COMBIVENT | 37.66 | 16052.116072 |
| | 705820230581003 | COMBIVENT | 37.66 | 16052.116072 |
| | 705820230581004 | COMBIVENT | 37.66 | 16052.116072 |
| 705820230790 | 705820230790001 | PREDNISONE | 6.05 | 16052.116072 |
| | 705820230790002 | PREDNISONE | 6.05 | 16052.116072 |
| | 705820230790003 | PREDNISONE | 6.05 | 16052.116072 |
| 705820230834 | 705820230834001 | SINGULAIR (UNIT OF USE) | 207.69 | 16052.116072 |
| | 705820230834002 | SINGULAIR (UNIT OF USE) | 207.69 | 16052.116072 |
| | 705820230834003 | SINGULAIR (UNIT OF USE) | 207.69 | 16052.116072 |
| | 705820230834004 | SINGULAIR (UNIT OF USE) | 207.69 | 16052.116072 |
| 705820230841 | 705820230841001 | COMBIVENT | 37.66 | 16052.116072 |
| | 705820230841002 | COMBIVENT | 37.66 | 16052.116072 |
| | 705820230841003 | COMBIVENT | 37.66 | 16052.116072 |
| | 705820230841004 | COMBIVENT | 37.66 | 16052.116072 |
| 705960430170 | 705960430170001 | PREDNISONE | 3.90 | 659.650918 |

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-051A) records which link to condition records coded as asthma

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 705960430187 | 705960430187001 | ALBUTEROL | 16.37 | 659.650918 |
| 705960430194 | 705960430194001 | FLOVENT | 59.13 | 659.650918 |
| 706030191334 | 706030191334001 | ALBUTEROL | 57.78 | 8239.521469 |
| 706120160040 | 706120160040001 | ALBUTEROL | 8.94 | 10341.586039 |
| 706120160064 | 706120160064001 | ALBUTEROL | 8.94 | 10341.586039 |
|  | 706120160064002 | ALBUTEROL | 8.94 | 10341.586039 |
|  | 706120160064003 | ALBUTEROL | 8.94 | 10341.586039 |
| 706130120067 | 706130120067001 | ALBUTEROL | 42.88 | 15913.710072 |
| 706220240575 | 706220240575001 | FLOVENT | 63.57 | 17318.346064 |
| 706220240582 | 706220240582001 | ALBUTEROL | 28.97 | 17318.346064 |
| 706220240828 | 706220240828001 | ALLEGRA | 49.44 | 17318.346064 |
| 706220240866 | 706220240866001 | FLOVENT | 63.57 | 17318.346064 |
| 706240310170 | 706240310170001 | ALBUTEROL | 21.41 | 6983.167036 |
|  | 706240310170002 | ALBUTEROL | 21.41 | 6983.167036 |
|  | 706240310170003 | ALBUTEROL | 21.41 | 6983.167036 |
| 706240310187 | 706240310187001 | AYR SALINE | 3.55 | 6983.167036 |
|  | 706240310187002 | AYR SALINE | 3.55 | 6983.167036 |
|  | 706240310187003 | AYR SALINE | 3.55 | 6983.167036 |
| 706440430059 | 706440430059001 | DIFIL G | 13.89 | 6825.819171 |
|  | 706440430059002 | DIFIL G | 13.89 | 6825.819171 |
|  | 706440430059003 | DIFIL G | 13.89 | 6825.819171 |
| 706440430073 | 706440430073001 | PROPOXY-N W/APAP | 15.19 | 6825.819171 |
|  | 706440430073002 | PROPOXY-N W/APAP | 15.19 | 6825.819171 |
| 706440430080 | 706440430080001 | PROMETHAZINE DM | 3.49 | 6825.819171 |
|  | 706440430080002 | PROMETHAZINE DM | 3.49 | 6825.819171 |
| 706440430131 | 706440430131001 | PROMETHAZINE DM | 3.49 | 6825.819171 |
| 706440430148 | 706440430148001 | CEFTIN | 65.56 | 6825.819171 |
| 706460490186 | 706460490186001 | ALBUTEROL | 10.31 | 7020.320170 |
| 706470170923 | 706470170923001 | ALBUTEROL | 85.64 | 9712.489314 |
| 706470170930 | 706470170930001 | FLOVENT | 55.29 | 9712.489314 |

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-051A) records which link to condition records coded as asthma

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 706470170961 | 706470170961001 | PROVENTIL | 30.28 | 9712.489314 |
|  | 706470170961002 | PROVENTIL | 30.28 | 9712.489314 |
| 706470171084 | 706470171084001 | ALBUTEROL | 85.64 | 9712.489314 |
|  | 706470171084002 | ALBUTEROL | 85.64 | 9712.489314 |
| 706500690112 | 706500690112001 | PROVENTIL | 32.66 | 8299.989960 |
| 706780310123 | 706780310123001 | VENTOLIN | 7.23 | 21135.388243 |
| 706920430087 | 706920430087001 | PROVENTIL | 57.27 | 11407.204417 |
| 706970200490 | 706970200490001 | PROVENTIL | 31.14 | 6486.389241 |
|  | 706970200490002 | PROVENTIL | 31.14 | 6486.389241 |
|  | 706970200490003 | PROVENTIL | 31.14 | 6486.389241 |
|  | 706970200490004 | PROVENTIL | 31.14 | 6486.389241 |
| 706970200503 | 706970200503001 | UNIPHYL | 6.98 | 6486.389241 |
|  | 706970200503002 | UNIPHYL | 6.98 | 6486.389241 |
|  | 706970200503003 | UNIPHYL | 6.98 | 6486.389241 |
| 706970200692 | 706970200692001 | UNIPHYL | 6.98 | 6486.389241 |
|  | 706970200692002 | UNIPHYL | 6.98 | 6486.389241 |
|  | 706970200692003 | UNIPHYL | 6.98 | 6486.389241 |
|  | 706970200692004 | UNIPHYL | 6.98 | 6486.389241 |
| 706970200832 | 706970200832001 | PROVENTIL | 31.14 | 6486.389241 |
|  | 706970200832002 | PROVENTIL | 31.14 | 6486.389241 |
| 706970200849 | 706970200849001 | UNIPHYL | 6.98 | 6486.389241 |
|  | 706970200849002 | UNIPHYL | 6.98 | 6486.389241 |
|  | 706970200849003 | UNIPHYL | 6.98 | 6486.389241 |
|  | 706970200849004 | UNIPHYL | 6.98 | 6486.389241 |
| 707110170167 | 707110170167001 | SEREVENT | 58.71 | 16519.345983 |
| 707110170174 | 707110170174001 | FLOVENT | 54.74 | 16519.345983 |
| 707110170181 | 707110170181001 | ALBUTEROL | 21.41 | 16519.345983 |
|  | 707110170181002 | ALBUTEROL | 21.41 | 16519.345983 |
| 707110170198 | 707110170198001 | PREDNISONE | 7.70 | 16519.345983 |
| 707110170403 | 707110170403001 | SEREVENT | 58.71 | 16519.345983 |
|  | 707110170403002 | SEREVENT | 58.71 | 16519.345983 |
| 707110170410 | 707110170410001 | FLOVENT | 54.74 | 16519.345983 |
|  | 707110170410002 | FLOVENT | 56.85 | 16519.345983 |

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-051A) records which link to condition records coded as asthma

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---|---|---|---|---|
| 707110170427 | 707110170427001 | ALBUTEROL | 21.41 | 16519.345983 |
|  | 707110170427002 | ALBUTEROL | 21.41 | 16519.345983 |
| 707110170509 | 707110170509001 | SEREVENT | 60.99 | 16519.345983 |
| 707110170516 | 707110170516001 | FLOVENT | 56.85 | 16519.345983 |
| 707110170523 | 707110170523001 | ALBUTEROL | 21.41 | 16519.345983 |
| 707110170530 | 707110170530001 | PREDNISONE | 7.70 | 16519.345983 |
| 707140430308 | 707140430308001 | ALBUTEROL SULFATE | 13.11 | 14053.576563 |
| 707140430346 | 707140430346001 | FLOVENT | 54.34 | 14053.576563 |
|  | 707140430346002 | FLOVENT | 54.34 | 14053.576563 |
|  | 707140430346003 | FLOVENT | 54.34 | 14053.576563 |
| 707140430606 | 707140430606001 | FLOVENT | 56.45 | 14053.576563 |
|  | 707140430606002 | FLOVENT | 54.34 | 14053.576563 |

Sample SAS Job for Example B
Total Rx expenditures associated with asthma

The MEANS Procedure

Analysis Variable : RXXP00X SUM OF PAYMENTS RXSF00X-RXOU00X(IMPUTED)

```
           N              Sum
       --------------------
       6307         273294.93
       --------------------
```

Sample SAS Job for Example B

Sample SAS Job for Example B
Total Rx expenditures associated with asthma


Weighted


The MEANS Procedure


Analysis Variable : RXXP00X SUM OF PAYMENTS RXSF00X-RXOU00X(IMPUTED)


|  N  |     Sum     |
|-----|-------------|
| 6307 | 3239010632 |

```
NOTE: Copyright (c) 1999-2001 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 8.2 (TS2M0)
      Licensed to SOCIAL & SCIENTIFIC SYSTEMS INC/AHRQ, Site 0038838053.
NOTE: This session is executing on the WIN_95  platform.



NOTE: SAS initialization used:
      real time           5.16 seconds


1
2           OPTIONS LS=132 PS=59;
3
4           TITLE1 "HC-051I";
5           TITLE2 'Sample SAS Job for Example C';
6
7           LIBNAME IN 'C:\DATA';
NOTE: Directory for library IN contains files of mixed engine types.
NOTE: Libref IN was successfully assigned as follows:
      Engine:        V8
      Physical Name: C:\DATA
8
9           ********************************************************************************
10          *  Calculate the expenditures for medical visits associated with asthma.
11          *******************************************************************************;
12          PROC FORMAT;
13            VALUE EVENTYPE
14                1 = "1 MVIS"
15                2 = "2 OPAT"
16                3 = "3 EROM"
17                4 = "4 STAZ"
18                5 = "5 DVIS"
19                6 = "6 OMED"
20                7 = "7 HVIS"
21                8 = "8 PMED";
NOTE: Format EVENTYPE has been output.
22          RUN;


NOTE: PROCEDURE FORMAT used:
      real time           0.33 seconds



23
24          *-------------------------------------------------------------------------------
25          * Get conditions records coded as asthma.
26          *------------------------------------------------------------------------------;
27          DATA ASCONDS;
28            SET IN.H52 (KEEP=CONDIDX CCCODEX);
29            IF CCCODEX="128";
30          RUN;

NOTE: There were 72624 observations read from the data set IN.H52.
NOTE: The data set WORK.ASCONDS has 1156 observations and 2 variables.
NOTE: DATA statement used:
      real time           13.84 seconds
```

```
31
32         *-------------------------------------------------------------------------------
33         * Get the events linked to each of the asthma condition records.
34         *------------------------------------------------------------------------------;
35         PROC SORT DATA=ASCONDS; BY CONDIDX; RUN;

NOTE: There were 1156 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCONDS has 1156 observations and 2 variables.
NOTE: PROCEDURE SORT used:
      real time           0.22 seconds


36
37         proc print data=asconds (obs=50);
38            title3 "sample print of work.asconds - sorted by condidx";
39            title4 "COND (HC-052) records where cccodex=128";
40         run;

NOTE: There were 50 observations read from the data set WORK.ASCONDS.
NOTE: The PROCEDURE PRINT printed page 1.
NOTE: PROCEDURE PRINT used:
      real time           1.15 seconds


41
42         PROC SORT DATA=IN.H51IF1 OUT=CLNK; BY CONDIDX; RUN;

NOTE: There were 217414 observations read from the data set IN.H51IF1.
NOTE: The data set WORK.CLNK has 217414 observations and 5 variables.
NOTE: PROCEDURE SORT used:
      real time          12.90 seconds


43
44         DATA ASCLNKS;
45            MERGE CLNK   (IN=INCLNK   KEEP=CONDIDX EVNTIDX EVENTYPE)
46                  ASCONDS(IN=INASCOND KEEP=CONDIDX);
47            BY CONDIDX;
48            IF INCLNK & INASCOND;
49         RUN;

NOTE: There were 217414 observations read from the data set WORK.CLNK.
NOTE: There were 1156 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCLNKS has 4737 observations and 3 variables.
NOTE: DATA statement used:
      real time           1.25 seconds


50
51         proc print data=asclnks (obs=75);
52            by condidx;
53            id condidx;
54            format eventype eventype.;
55            title3 "sample print of work.asclnks - sorted by condidx";
56            title4 "events linked to asthma condition records";
57         run;
```

```
NOTE: There were 75 observations read from the data set WORK.ASCLNKS.
NOTE: The PROCEDURE PRINT printed pages 2-3.
NOTE: PROCEDURE PRINT used:
      real time           0.44 seconds


58
59          PROC SORT DATA=ASCLNKS; BY EVNTIDX; RUN;

NOTE: There were 4737 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 4737 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time           0.04 seconds


60
61          proc print data=asclnks (obs=50);
62            format eventype eventype.;
63            title3 "sample print of work.asclnks - sorted by evntidx";
64          run;

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


65
66          DATA ASCLNKS;
67            SET ASCLNKS (KEEP=EVNTIDX EVENTYPE);
68            BY EVNTIDX;
69            IF FIRST.EVNTIDX;
70          RUN;

NOTE: There were 4737 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 4712 observations and 2 variables.
NOTE: DATA statement used:
      real time           0.04 seconds


71
72          proc print data=asclnks (obs=50);
73            format eventype eventype.;
74            title3 "sample print of unique evntidxs from work.asclnks";
75          run;

NOTE: There were 50 observations read from the data set WORK.ASCLNKS.
NOTE: The PROCEDURE PRINT printed page 5.
NOTE: PROCEDURE PRINT used:
      real time           0.00 seconds


76
77          *-------------------------------------------------------------------------------------------
78          * Get non-telephone office based visits (i.e. MVIS events) for persons with positive weights.
79          *------------------------------------------------------------------------------------------;
80          DATA MVIS;
```

**ATTACHMENT 2-Example C**                      **Page A2-56**                      **MEPS HC-051I**

```
81              SET IN.H51G (KEEP=EVNTIDX PERWT00F SEETLKPV OBXP00X);
82              IF PERWT00F > 0 & SEETLKPV NE 2;
83          RUN;
```

NOTE: There were 102530 observations read from the data set IN.H51G.
NOTE: The data set WORK.MVIS has 98816 observations and 4 variables.
NOTE: DATA statement used:
      real time           14.76 seconds


```
84
85          PROC SORT DATA=MVIS; BY EVNTIDX; RUN;
```

NOTE: There were 98816 observations read from the data set WORK.MVIS.
NOTE: The data set WORK.MVIS has 98816 observations and 4 variables.
NOTE: PROCEDURE SORT used:
      real time            1.53 seconds


```
86
87          *--------------------------------------------------------------------------------
88          * Identify MVIS events which were for asthma.
89          *-------------------------------------------------------------------------------;
90          DATA ASMVIS;
91            MERGE ASCLNKS (IN=INASCLNK)
92                  MVIS    (IN=INMVIS);
93            BY EVNTIDX;
94            IF INASCLNK & INMVIS;
95          RUN;
```

NOTE: There were 4712 observations read from the data set WORK.ASCLNKS.
NOTE: There were 98816 observations read from the data set WORK.MVIS.
NOTE: The data set WORK.ASMVIS has 1509 observations and 5 variables.
NOTE: DATA statement used:
      real time            0.44 seconds


```
96
97          proc print data=asmvis (obs=50);
98            format eventype eventype.;
99            title3 "sample print of work.asmvis";
100           title4 "unique evntidxs from work.asclnks that are non-telephone MVIS (HC-051G) events";
101         run;
```

NOTE: There were 50 observations read from the data set WORK.ASMVIS.
NOTE: The PROCEDURE PRINT printed page 6.
NOTE: PROCEDURE PRINT used:
      real time            0.04 seconds


```
102
103         PROC MEANS DATA=ASMVIS N SUM;
104           VAR OBXP00X;
105           TITLE3 "Total medical visit expenditures (excluding telephone) associated with asthma";
106         RUN;
```

NOTE: There were 1509 observations read from the data set WORK.ASMVIS.

```
NOTE: The PROCEDURE MEANS printed page 7.
NOTE: PROCEDURE MEANS used:
      real time            0.38 seconds


107
108          PROC MEANS DATA=ASMVIS SUM;
109            VAR OBXP00X;
110            WEIGHT PERWT00F;
111            TITLE3 "Total medical visit expenditures (excluding telephone) associated with asthma";
112            TITLE5 "Weighted";
113          RUN;

NOTE: There were 1509 observations read from the data set WORK.ASMVIS.
NOTE: The PROCEDURE MEANS printed page 8.
NOTE: PROCEDURE MEANS used:
      real time            0.00 seconds


114
115
116

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414
NOTE: The SAS System used:
      real time           53.66 seconds
```

Sample SAS Job for Example C
sample print of work.asconds - sorted by condidx
COND (HC-052) records where cccodex=128

| Obs | CONDIDX | CCCODEX |
|-----|---------|---------|
| 1 | 700020160021 | 128 |
| 2 | 700030270103 | 128 |
| 3 | 700160460057 | 128 |
| 4 | 700250310022 | 128 |
| 5 | 700400180023 | 128 |
| 6 | 700600150036 | 128 |
| 7 | 700620410027 | 128 |
| 8 | 700650190014 | 128 |
| 9 | 700710230197 | 128 |
| 10 | 700710470076 | 128 |
| 11 | 700710470139 | 128 |
| 12 | 700710470220 | 128 |
| 13 | 700840260044 | 128 |
| 14 | 700920230022 | 128 |
| 15 | 700920230072 | 128 |
| 16 | 701040310031 | 128 |
| 17 | 701070510018 | 128 |
| 18 | 701290210090 | 128 |
| 19 | 701750470029 | 128 |
| 20 | 701790470012 | 128 |
| 21 | 701860280028 | 128 |
| 22 | 701950340024 | 128 |
| 23 | 702140270063 | 128 |
| 24 | 702140410061 | 128 |
| 25 | 702470440015 | 128 |
| 26 | 702510110017 | 128 |
| 27 | 702630600025 | 128 |
| 28 | 702800530017 | 128 |
| 29 | 702800600016 | 128 |
| 30 | 702970120037 | 128 |
| 31 | 703290450025 | 128 |
| 32 | 703480330115 | 128 |
| 33 | 703620260038 | 128 |
| 34 | 703720350022 | 128 |
| 35 | 703740330010 | 128 |
| 36 | 703760300019 | 128 |
| 37 | 704370650012 | 128 |
| 38 | 704410120049 | 128 |
| 39 | 704460370015 | 128 |
| 40 | 704650140053 | 128 |
| 41 | 705050370023 | 128 |
| 42 | 705050440022 | 128 |
| 43 | 705150120020 | 128 |
| 44 | 705300280039 | 128 |
| 45 | 705330450013 | 128 |
| 46 | 705380510029 | 128 |
| 47 | 705420300016 | 128 |
| 48 | 705440380013 | 128 |
| 49 | 705480280016 | 128 |
| 50 | 705560320026 | 128 |

```
                    HC-051I                          08:46 Tuesday, June 24, 2003    2
              Sample SAS Job for Example C
        sample print of work.asclnks - sorted by condidx
           events linked to asthma condition records
```

```
         CONDIDX          EVNTIDX          EVENTYPE

      700020160021     700020160244       1 MVIS

      700030270103     700030270153       1 MVIS

      700160460057     700160460349       3 EROM
                       700160460356       8 PMED

      700250310022     700250310055       1 MVIS
                       700250310062       8 PMED

      700400180023     700400180068       8 PMED

      700600150036     700600150096       8 PMED
                       700600150109       8 PMED
                       700600150123       8 PMED
                       700600150130       8 PMED
                       700600150178       8 PMED
                       700600150185       8 PMED

      700650190014     700650190159       8 PMED
                       700650190166       8 PMED
                       700650190197       8 PMED
                       700650190217       1 MVIS
                       700650190231       8 PMED
                       700650190248       8 PMED
                       700650190286       8 PMED
                       700650190293       8 PMED
                       700650190306       8 PMED

      700710470139     700710470131       1 MVIS
                       700710470148       1 MVIS
                       700710470186       8 PMED
                       700710470244       8 PMED
                       700710470282       8 PMED
                       700710470302       8 PMED

      700710470220     700710470213       1 MVIS
                       700710470268       8 PMED
                       700710470275       8 PMED

      700840260044     700840260136       1 MVIS
                       700840260198       8 PMED
                       700840260287       8 PMED

      700920230022     700920230207       1 MVIS
                       700920230214       1 MVIS
                       700920230221       1 MVIS
                       700920230238       8 PMED
                       700920230269       8 PMED
```

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

| CONDIDX | EVNTIDX | EVENTYPE |
|---------|---------|----------|
| 700920230072 | 700920230276 | 1 MVIS |
| | 700920230283 | 1 MVIS |
| | 700920230290 | 8 PMED |
| | 700920230303 | 8 PMED |
| | 700920230310 | 8 PMED |
| | 700920230327 | 8 PMED |
| 701040310031 | 701040310062 | 1 MVIS |
| | 701040310079 | 8 PMED |
| | 701040310093 | 1 MVIS |
| | 701040310106 | 8 PMED |
| 701290210090 | 701290210146 | 1 MVIS |
| | 701290210153 | 1 MVIS |
| | 701290210160 | 1 MVIS |
| | 701290210177 | 1 MVIS |
| | 701290210184 | 1 MVIS |
| | 701290210191 | 8 PMED |
| | 701290210204 | 8 PMED |
| | 701290210211 | 8 PMED |
| | 701290210228 | 8 PMED |
| 701750470029 | 701750470078 | 1 MVIS |
| | 701750470085 | 1 MVIS |
| | 701750470092 | 1 MVIS |
| | 701750470105 | 1 MVIS |
| | 701750470112 | 1 MVIS |
| | 701750470129 | 1 MVIS |
| | 701750470136 | 8 PMED |
| | 701750470143 | 8 PMED |
| | 701750470150 | 8 PMED |
| 701790470012 | 701790470202 | 8 PMED |
| 701950340024 | 701950340049 | 8 PMED |
| | 701950340056 | 8 PMED |
| 702140270063 | 702140270133 | 1 MVIS |
| | 702140270157 | 8 PMED |
| 702140410061 | 702140410133 | 1 MVIS |
| 702510110017 | 702510110257 | 1 MVIS |
| | 702510110264 | 1 MVIS |

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

| Obs | CONDIDX | EVNTIDX | EVENTYPE |
|-----|---------|---------|----------|
| 1 | 700020160021 | 700020160244 | 1 MVIS |
| 2 | 700030270103 | 700030270153 | 1 MVIS |
| 3 | 700160460057 | 700160460349 | 3 EROM |
| 4 | 700160460057 | 700160460356 | 8 PMED |
| 5 | 700250310022 | 700250310055 | 1 MVIS |
| 6 | 700250310022 | 700250310062 | 8 PMED |
| 7 | 700400180023 | 700400180068 | 8 PMED |
| 8 | 700600150036 | 700600150096 | 8 PMED |
| 9 | 700600150036 | 700600150109 | 8 PMED |
| 10 | 700600150036 | 700600150123 | 8 PMED |
| 11 | 700600150036 | 700600150130 | 8 PMED |
| 12 | 700600150036 | 700600150178 | 8 PMED |
| 13 | 700600150036 | 700600150185 | 8 PMED |
| 14 | 700650190014 | 700650190159 | 8 PMED |
| 15 | 700650190014 | 700650190166 | 8 PMED |
| 16 | 700650190014 | 700650190197 | 8 PMED |
| 17 | 700650190014 | 700650190217 | 1 MVIS |
| 18 | 700650190014 | 700650190231 | 8 PMED |
| 19 | 700650190014 | 700650190248 | 8 PMED |
| 20 | 700650190014 | 700650190286 | 8 PMED |
| 21 | 700650190014 | 700650190293 | 8 PMED |
| 22 | 700650190014 | 700650190306 | 8 PMED |
| 23 | 700710470139 | 700710470131 | 1 MVIS |
| 24 | 700710470139 | 700710470148 | 1 MVIS |
| 25 | 700710470139 | 700710470186 | 8 PMED |
| 26 | 700710470220 | 700710470213 | 1 MVIS |
| 27 | 700710470139 | 700710470244 | 8 PMED |
| 28 | 700710470220 | 700710470268 | 8 PMED |
| 29 | 700710470220 | 700710470275 | 8 PMED |
| 30 | 700710470139 | 700710470282 | 8 PMED |
| 31 | 700710470139 | 700710470302 | 8 PMED |
| 32 | 700840260044 | 700840260136 | 1 MVIS |
| 33 | 700840260044 | 700840260198 | 8 PMED |
| 34 | 700840260044 | 700840260287 | 8 PMED |
| 35 | 700920230022 | 700920230207 | 1 MVIS |
| 36 | 700920230022 | 700920230214 | 1 MVIS |
| 37 | 700920230022 | 700920230221 | 1 MVIS |
| 38 | 700920230022 | 700920230238 | 8 PMED |
| 39 | 700920230022 | 700920230269 | 8 PMED |
| 40 | 700920230072 | 700920230276 | 1 MVIS |
| 41 | 700920230072 | 700920230283 | 1 MVIS |
| 42 | 700920230072 | 700920230290 | 8 PMED |
| 43 | 700920230072 | 700920230303 | 8 PMED |
| 44 | 700920230072 | 700920230310 | 8 PMED |
| 45 | 700920230072 | 700920230327 | 8 PMED |
| 46 | 701040310031 | 701040310062 | 1 MVIS |
| 47 | 701040310031 | 701040310079 | 8 PMED |
| 48 | 701040310031 | 701040310093 | 1 MVIS |
| 49 | 701040310031 | 701040310106 | 8 PMED |
| 50 | 701290210090 | 701290210146 | 1 MVIS |

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

| Obs | EVNTIDX | EVENTYPE |
|---|---|---|
| 1 | 700020160244 | 1 MVIS |
| 2 | 700030270153 | 1 MVIS |
| 3 | 700160460349 | 3 EROM |
| 4 | 700160460356 | 8 PMED |
| 5 | 700250310055 | 1 MVIS |
| 6 | 700250310062 | 8 PMED |
| 7 | 700400180068 | 8 PMED |
| 8 | 700600150096 | 8 PMED |
| 9 | 700600150109 | 8 PMED |
| 10 | 700600150123 | 8 PMED |
| 11 | 700600150130 | 8 PMED |
| 12 | 700600150178 | 8 PMED |
| 13 | 700600150185 | 8 PMED |
| 14 | 700650190159 | 8 PMED |
| 15 | 700650190166 | 8 PMED |
| 16 | 700650190197 | 8 PMED |
| 17 | 700650190217 | 1 MVIS |
| 18 | 700650190231 | 8 PMED |
| 19 | 700650190248 | 8 PMED |
| 20 | 700650190286 | 8 PMED |
| 21 | 700650190293 | 8 PMED |
| 22 | 700650190306 | 8 PMED |
| 23 | 700710470131 | 1 MVIS |
| 24 | 700710470148 | 1 MVIS |
| 25 | 700710470186 | 8 PMED |
| 26 | 700710470213 | 1 MVIS |
| 27 | 700710470244 | 8 PMED |
| 28 | 700710470268 | 8 PMED |
| 29 | 700710470275 | 8 PMED |
| 30 | 700710470282 | 8 PMED |
| 31 | 700710470302 | 8 PMED |
| 32 | 700840260136 | 1 MVIS |
| 33 | 700840260198 | 8 PMED |
| 34 | 700840260287 | 8 PMED |
| 35 | 700920230207 | 1 MVIS |
| 36 | 700920230214 | 1 MVIS |
| 37 | 700920230221 | 1 MVIS |
| 38 | 700920230238 | 8 PMED |
| 39 | 700920230269 | 8 PMED |
| 40 | 700920230276 | 1 MVIS |
| 41 | 700920230283 | 1 MVIS |
| 42 | 700920230290 | 8 PMED |
| 43 | 700920230303 | 8 PMED |
| 44 | 700920230310 | 8 PMED |
| 45 | 700920230327 | 8 PMED |
| 46 | 701040310062 | 1 MVIS |
| 47 | 701040310079 | 8 PMED |
| 48 | 701040310093 | 1 MVIS |
| 49 | 701040310106 | 8 PMED |
| 50 | 701290210146 | 1 MVIS |

Sample SAS Job for Example C
sample print of work.asmvis
unique evntidxs from work.asclnks that are non-telephone MVIS (HC-051G) events

| Obs | EVNTIDX | EVENTYPE | SEETLKPV | OBXP00X | PERWT00F |
|-----|---------|----------|----------|---------|----------|
| 1 | 700020160244 | 1 MVIS | 1 | 238.00 | 14309.47 |
| 2 | 700030270153 | 1 MVIS | 1 | 49.40 | 11255.55 |
| 3 | 700250310055 | 1 MVIS | 1 | 33.54 | 4141.90 |
| 4 | 700650190217 | 1 MVIS | 1 | 15.00 | 8288.54 |
| 5 | 700710470131 | 1 MVIS | 1 | 63.00 | 9015.74 |
| 6 | 700710470148 | 1 MVIS | 1 | 63.00 | 9015.74 |
| 7 | 700710470213 | 1 MVIS | 1 | 64.00 | 9015.74 |
| 8 | 700840260136 | 1 MVIS | 1 | 204.00 | 27728.28 |
| 9 | 700920230207 | 1 MVIS | 1 | 58.92 | 5006.34 |
| 10 | 700920230214 | 1 MVIS | 1 | 54.00 | 5006.34 |
| 11 | 700920230221 | 1 MVIS | 1 | 58.92 | 5006.34 |
| 12 | 700920230276 | 1 MVIS | 1 | 18.00 | 5006.34 |
| 13 | 700920230283 | 1 MVIS | 1 | 15.84 | 5006.34 |
| 14 | 701040310062 | 1 MVIS | 1 | 21.61 | 4142.21 |
| 15 | 701040310093 | 1 MVIS | 1 | 24.30 | 4142.21 |
| 16 | 701290210146 | 1 MVIS | 1 | 111.11 | 7299.94 |
| 17 | 701290210153 | 1 MVIS | 1 | 74.20 | 7299.94 |
| 18 | 701290210160 | 1 MVIS | 1 | 45.67 | 7299.94 |
| 19 | 701290210177 | 1 MVIS | 1 | 74.20 | 7299.94 |
| 20 | 701290210184 | 1 MVIS | 1 | 219.56 | 7299.94 |
| 21 | 701750470078 | 1 MVIS | 1 | 70.34 | 4668.21 |
| 22 | 701750470085 | 1 MVIS | 1 | 87.20 | 4668.21 |
| 23 | 701750470092 | 1 MVIS | 1 | 81.75 | 4668.21 |
| 24 | 701750470105 | 1 MVIS | 1 | 110.00 | 4668.21 |
| 25 | 701750470112 | 1 MVIS | 1 | 125.00 | 4668.21 |
| 26 | 701750470129 | 1 MVIS | 1 | 90.00 | 4668.21 |
| 27 | 702140270133 | 1 MVIS | 1 | 65.61 | 18941.56 |
| 28 | 702140410133 | 1 MVIS | 1 | 58.00 | 15148.37 |
| 29 | 702510110257 | 1 MVIS | 1 | 90.00 | 11195.02 |
| 30 | 702510110264 | 1 MVIS | 1 | 45.72 | 11195.02 |
| 31 | 702510110459 | 1 MVIS | 1 | 53.00 | 11195.02 |
| 32 | 702630600060 | 1 MVIS | 1 | 19.00 | 5284.01 |
| 33 | 702970120198 | 1 MVIS | 1 | 46.92 | 15096.51 |
| 34 | 702970120201 | 1 MVIS | 1 | 41.50 | 15096.51 |
| 35 | 702970120218 | 1 MVIS | 1 | 49.50 | 15096.51 |
| 36 | 704410120052 | 1 MVIS | 1 | 25.64 | 3520.15 |
| 37 | 704410120069 | 1 MVIS | 1 | 25.64 | 3520.15 |
| 38 | 704410120076 | 1 MVIS | 1 | 60.25 | 3520.15 |
| 39 | 704410120083 | 1 MVIS | 1 | 25.64 | 3520.15 |
| 40 | 705150120301 | 1 MVIS | 1 | 31.49 | 3391.46 |
| 41 | 705480280281 | 1 MVIS | 1 | 54.00 | 13477.02 |
| 42 | 705480280298 | 1 MVIS | 1 | 54.00 | 13477.02 |
| 43 | 705480280414 | 1 MVIS | 1 | 78.00 | 13477.02 |
| 44 | 705700290090 | 1 MVIS | 1 | 109.91 | 26722.79 |
| 45 | 705820230365 | 1 MVIS | 1 | 57.58 | 16052.12 |
| 46 | 705820230512 | 1 MVIS | 1 | 70.00 | 16052.12 |
| 47 | 705820230601 | 1 MVIS | 1 | 70.00 | 16052.12 |
| 48 | 705820230618 | 1 MVIS | 1 | 70.00 | 16052.12 |
| 49 | 705820230625 | 1 MVIS | 1 | 131.00 | 16052.12 |
| 50 | 705820230632 | 1 MVIS | 1 | 85.37 | 16052.12 |

Sample SAS Job for Example C
Total medical visit expenditures (excluding telephone) associated with asthma

The MEANS Procedure

Analysis Variable : OBXP00X SUM OF OBSF00X - OBOT00X (IMPUTED)

```
        N              Sum
--------------------
      1509        115160.55
--------------------
```

Sample SAS Job for Example C

Sample SAS Job for Example C
Total medical visit expenditures (excluding telephone) associated with asthma


Weighted


The MEANS Procedure

Analysis Variable : OBXP00X SUM OF OBSF00X - OBOT00X (IMPUTED)

```
                 Sum
             ------------
             1227885582
             ------------
```

NOTE: Copyright (c) 1999-2001 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 8.2 (TS2M0)
      Licensed to SOCIAL & SCIENTIFIC SYSTEMS INC/AHRQ, Site 0038838053.
NOTE: This session is executing on the WIN_95  platform.



NOTE: SAS initialization used:
      real time           4.72 seconds


```
1
2            OPTIONS LS=132 PS=59;
3
4            TITLE1 "HC-051I";
5            TITLE2 'Sample SAS Job for Example D';
6
7            LIBNAME IN 'C:\DATA';
```
NOTE: Directory for library IN contains files of mixed engine types.
NOTE: Libref IN was successfully assigned as follows:
      Engine:        V8
      Physical Name: C:\DATA
```
8            ********************************************************************************
9            * Calculate the expenditures for prescribed medicines associated
10           * with insulin reported by the household as an other medical expense.
11           *******************************************************************************;
12
13           PROC FORMAT;
14             VALUE EVENTYPE
15                 1 = "1 MVIS"
16                 2 = "2 OPAT"
17                 3 = "3 EROM"
18                 4 = "4 STAZ"
19                 5 = "5 DVIS"
20                 6 = "6 OMED"
21                 7 = "7 HVIS"
22                 8 = "8 PMED";
```
NOTE: Format EVENTYPE has been output.
```
23
24              VALUE OMTYPE
25                 -9 = '-9 NOT ASCERTAINED'
26                 -8 = '-8 DK'
27                 -7 = '-7 REFUSED'
28                 -1 = '-1 INAPPLICABLE'
29                 1 = '1 GLASSES OR CONTACT LENSES'
30                 2 = '2 INSULIN'
31                 3 = '3 DIABETIC EQUIPMENT/SUPPLIES'
32                 4 = '4 AMBULANCE SERVICES'
33                 5 = '5 ORTHOPEDIC ITEMS'
34                 6 = '6 HEARING DEVICES'
35                 7 = '7 PROSTHESIS'
36                 8 = '8 BATHROOM AIDS'
37                 9 = '9 MEDICAL EQUIPMENT'
38                 10 = '10 DISPOSABLE SUPPLIES'
39                 11 = '11 ALTERATIONS/MODIFICATIONS'
40                 91 = '91 OTHER'
41                 ;
```
NOTE: Format OMTYPE has been output.

```
42          RUN;

NOTE: PROCEDURE FORMAT used:
      real time           0.33 seconds


43
44          *-------------------------------------------------------------------------------
45          * Get other medical records for insulin for persons with positive weights.
46          *------------------------------------------------------------------------------;
47
48          DATA OMED;
49            SET IN.H51C (KEEP=EVNTIDX PERWT00F OMTYPEX);
50            IF PERWT00F > 0 & OMTYPEX = 2;
51          RUN;

NOTE: There were 6586 observations read from the data set IN.H51C.
NOTE: The data set WORK.OMED has 448 observations and 3 variables.
NOTE: DATA statement used:
      real time           1.53 seconds


52
53          proc print data=omed (obs=100);
54            var evntidx OMTYPEX PERWT00F;
55            format OMTYPEX omtype.;
56            title3 "sample print of OMED (HC-051C) records where OMTYPEX=2";
57          run;

NOTE: There were 100 observations read from the data set WORK.OMED.
NOTE: The PROCEDURE PRINT printed pages 1-2.
NOTE: PROCEDURE PRINT used:
      real time           1.70 seconds


58
59          *-------------------------------------------------------------------------------
60          * Get PMED IDs linked to the OMED events which were for insulin.
61          *------------------------------------------------------------------------------;
62
63          PROC SORT DATA=IN.H51IF2 OUT=RXLK; BY EVENTIDX; RUN;

NOTE: There were 42089 observations read from the data set IN.H51IF2.
NOTE: The data set WORK.RXLK has 42089 observations and 5 variables.
NOTE: PROCEDURE SORT used:
      real time           0.99 seconds


64
65          proc print data=rxlk (obs=150);
66            by eventidx;
67            id eventidx;
68            var linkidx eventype;
69            format eventype eventype.;
70            title3 "sample print of Rx+event link file records (HC-51IF2) - sorted by eventidx";
71          run;
```

```
NOTE: There were 150 observations read from the data set WORK.RXLK.
NOTE: The PROCEDURE PRINT printed pages 3-7.
NOTE: PROCEDURE PRINT used:
      real time           0.15 seconds


72
73          data omedrxlk;
74            set rxlk (where=(eventype=6));
75          run;

NOTE: There were 1210 observations read from the data set WORK.RXLK.
      WHERE eventype=6;
NOTE: The data set WORK.OMEDRXLK has 1210 observations and 5 variables.
NOTE: DATA statement used:
      real time           0.15 seconds


76          proc print data=omedrxlk (obs=120);
77            by eventidx;
78            id eventidx;
79            var linkidx eventype;
80            format eventype eventype.;
81            title3 "sample print of work.omedrxlk - sorted by eventidx";
82            title4 "Rx+event link file records (HC-51IF2) where eventype=6 (omed)";
83          run;

NOTE: There were 120 observations read from the data set WORK.OMEDRXLK.
NOTE: The PROCEDURE PRINT printed pages 8-12.
NOTE: PROCEDURE PRINT used:
      real time           0.00 seconds


84
85          DATA PMEDIDS;
86            MERGE RXLK (IN=INRXLK KEEP=EVENTIDX LINKIDX EVENTYPE RENAME=(EVENTIDX=EVNTIDX))
87                  OMED (IN=INOMED KEEP=EVNTIDX);
88            BY EVNTIDX;
89            IF INRXLK & INOMED;
90          RUN;

NOTE: There were 42089 observations read from the data set WORK.RXLK.
NOTE: There were 448 observations read from the data set WORK.OMED.
NOTE: The data set WORK.PMEDIDS has 425 observations and 3 variables.
NOTE: DATA statement used:
      real time           0.15 seconds


91
92          proc print data=pmedids (obs=50);
93            by evntidx;
94            id evntidx;
95            format eventype eventype.;
96            title3 "sample print of work.pmedids - sorted by evntidx";
97            title4 "work.rxlk records for omed events for insulin";
98          run;
```

```
NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE PRINT printed pages 13-14.
NOTE: PROCEDURE PRINT used:
      real time           0.06 seconds


99
100        PROC SORT DATA=PMEDIDS; BY LINKIDX; RUN;

NOTE: There were 425 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 425 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time           0.04 seconds


101
102        proc print data=pmedids (obs=50);
103          format eventype eventype.;
104          title3 "sample print of work.pmedids - sorted by linkidx";
105        run;

NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE PRINT printed page 15.
NOTE: PROCEDURE PRINT used:
      real time           0.05 seconds


106
107        DATA PMEDIDS;
108          SET PMEDIDS (KEEP=LINKIDX);
109          BY LINKIDX;
110          IF FIRST.LINKIDX;
111          KEEP LINKIDX;
112        RUN;

NOTE: There were 425 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 425 observations and 1 variables.
NOTE: DATA statement used:
      real time           0.04 seconds


113
114        proc print data=pmedids (obs=50);
115          title3 "sample print of unique linkidxs in work.pmedids";
116        run;

NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE PRINT printed page 16.
NOTE: PROCEDURE PRINT used:
      real time           0.00 seconds


117
118
119        *-------------------------------------------------------------------------------
120        * Get PMED records for OMED event which were for insulin.
121        *------------------------------------------------------------------------------;
```

```
122         PROC SORT DATA=IN.H51A OUT=PMED; BY LINKIDX; RUN;


NOTE: There were 182677 observations read from the data set IN.H51A.
NOTE: The data set WORK.PMED has 182677 observations and 52 variables.
NOTE: PROCEDURE SORT used:
      real time           2:12.48


123
124         DATA OMPMEDS;
125           MERGE PMED (KEEP=LINKIDX RXRECIDX  RXXP00X PERWT00F RXNAME)
126                 PMEDIDS (IN=A);
127           BY LINKIDX;
128           IF A & PERWT00F>0;
129         RUN;

NOTE: There were 182677 observations read from the data set WORK.PMED.
NOTE: There were 425 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.OMPMEDS has 1428 observations and 5 variables.
NOTE: DATA statement used:
      real time           38.28 seconds


130
131         proc print data=ompmeds (obs=200);
132           by linkidx;
133           id linkidx;
134           var rxrecidx rxname RXXP00X  PERWT00F;
135           title3 "sample print of work.pmeds";
136           title4 "PMED (HC-051A) records for unique linkidxs in work.pmedids";
137         run;

NOTE: There were 200 observations read from the data set WORK.OMPMEDS.
NOTE: The PROCEDURE PRINT printed pages 17-22.
NOTE: PROCEDURE PRINT used:
      real time           0.05 seconds


138
139         PROC MEANS DATA=OMPMEDS N SUM;
140           VAR RXXP00X;
141           TITLE3 "Total Rx expenditures associated with other medical expenses for insulin";
142         RUN;

NOTE: There were 1428 observations read from the data set WORK.OMPMEDS.
NOTE: The PROCEDURE MEANS printed page 23.
NOTE: PROCEDURE MEANS used:
      real time           0.55 seconds


143
144         PROC MEANS DATA=OMPMEDS N SUM;
145           VAR RXXP00X;
146           WEIGHT PERWT00F;
147           TITLE3 "Total Rx expenditures associated with other medical expenses for insulin";
148           TITLE5 "Weighted";
149         RUN;
```

NOTE: There were 1428 observations read from the data set WORK.OMPMEDS.
NOTE: The PROCEDURE MEANS printed page 24.
NOTE: PROCEDURE MEANS used:
      real time            0.05 seconds


150
151

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414
NOTE: The SAS System used:
      real time            3:02.34

                    Sample SAS Job for Example D
           sample print of OMED (HC-051C) records where OMTYPEX=2

          Obs        EVNTIDX         OMTYPEX        PERWT00F

           1      700170170285      2 INSULIN        6565.88
           2      700390180407      2 INSULIN       14761.19
           3      700390180729      2 INSULIN       14761.19
           4      701050290296      2 INSULIN       16826.66
           5      702320191014      2 INSULIN       13402.96
           6      702790220591      2 INSULIN       16208.01
           7      702790220762      2 INSULIN       16208.01
           8      703010100486      2 INSULIN        7498.93
           9      703010100804      2 INSULIN        7498.93
          10      703710110328      2 INSULIN        2919.24
          11      704090250298      2 INSULIN       18693.20
          12      704090250421      2 INSULIN       18693.20
          13      704220100853      2 INSULIN       36865.67
          14      704810110285      2 INSULIN        7840.56
          15      706010180565      2 INSULIN        9595.59
          16      706010180736      2 INSULIN        9595.59
          17      706520113033      2 INSULIN        6352.29
          18      706520113742      2 INSULIN        6352.29
          19      706520114389      2 INSULIN        6352.29
          20      706740230373      2 INSULIN        9136.93
          21      707590140135      2 INSULIN       11717.13
          22      707610270130      2 INSULIN       32666.40
          23      708950310933      2 INSULIN        3845.59
          24      710050230454      2 INSULIN       35514.59
          25      710580530204      2 INSULIN        2921.27
          26      710580530242      2 INSULIN        2921.27
          27      711100270364      2 INSULIN       10026.35
          28      711100270491      2 INSULIN       10026.35
          29      711190130703      2 INSULIN       26391.50
          30      711190130929      2 INSULIN       26391.50
          31      711190131117      2 INSULIN       26391.50
          32      711740350491      2 INSULIN       18578.53
          33      712460240378      2 INSULIN        4948.38
          34      712820170592      2 INSULIN       21016.98
          35      712820170958      2 INSULIN       21016.98
          36      712820171191      2 INSULIN       21016.98
          37      713900140537      2 INSULIN        4602.95
          38      714080290438      2 INSULIN       24046.46
          39      714080290534      2 INSULIN       24046.46
          40      714480150247      2 INSULIN       12754.81
          41      714480150329      2 INSULIN       12754.81
          42      714480150381      2 INSULIN       12754.81
          43      714750200360      2 INSULIN       11367.47
          44      714780530265      2 INSULIN        8401.10
          45      715680250473      2 INSULIN        3111.78
          46      716330290590      2 INSULIN       13962.86
          47      716460200464      2 INSULIN        8344.92
          48      716800140306      2 INSULIN       19309.17
          49      716800140522      2 INSULIN       19309.17
          50      717810210167      2 INSULIN        9752.59
          51      717810210270      2 INSULIN        9752.59
          52      717810210345      2 INSULIN        9752.59
          53      718320340255      2 INSULIN       10164.11

**ATTACHMENT 2-Example D**                    **Page A2-73**                         **MEPS HC-051I**

Sample SAS Job for Example D
sample print of OMED (HC-051C) records where OMTYPEX=2

| Obs | EVNTIDX | OMTYPEX | PERWT00F |
|-----|---------|---------|----------|
| 54 | 718370140588 | 2 INSULIN | 13694.74 |
| 55 | 718370140906 | 2 INSULIN | 13694.74 |
| 56 | 719290220484 | 2 INSULIN | 6361.70 |
| 57 | 719560320092 | 2 INSULIN | 10002.19 |
| 58 | 720210190119 | 2 INSULIN | 12568.49 |
| 59 | 721110260168 | 2 INSULIN | 7784.15 |
| 60 | 722530160717 | 2 INSULIN | 15892.26 |
| 61 | 724150160447 | 2 INSULIN | 22917.64 |
| 62 | 724930140448 | 2 INSULIN | 10671.70 |
| 63 | 725250150250 | 2 INSULIN | 13818.40 |
| 64 | 725710300102 | 2 INSULIN | 10430.63 |
| 65 | 725710300284 | 2 INSULIN | 10430.63 |
| 66 | 725760190391 | 2 INSULIN | 10790.43 |
| 67 | 725760190531 | 2 INSULIN | 10790.43 |
| 68 | 725760190620 | 2 INSULIN | 10790.43 |
| 69 | 725790120013 | 2 INSULIN | 5147.72 |
| 70 | 725790120068 | 2 INSULIN | 5147.72 |
| 71 | 726190290436 | 2 INSULIN | 14300.81 |
| 72 | 726190290758 | 2 INSULIN | 14300.81 |
| 73 | 726670211772 | 2 INSULIN | 3796.63 |
| 74 | 727090142213 | 2 INSULIN | 7277.57 |
| 75 | 729490180591 | 2 INSULIN | 19291.48 |
| 76 | 729490180779 | 2 INSULIN | 19291.48 |
| 77 | 730270270479 | 2 INSULIN | 14356.16 |
| 78 | 730530290552 | 2 INSULIN | 12958.86 |
| 79 | 730530290716 | 2 INSULIN | 12958.86 |
| 80 | 730530291168 | 2 INSULIN | 12958.86 |
| 81 | 731110120247 | 2 INSULIN | 11904.03 |
| 82 | 731110120312 | 2 INSULIN | 11904.03 |
| 83 | 732590130263 | 2 INSULIN | 7770.87 |
| 84 | 733030120062 | 2 INSULIN | 3115.24 |
| 85 | 733390110298 | 2 INSULIN | 1408.95 |
| 86 | 733390110469 | 2 INSULIN | 1408.95 |
| 87 | 733610220407 | 2 INSULIN | 2111.25 |
| 88 | 734770140872 | 2 INSULIN | 21530.52 |
| 89 | 734770141464 | 2 INSULIN | 21530.52 |
| 90 | 734800120300 | 2 INSULIN | 14927.77 |
| 91 | 734800120406 | 2 INSULIN | 14927.77 |
| 92 | 734800120499 | 2 INSULIN | 14927.77 |
| 93 | 735050130757 | 2 INSULIN | 5112.29 |
| 94 | 735050131034 | 2 INSULIN | 5112.29 |
| 95 | 735050201250 | 2 INSULIN | 6939.63 |
| 96 | 736050180798 | 2 INSULIN | 6135.54 |
| 97 | 736050181044 | 2 INSULIN | 6135.54 |
| 98 | 736360161209 | 2 INSULIN | 11308.65 |
| 99 | 736450361269 | 2 INSULIN | 2883.28 |
| 100 | 736500190125 | 2 INSULIN | 7244.20 |

Sample SAS Job for Example D
sample print of Rx+event link file records (HC-51IF2) - sorted by eventidx

| EVENTIDX | LINKIDX | EVENTYPE |
|----------|---------|----------|
| 700020160244 | 700020160268 | 1 MVIS |
| 700020160251 | 700020160275 | 3 EROM |
| 700030100160 | 700030100177 | 1 MVIS |
| 700030100191 | 700030100211 | 1 MVIS |
| 700030270108 | 700030270122 | 1 MVIS |
|  | 700030270139 | 1 MVIS |
| 700030270153 | 700030270177 | 1 MVIS |
| 700030340033 | 700030340040 | 1 MVIS |
|  | 700030340057 | 1 MVIS |
| 700030570065 | 700030570089 | 1 MVIS |
| 700040210067 | 700040210074 | 1 MVIS |
| 700050110128 | 700050110135 | 1 MVIS |
| 700050230123 | 700050230130 | 1 MVIS |
| 700060190073 | 700060190100 | 1 MVIS |
| 700060260080 | 700060260179 | 1 MVIS |
|  | 700060260186 | 1 MVIS |
|  | 700060260193 | 1 MVIS |
| 700060260244 | 700060260364 | 1 MVIS |
| 700060260251 | 700060260371 | 1 MVIS |
|  | 700060260388 | 1 MVIS |
| 700070210087 | 700070210152 | 1 MVIS |
| 700070450049 | 700070450070 | 1 MVIS |
|  | 700070450087 | 1 MVIS |
| 700070450056 | 700070450070 | 1 MVIS |
|  | 700070450087 | 1 MVIS |
| 700070510088 | 700070510095 | 1 MVIS |
| 700130330073 | 700130330100 | 1 MVIS |
| 700140160115 | 700140160122 | 1 MVIS |
| 700140230362 | 700140230519 | 1 MVIS |

Sample SAS Job for Example D
sample print of Rx+event link file records (HC-51IF2) - sorted by eventidx

| EVENTIDX | LINKIDX | EVENTYPE |
|---|---|---|
| 700140230468 | 700140230475 | 6 OMED |
| 700140230824 | 700140230831 | 6 OMED |
| 700160150065 | 700160150116 | 1 MVIS |
| 700160220010 | 700160220027 | 1 MVIS |
| 700160390010 | 700160390027 | 1 MVIS |
|  | 700160390034 | 1 MVIS |
| 700160460185 | 700160460229 | 1 MVIS |
|  | 700160460236 | 1 MVIS |
|  | 700160460243 | 1 MVIS |
| 700160460192 | 700160460250 | 1 MVIS |
|  | 700160460267 | 1 MVIS |
| 700160460349 | 700160460356 | 3 EROM |
| 700170170223 | 700170170292 | 1 MVIS |
|  | 700170170305 | 1 MVIS |
|  | 700170170312 | 1 MVIS |
|  | 700170170329 | 1 MVIS |
| 700170170285 | 700170170292 | 6 OMED |
| 700170170336 | 700170170374 | 1 MVIS |
| 700170170343 | 700170170374 | 1 MVIS |
| 700170170350 | 700170170374 | 1 MVIS |
| 700170170367 | 700170170374 | 1 MVIS |
| 700170240090 | 700170240134 | 1 MVIS |
| 700170240141 | 700170240223 | 1 MVIS |
|  | 700170240230 | 1 MVIS |
|  | 700170240247 | 1 MVIS |
|  | 700170240254 | 1 MVIS |
|  | 700170240261 | 1 MVIS |
| 700170240209 | 700170240216 | 6 OMED |
| 700170240278 | 700170240312 | 1 MVIS |
|  | 700170240329 | 1 MVIS |
|  | 700170240336 | 1 MVIS |
|  | 700170240343 | 1 MVIS |
|  | 700170240367 | 1 MVIS |

Sample SAS Job for Example D
sample print of Rx+event link file records (HC-51IF2) - sorted by eventidx

|   EVENTIDX   |   LINKIDX    | EVENTYPE |
|--------------|--------------|----------|
| 700170240278 | 700170240381 | 1 MVIS   |
|              |              |          |
| 700170240285 | 700170240312 | 1 MVIS   |
|              | 700170240329 | 1 MVIS   |
|              | 700170240336 | 1 MVIS   |
|              | 700170240343 | 1 MVIS   |
|              | 700170240367 | 1 MVIS   |
|              | 700170240381 | 1 MVIS   |
|              |              |          |
| 700170240292 | 700170240312 | 1 MVIS   |
|              | 700170240329 | 1 MVIS   |
|              | 700170240336 | 1 MVIS   |
|              | 700170240343 | 1 MVIS   |
|              | 700170240367 | 1 MVIS   |
|              | 700170240381 | 1 MVIS   |
|              |              |          |
| 700170240305 | 700170240312 | 1 MVIS   |
|              | 700170240329 | 1 MVIS   |
|              | 700170240336 | 1 MVIS   |
|              | 700170240343 | 1 MVIS   |
|              | 700170240367 | 1 MVIS   |
|              | 700170240381 | 1 MVIS   |
|              |              |          |
| 700200440060 | 700200440077 | 1 MVIS   |
|              |              |          |
| 700210130019 | 700210130033 | 1 MVIS   |
|              |              |          |
| 700210270050 | 700210270074 | 1 MVIS   |
|              | 700210270081 | 1 MVIS   |
|              |              |          |
| 700210270101 | 700210270125 | 1 MVIS   |
|              | 700210270132 | 1 MVIS   |
|              |              |          |
| 700210270118 | 700210270132 | 1 MVIS   |
|              |              |          |
| 700210270156 | 700210270187 | 1 MVIS   |
|              | 700210270194 | 1 MVIS   |
|              | 700210270207 | 1 MVIS   |
|              | 700210270214 | 1 MVIS   |
|              |              |          |
| 700250170048 | 700250170055 | 1 MVIS   |
|              | 700250170062 | 1 MVIS   |
|              |              |          |
| 700250310055 | 700250310062 | 1 MVIS   |
|              | 700250310079 | 1 MVIS   |
|              |              |          |
| 700250480024 | 700250480031 | 1 MVIS   |
|              |              |          |
| 700280240520 | 700280240582 | 1 MVIS   |

| EVENTIDX | LINKIDX | EVENTYPE |
|---|---|---|
| 700280240537 | 700280240599 | 1 MVIS |
| | 700280240602 | 1 MVIS |
| | 700280240619 | 1 MVIS |
| 700280240544 | 700280240626 | 1 MVIS |
| 700280240551 | 700280240633 | 1 MVIS |
| 700280240575 | 700280240633 | 4 STAZ |
| 700280241218 | 700280241225 | 1 MVIS |
| 700300260145 | 700300260152 | 1 MVIS |
| 700300260241 | 700300260289 | 1 MVIS |
| 700300260258 | 700300260296 | 1 MVIS |
| 700320160339 | 700320160391 | 3 EROM |
| | 700320160404 | 3 EROM |
| | 700320160411 | 3 EROM |
| 700320160346 | 700320160428 | 1 MVIS |
| 700320160360 | 700320160435 | 1 MVIS |
| 700380130115 | 700380130122 | 1 MVIS |
| 700380130177 | 700380130235 | 1 MVIS |
| | 700380130242 | 1 MVIS |
| | 700380130259 | 1 MVIS |
| 700380130204 | 700380130273 | 1 MVIS |
| 700380250141 | 700380250292 | 1 MVIS |
| 700380250158 | 700380250305 | 1 MVIS |
| 700380250189 | 700380250292 | 1 MVIS |
| 700380250278 | 700380250305 | 4 STAZ |
| 700390180407 | 700390180414 | 6 OMED |
| 700390180541 | 700390180596 | 1 MVIS |
| | 700390180609 | 1 MVIS |
| | 700390180616 | 1 MVIS |
| | 700390180623 | 1 MVIS |
| 700390180678 | 700390180743 | 5 DVIS |

Sample SAS Job for Example D
sample print of Rx+event link file records (HC-51IF2) - sorted by eventidx

| EVENTIDX | LINKIDX | EVENTYPE |
|----------|---------|----------|
| 700390180729 | 700390180736 | 6 OMED |
| 700400180037 | 700400180068 | 1 MVIS |
| 700430180041 | 700430180058 | 1 MVIS |
| 700450110312 | 700450110374 | 1 MVIS |
| 700450170070 | 700450170087 | 3 EROM |
|  | 700450170094 | 3 EROM |
| 700450170107 | 700450170114 | 1 MVIS |
|  | 700450170121 | 1 MVIS |
|  | 700450170138 | 1 MVIS |
| 700450330225 | 700450330256 | 1 MVIS |
| 700450330294 | 700450330338 | 5 DVIS |
|  | 700450330345 | 5 DVIS |
|  | 700450330352 | 5 DVIS |
| 700450330376 | 700450330410 | 1 MVIS |
| 700450330390 | 700450330410 | 1 MVIS |
| 700450330403 | 700450330410 | 1 MVIS |
| 700460220069 | 700460220076 | 1 MVIS |
| 700460220083 | 700460220090 | 1 MVIS |
| 700480110042 | 700480110148 | 1 MVIS |
|  | 700480110155 | 1 MVIS |
| 700480280028 | 700480280035 | 1 MVIS |
| 700490180038 | 700490180103 | 1 MVIS |

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by eventidx
Rx+event link file records (HC-51IF2) where eventtype=6 (omed)

| EVENTIDX | LINKIDX | EVENTYPE |
|----------|---------|----------|
| 700140230468 | 700140230475 | 6 OMED |
| 700140230824 | 700140230831 | 6 OMED |
| 700170170285 | 700170170292 | 6 OMED |
| 700170240209 | 700170240216 | 6 OMED |
| 700390180407 | 700390180414 | 6 OMED |
| 700390180729 | 700390180736 | 6 OMED |
| 701050290272 | 701050290289 | 6 OMED |
| 701050290296 | 701050290309 | 6 OMED |
| 701510240453 | 701510240460 | 6 OMED |
| 701510240580 | 701510240597 | 6 OMED |
| 701510240679 | 701510240686 | 6 OMED |
| 701890180615 | 701890180622 | 6 OMED |
| 702030260267 | 702030260274 | 6 OMED |
| 702030260363 | 702030260370 | 6 OMED |
| 702320191014 | 702320191021 | 6 OMED |
| 702320191038 | 702320191045 | 6 OMED |
| 702760270183 | 702760270190 | 6 OMED |
| 702790220591 | 702790220604 | 6 OMED |
| 702790220611 | 702790220628 | 6 OMED |
| 702790220762 | 702790220779 | 6 OMED |
| 702790220786 | 702790220793 | 6 OMED |
| 703010100486 | 703010100493 | 6 OMED |
| 703010100506 | 703010100513 | 6 OMED |
| 703010100784 | 703010100791 | 6 OMED |
| 703010100804 | 703010100811 | 6 OMED |

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Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by eventidx
Rx+event link file records (HC-51IF2) where eventtype=6 (omed)

| EVENTIDX | LINKIDX | EVENTYPE |
|----------|---------|----------|
| 703180160363 | 703180160370 | 6 OMED |
| 703430270684 | 703430270691 | 6 OMED |
| 703430270893 | 703430270906 | 6 OMED |
| 703660190227 | 703660190234 | 6 OMED |
| 703680230289 | 703680230296 | 6 OMED |
| 703710110277 | 703710110284 | 6 OMED |
| 703710110328 | 703710110335 | 6 OMED |
| 703710110342 | 703710110359 | 6 OMED |
| 704090250298 | 704090250301 | 6 OMED |
| 704090250318 | 704090250325 | 6 OMED |
| 704090250421 | 704090250438 | 6 OMED |
| 704090250445 | 704090250452 | 6 OMED |
| 704090250476 | 704090250483 | 6 OMED |
| 704180150035 | 704180150042 | 6 OMED |
| 704180150148 | 704180150155 | 6 OMED |
| 704180150193 | 704180150206 | 6 OMED |
| 704220100853 | 704220100860 | 6 OMED |
| 704220100877 | 704220100884 | 6 OMED |
| 704810110285 | 704810110292 | 6 OMED |
| 705480350503 | 705480350510 | 6 OMED |
| 706010180565 | 706010180572 | 6 OMED |
| 706010180589 | 706010180596 | 6 OMED |
| 706010180736 | 706010180743 | 6 OMED |
| 706520113033 | 706520113040 | 6 OMED |
| 706520113057 | 706520113064 | 6 OMED |

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by eventidx
Rx+event link file records (HC-51IF2) where eventype=6 (omed)

| EVENTIDX | LINKIDX | EVENTYPE |
|----------|---------|----------|
| 706520113742 | 706520113759 | 6 OMED |
| 706520113766 | 706520113773 | 6 OMED |
| 706520114389 | 706520114396 | 6 OMED |
| 706520114409 | 706520114416 | 6 OMED |
| 706740160373 | 706740160380 | 6 OMED |
| 706740230373 | 706740230380 | 6 OMED |
| 706800170489 | 706800170496 | 6 OMED |
| 706970200476 | 706970200483 | 6 OMED |
| 707340130138 | 707340130145 | 6 OMED |
| 707590140135 | 707590140142 | 6 OMED |
| 707590140159 | 707590140166 | 6 OMED |
| 707590140224 | 707590140231 | 6 OMED |
| 707610270130 | 707610270147 | 6 OMED |
| 707610270154 | 707610270161 | 6 OMED |
| 708320190321 | 708320190198 | 6 OMED |
| 708440210291 | 708440210304 | 6 OMED |
| 708460140474 | 708460140481 | 6 OMED |
| 708710180288 | 708710180295 | 6 OMED |
| 708810120144 | 708810120151 | 6 OMED |
| 708810120288 | 708810120295 | 6 OMED |
| 708810260089 | 708810260096 | 6 OMED |
| 708810260154 | 708810260161 | 6 OMED |
| 708810260267 | 708810260274 | 6 OMED |
| 708950310933 | 708950310940 | 6 OMED |
| 708950310957 | 708950310964 | 6 OMED |

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by eventidx
Rx+event link file records (HC-51IF2) where eventype=6 (omed)

| EVENTIDX | LINKIDX | EVENTYPE |
|----------|---------|----------|
| 709060260395 | 709060260408 | 6 OMED |
| 709110100075 | 709110100082 | 6 OMED |
| 709260200552 | 709260200569 | 6 OMED |
| 709620140703 | 709620140710 | 6 OMED |
| 709730160172 | 709730160189 | 6 OMED |
| 710050230454 | 710050230461 | 6 OMED |
| 710580530204 | 710580530211 | 6 OMED |
| 710580530228 | 710580530235 | 6 OMED |
| 710580530242 | 710580530259 | 6 OMED |
| 710580530266 | 710580530273 | 6 OMED |
| 710820140435 | 710820140442 | 6 OMED |
| 711100270364 | 711100270371 | 6 OMED |
| 711100270388 | 711100270395 | 6 OMED |
| 711100270491 | 711100270504 | 6 OMED |
| 711140130319 | 711140130326 | 6 OMED |
| 711140130453 | 711140130460 | 6 OMED |
| 711190130727 | 711190130734 | 6 OMED |
| 711190130929 | 711190130936 | 6 OMED |
| 711190130943 | 711190130950 | 6 OMED |
| 711190131117 | 711190131124 | 6 OMED |
| 711190131131 | 711190131148 | 6 OMED |
| 711740350491 | 711740350504 | 6 OMED |
| 711740350511 | 711740350528 | 6 OMED |
| 711770270431 | 711770270448 | 6 OMED |
| 712460240378 | 712460240385 | 6 OMED |

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by eventidx
Rx+event link file records (HC-51IF2) where eventype=6 (omed)

| EVENTIDX | LINKIDX | EVENTYPE |
|----------|---------|----------|
| 712460240392 | 712460240405 | 6 OMED |
| 712570240158 | 712570240165 | 6 OMED |
| 712570240172 | 712570240189 | 6 OMED |
| 712570240223 | 712570240230 | 6 OMED |
| 712570310401 | 712570310418 | 6 OMED |
| 712570310463 | 712570310470 | 6 OMED |
| 712570310569 | 712570310576 | 6 OMED |
| 712580171280 | 712580171297 | 6 OMED |
| 712820170592 | 712820170605 | 6 OMED |
| 712820170612 | 712820170629 | 6 OMED |
| 712820170958 | 712820170965 | 6 OMED |
| 712820170972 | 712820170989 | 6 OMED |
| 712820171191 | 712820171204 | 6 OMED |
| 712820171211 | 712820171228 | 6 OMED |
| 712890130867 | 712890130874 | 6 OMED |
| 713690140195 | 713690140208 | 6 OMED |
| 713900140537 | 713900140544 | 6 OMED |
| 713900140551 | 713900140568 | 6 OMED |
| 714080290438 | 714080290445 | 6 OMED |
| 714080290452 | 714080290469 | 6 OMED |

Sample SAS Job for Example D
sample print of work.pmedids - sorted by evntidx
work.rxlk records for omed events for insulin

| EVNTIDX | LINKIDX | EVENTYPE |
|---|---|---|
| 700170170285 | 700170170292 | 6 OMED |
| 700390180407 | 700390180414 | 6 OMED |
| 700390180729 | 700390180736 | 6 OMED |
| 701050290296 | 701050290309 | 6 OMED |
| 702320191014 | 702320191021 | 6 OMED |
| 702790220591 | 702790220604 | 6 OMED |
| 702790220762 | 702790220779 | 6 OMED |
| 703010100486 | 703010100493 | 6 OMED |
| 703010100804 | 703010100811 | 6 OMED |
| 703710110328 | 703710110335 | 6 OMED |
| 704090250298 | 704090250301 | 6 OMED |
| 704090250421 | 704090250438 | 6 OMED |
| 704220100853 | 704220100860 | 6 OMED |
| 704810110285 | 704810110292 | 6 OMED |
| 706010180565 | 706010180572 | 6 OMED |
| 706010180736 | 706010180743 | 6 OMED |
| 706520113033 | 706520113040 | 6 OMED |
| 706520113742 | 706520113759 | 6 OMED |
| 706520114389 | 706520114396 | 6 OMED |
| 706740230373 | 706740230380 | 6 OMED |
| 707590140135 | 707590140142 | 6 OMED |
| 707610270130 | 707610270147 | 6 OMED |
| 708950310933 | 708950310940 | 6 OMED |
| 710050230454 | 710050230461 | 6 OMED |
| 710580530204 | 710580530211 | 6 OMED |

Sample SAS Job for Example D
sample print of work.pmedids - sorted by evntidx
work.rxlk records for omed events for insulin

| EVNTIDX | LINKIDX | EVENTYPE |
|---|---|---|
| 710580530242 | 710580530259 | 6 OMED |
| 711100270364 | 711100270371 | 6 OMED |
| 711100270491 | 711100270504 | 6 OMED |
| 711190130929 | 711190130936 | 6 OMED |
| 711190131117 | 711190131124 | 6 OMED |
| 711740350491 | 711740350504 | 6 OMED |
| 712460240378 | 712460240385 | 6 OMED |
| 712820170592 | 712820170605 | 6 OMED |
| 712820170958 | 712820170965 | 6 OMED |
| 712820171191 | 712820171204 | 6 OMED |
| 713900140537 | 713900140544 | 6 OMED |
| 714080290438 | 714080290445 | 6 OMED |
| 714080290534 | 714080290541 | 6 OMED |
| 714480150247 | 714480150254 | 6 OMED |
| 714480150329 | 714480150336 | 6 OMED |
| 714480150381 | 714480150398 | 6 OMED |
| 714750200360 | 714750200377 | 6 OMED |
| 714780530265 | 714780530272 | 6 OMED |
| 715680250473 | 715680250480 | 6 OMED |
| 716330290590 | 716330290603 | 6 OMED |
| 716460200464 | 716460200471 | 6 OMED |
| 716800140306 | 716800140313 | 6 OMED |
| 716800140522 | 716800140539 | 6 OMED |
| 717810210167 | 717810210174 | 6 OMED |
| 717810210270 | 717810210287 | 6 OMED |

Sample SAS Job for Example D

Sample SAS Job for Example D
sample print of work.pmedids - sorted by linkidx

| Obs | EVNTIDX | LINKIDX | EVENTYPE |
|-----|---------|---------|----------|
| 1 | 700170170285 | 700170170292 | 6 OMED |
| 2 | 700390180407 | 700390180414 | 6 OMED |
| 3 | 700390180729 | 700390180736 | 6 OMED |
| 4 | 701050290296 | 701050290309 | 6 OMED |
| 5 | 702320191014 | 702320191021 | 6 OMED |
| 6 | 702790220591 | 702790220604 | 6 OMED |
| 7 | 702790220762 | 702790220779 | 6 OMED |
| 8 | 703010100486 | 703010100493 | 6 OMED |
| 9 | 703010100804 | 703010100811 | 6 OMED |
| 10 | 703710110328 | 703710110335 | 6 OMED |
| 11 | 704090250298 | 704090250301 | 6 OMED |
| 12 | 704090250421 | 704090250438 | 6 OMED |
| 13 | 704220100853 | 704220100860 | 6 OMED |
| 14 | 704810110285 | 704810110292 | 6 OMED |
| 15 | 706010180565 | 706010180572 | 6 OMED |
| 16 | 706010180736 | 706010180743 | 6 OMED |
| 17 | 706520113033 | 706520113040 | 6 OMED |
| 18 | 706520113742 | 706520113759 | 6 OMED |
| 19 | 706520114389 | 706520114396 | 6 OMED |
| 20 | 706740230373 | 706740230380 | 6 OMED |
| 21 | 707590140135 | 707590140142 | 6 OMED |
| 22 | 707610270130 | 707610270147 | 6 OMED |
| 23 | 708950310933 | 708950310940 | 6 OMED |
| 24 | 710050230454 | 710050230461 | 6 OMED |
| 25 | 710580530204 | 710580530211 | 6 OMED |
| 26 | 710580530242 | 710580530259 | 6 OMED |
| 27 | 711100270364 | 711100270371 | 6 OMED |
| 28 | 711100270491 | 711100270504 | 6 OMED |
| 29 | 711190130929 | 711190130936 | 6 OMED |
| 30 | 711190131117 | 711190131124 | 6 OMED |
| 31 | 711740350491 | 711740350504 | 6 OMED |
| 32 | 712460240378 | 712460240385 | 6 OMED |
| 33 | 712820170592 | 712820170605 | 6 OMED |
| 34 | 712820170958 | 712820170965 | 6 OMED |
| 35 | 712820171191 | 712820171204 | 6 OMED |
| 36 | 713900140537 | 713900140544 | 6 OMED |
| 37 | 714080290438 | 714080290445 | 6 OMED |
| 38 | 714080290534 | 714080290541 | 6 OMED |
| 39 | 714480150247 | 714480150254 | 6 OMED |
| 40 | 714480150329 | 714480150336 | 6 OMED |
| 41 | 714480150381 | 714480150398 | 6 OMED |
| 42 | 714750200360 | 714750200377 | 6 OMED |
| 43 | 714780530265 | 714780530272 | 6 OMED |
| 44 | 715680250473 | 715680250480 | 6 OMED |
| 45 | 716330290590 | 716330290603 | 6 OMED |
| 46 | 716460200464 | 716460200471 | 6 OMED |
| 47 | 716800140306 | 716800140313 | 6 OMED |
| 48 | 716800140522 | 716800140539 | 6 OMED |
| 49 | 717810210167 | 717810210174 | 6 OMED |
| 50 | 717810210270 | 717810210287 | 6 OMED |

Sample SAS Job for Example D
sample print of unique linkidxs in work.pmedids

```
         Obs     LINKIDX


          1     700170170292
          2     700390180414
          3     700390180736
          4     701050290309
          5     702320191021
          6     702790220604
          7     702790220779
          8     703010100493
          9     703010100811
         10     703710110335
         11     704090250301
         12     704090250438
         13     704220100860
         14     704810110292
         15     706010180572
         16     706010180743
         17     706520113040
         18     706520113759
         19     706520114396
         20     706740230380
         21     707590140142
         22     707610270147
         23     708950310940
         24     710050230461
         25     710580530211
         26     710580530259
         27     711100270371
         28     711100270504
         29     711190130936
         30     711190131124
         31     711740350504
         32     712460240385
         33     712820170605
         34     712820170965
         35     712820171204
         36     713900140544
         37     714080290445
         38     714080290541
         39     714480150254
         40     714480150336
         41     714480150398
         42     714750200377
         43     714780530272
         44     715680250480
         45     716330290603
         46     716460200471
         47     716800140313
         48     716800140539
         49     717810210174
         50     717810210287
```

Sample SAS Job for Example D
sample print of work.pmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 700170170292 | 700170170292001 | HUMULIN N (VIAL) | 44.18 | 6565.877991 |
|  | 700170170292002 | HUMULIN N (VIAL) | 44.18 | 6565.877991 |
|  | 700170170292003 | HUMULIN N (VIAL) | 44.18 | 6565.877991 |
|  | 700170170292004 | HUMULIN N (VIAL) | 44.18 | 6565.877991 |
|  | 700170170292005 | HUMULIN N (VIAL) | 44.18 | 6565.877991 |
| 700390180414 | 700390180414001 | INSULIN NPH | 61.44 | 14761.185211 |
| 700390180736 | 700390180736001 | INSULIN NPH | 61.44 | 14761.185211 |
|  | 700390180736002 | INSULIN NPH | 61.44 | 14761.185211 |
| 701050290309 | 701050290309001 | INSULIN NPH | 61.44 | 16826.662253 |
|  | 701050290309002 | INSULIN NPH | 61.44 | 16826.662253 |
|  | 701050290309003 | INSULIN NPH | 61.44 | 16826.662253 |
| 702320191021 | 702320191021001 | INSULIN NPH | 61.44 | 13402.955911 |
|  | 702320191021002 | INSULIN NPH | 61.44 | 13402.955911 |
|  | 702320191021003 | INSULIN NPH | 61.44 | 13402.955911 |
| 702790220604 | 702790220604001 | INSULIN NOVOLIN | 9.64 | 16208.011436 |
|  | 702790220604002 | INSULIN NOVOLIN | 9.64 | 16208.011436 |
|  | 702790220604003 | INSULIN NOVOLIN | 9.64 | 16208.011436 |
|  | 702790220604004 | INSULIN NOVOLIN | 9.64 | 16208.011436 |
|  | 702790220604005 | INSULIN NOVOLIN | 9.64 | 16208.011436 |
| 702790220779 | 702790220779001 | INSULIN NOVOLIN | 9.64 | 16208.011436 |
|  | 702790220779002 | INSULIN NOVOLIN | 9.64 | 16208.011436 |
|  | 702790220779003 | INSULIN NOVOLIN | 9.64 | 16208.011436 |
|  | 702790220779004 | INSULIN NOVOLIN | 9.64 | 16208.011436 |
| 703010100493 | 703010100493001 | INSULIN NOVOLIN | 9.64 | 7498.931904 |
|  | 703010100493002 | INSULIN NOVOLIN | 9.64 | 7498.931904 |
|  | 703010100493003 | INSULIN NOVOLIN | 9.64 | 7498.931904 |
|  | 703010100493004 | INSULIN NOVOLIN | 9.64 | 7498.931904 |
| 703010100811 | 703010100811001 | HUMULIN N (VIAL) | 70.41 | 7498.931904 |
| 703710110335 | 703710110335001 | INSULIN NOVOLIN | 9.64 | 2919.235979 |
|  | 703710110335002 | INSULIN NOVOLIN | 9.64 | 2919.235979 |
|  | 703710110335003 | INSULIN NOVOLIN | 9.64 | 2919.235979 |
|  | 703710110335004 | INSULIN NOVOLIN | 9.64 | 2919.235979 |
| 704090250301 | 704090250301001 | INSULIN NPH | 61.44 | 18693.199276 |
|  | 704090250301002 | INSULIN NPH | 61.44 | 18693.199276 |
|  | 704090250301003 | INSULIN NPH | 61.44 | 18693.199276 |
|  | 704090250301004 | INSULIN NPH | 61.44 | 18693.199276 |
|  | 704090250301005 | INSULIN NPH | 61.44 | 18693.199276 |
| 704090250438 | 704090250438001 | INSULIN NPH | 61.44 | 18693.199276 |

                         Sample SAS Job for Example D
                          sample print of work.pmeds
                PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 704090250438 | 704090250438002 | INSULIN NPH | 61.44 | 18693.199276 |
| | 704090250438003 | INSULIN NPH | 61.44 | 18693.199276 |
| | 704090250438004 | INSULIN NPH | 61.44 | 18693.199276 |
| | 704090250438005 | INSULIN NPH | 61.44 | 18693.199276 |
| | 704090250438006 | INSULIN NPH | 61.44 | 18693.199276 |
| 704220100860 | 704220100860001 | INSULIN NOVOLIN | 9.64 | 36865.666721 |
| 704810110292 | 704810110292001 | INSULIN NOVOLIN | 9.64 | 7840.563501 |
| | 704810110292002 | INSULIN NOVOLIN | 9.64 | 7840.563501 |
| | 704810110292003 | INSULIN NOVOLIN | 9.64 | 7840.563501 |
| 706010180572 | 706010180572001 | HUMULIN 70/30 (VIAL) | 70.67 | 9595.593650 |
| | 706010180572002 | HUMULIN 70/30 (VIAL) | 70.67 | 9595.593650 |
| | 706010180572003 | HUMULIN 70/30 (VIAL) | 67.54 | 9595.593650 |
| | 706010180572004 | HUMULIN 70/30 (VIAL) | 70.67 | 9595.593650 |
| | 706010180572005 | HUMULIN 70/30 (VIAL) | 70.67 | 9595.593650 |
| 706010180743 | 706010180743001 | INSULIN NPH | 61.44 | 9595.593650 |
| | 706010180743002 | INSULIN NPH | 61.44 | 9595.593650 |
| | 706010180743003 | INSULIN NPH | 61.44 | 9595.593650 |
| | 706010180743004 | INSULIN NPH | 61.44 | 9595.593650 |
| 706520113040 | 706520113040001 | HUMULIN N (VIAL) | 24.10 | 6352.289112 |
| 706520113759 | 706520113759001 | HUMULIN N (VIAL) | 24.10 | 6352.289112 |
| 706520114396 | 706520114396001 | HUMULIN N (VIAL) | 22.97 | 6352.289112 |
| 706740230380 | 706740230380001 | INSULIN NPH | 61.44 | 9136.926346 |
| | 706740230380002 | INSULIN NPH | 61.44 | 9136.926346 |
| | 706740230380003 | INSULIN NPH | 61.44 | 9136.926346 |
| 707590140142 | 707590140142001 | INSULIN NPH | 61.44 | 11717.133054 |
| | 707590140142002 | INSULIN NPH | 61.44 | 11717.133054 |
| | 707590140142003 | INSULIN NPH | 61.44 | 11717.133054 |
| | 707590140142004 | INSULIN NPH | 61.44 | 11717.133054 |
| 707610270147 | 707610270147001 | INSULIN NPH | 61.44 | 32666.400903 |
| 708950310940 | 708950310940001 | HUMULIN R (VIAL) | 24.10 | 3845.590523 |
| | 708950310940002 | HUMULIN R (VIAL) | 24.10 | 3845.590523 |
| | 708950310940003 | HUMULIN R (VIAL) | 24.10 | 3845.590523 |
| 710050230461 | 710050230461001 | INSULIN NPH | 61.44 | 35514.590570 |
| | 710050230461002 | INSULIN NPH | 61.44 | 35514.590570 |
| 710580530211 | 710580530211001 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| | 710580530211002 | HUMALOG (VIAL) | 125.90 | 2921.270878 |

Sample SAS Job for Example D
sample print of work.pmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 710580530211 | 710580530211003 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| | 710580530211004 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| | 710580530211005 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| | 710580530211006 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| | 710580530211007 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| | 710580530211008 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| | 710580530211009 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| | 710580530211010 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| | 710580530211011 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| | 710580530211012 | HUMALOG (VIAL) | 125.90 | 2921.270878 |
| 710580530259 | 710580530259001 | INSULIN NPH | 61.44 | 2921.270878 |
| | 710580530259002 | INSULIN NPH | 61.44 | 2921.270878 |
| | 710580530259003 | INSULIN NPH | 61.44 | 2921.270878 |
| | 710580530259004 | INSULIN NPH | 61.44 | 2921.270878 |
| 711100270371 | 711100270371001 | INSULIN NPH | 61.44 | 10026.350828 |
| | 711100270371002 | INSULIN NPH | 61.44 | 10026.350828 |
| 711100270504 | 711100270504001 | HUMULIN 70/30 (VIAL) | 65.40 | 10026.350828 |
| | 711100270504002 | HUMULIN 70/30 (VIAL) | 65.40 | 10026.350828 |
| 711190130936 | 711190130936001 | INSULIN NOVOLIN MPH HUMAN | 12.05 | 26391.503933 |
| 711190131124 | 711190131124001 | INSULIN NOVOLIN NPH HUMAN | 23.91 | 26391.503933 |
| 711740350504 | 711740350504001 | INSULIN NOVOLIN | 9.64 | 18578.534408 |
| | 711740350504002 | INSULIN NOVOLIN | 9.64 | 18578.534408 |
| | 711740350504003 | INSULIN NOVOLIN | 9.64 | 18578.534408 |
| 712460240385 | 712460240385001 | INSULIN NPH | 61.44 | 4948.379991 |
| | 712460240385002 | INSULIN NPH | 61.44 | 4948.379991 |
| 712820170605 | 712820170605001 | HUMULIN R (VIAL) | 22.46 | 21016.984302 |
| 712820170965 | 712820170965001 | HUMULIN 70/30 (VIAL) | 44.43 | 21016.984302 |
| | 712820170965002 | HUMULIN 70/30 (VIAL) | 44.43 | 21016.984302 |
| | 712820170965003 | HUMULIN 70/30 (VIAL) | 23.47 | 21016.984302 |
| 712820171204 | 712820171204001 | HUMULIN 70/30 (VIAL) | 24.39 | 21016.984302 |
| | 712820171204002 | HUMULIN 70/30 (VIAL) | 24.39 | 21016.984302 |
| | 712820171204003 | HUMULIN 70/30 (VIAL) | 24.39 | 21016.984302 |
| 713900140544 | 713900140544001 | INSULIN NOVOLIN | 9.64 | 4602.950611 |
| 714080290445 | 714080290445001 | INSULIN NPH | 61.44 | 24046.457255 |
| | 714080290445002 | INSULIN NPH | 61.44 | 24046.457255 |
| | 714080290445003 | INSULIN NPH | 61.44 | 24046.457255 |

Sample SAS Job for Example D
sample print of work.pmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---|---|---|---|---|
| 714080290541 | 714080290541001 | INSULIN NPH | 61.44 | 24046.457255 |
| 714480150254 | 714480150254001 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150254002 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150254003 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| 714480150336 | 714480150336001 | NOVOLIN N (VIAL) | 20.97 | 12754.813051 |
| 714480150398 | 714480150398001 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398002 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398003 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398004 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398005 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398006 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398007 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398008 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398009 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398010 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398011 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| | 714480150398012 | INSULIN NOVOLIN | 9.64 | 12754.813051 |
| 714750200377 | 714750200377001 | INSULIN NPH | 61.44 | 11367.469633 |
| | 714750200377002 | INSULIN NPH | 61.44 | 11367.469633 |
| | 714750200377003 | INSULIN NPH | 61.44 | 11367.469633 |
| | 714750200377004 | INSULIN NPH | 61.44 | 11367.469633 |
| | 714750200377005 | INSULIN NPH | 61.44 | 11367.469633 |
| 714780530272 | 714780530272001 | INSULIN NOVOLIN | 9.64 | 8401.104621 |
| | 714780530272002 | INSULIN NOVOLIN | 9.64 | 8401.104621 |
| 715680250480 | 715680250480001 | HUMULIN R (VIAL) | 24.70 | 3111.775610 |
| | 715680250480002 | HUMULIN R (VIAL) | 24.70 | 3111.775610 |
| | 715680250480003 | HUMULIN R (VIAL) | 24.70 | 3111.775610 |
| | 715680250480004 | HUMULIN R (VIAL) | 24.70 | 3111.775610 |
| | 715680250480005 | HUMULIN R (VIAL) | 24.70 | 3111.775610 |
| 716330290603 | 716330290603001 | INSULIN NPH | 61.44 | 13962.863799 |
| 716460200471 | 716460200471001 | INSULIN NPH | 61.44 | 8344.917130 |
| | 716460200471002 | INSULIN NPH | 61.44 | 8344.917130 |
| | 716460200471003 | INSULIN NPH | 61.44 | 8344.917130 |
| | 716460200471004 | INSULIN NPH | 61.44 | 8344.917130 |
| | 716460200471005 | INSULIN NPH | 61.44 | 8344.917130 |
| 716800140313 | 716800140313001 | INSULIN NOVOLIN | 9.64 | 19309.170720 |
| 716800140539 | 716800140539001 | HUMULIN N (VIAL) | 45.98 | 19309.170720 |
| 717810210174 | 717810210174001 | INSULIN NOVOLIN | 9.64 | 9752.590190 |

Sample SAS Job for Example D
sample print of work.pmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---------|----------|--------|---------|----------|
| 717810210174 | 717810210174002 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210174003 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210174004 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210174005 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210174006 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210174007 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210174008 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210174009 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| 717810210287 | 717810210287001 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287002 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287003 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287004 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287005 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287006 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287007 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287008 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287009 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287010 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287011 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210287012 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| 717810210352 | 717810210352001 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210352002 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210352003 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210352004 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210352005 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210352006 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210352007 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| | 717810210352008 | INSULIN NOVOLIN | 9.64 | 9752.590190 |
| 718320340262 | 718320340262001 | INSULIN NPH | 61.44 | 10164.109025 |
| | 718320340262002 | INSULIN NPH | 61.44 | 10164.109025 |
| | 718320340262003 | INSULIN NPH | 61.44 | 10164.109025 |
| 718370140595 | 718370140595001 | INSULIN NOVOLIN | 9.64 | 13694.735422 |
| | 718370140595002 | INSULIN NOVOLIN | 9.64 | 13694.735422 |
| | 718370140595003 | INSULIN NOVOLIN | 9.64 | 13694.735422 |
| | 718370140595004 | INSULIN NOVOLIN | 9.64 | 13694.735422 |
| | 718370140595005 | INSULIN NOVOLIN | 9.64 | 13694.735422 |
| | 718370140595006 | INSULIN NOVOLIN | 9.64 | 13694.735422 |
| 718370140913 | 718370140913001 | INSULIN NOVOLIN | 9.64 | 13694.735422 |
| | 718370140913002 | INSULIN NOVOLIN | 9.64 | 13694.735422 |
| | 718370140913003 | INSULIN NOVOLIN | 9.64 | 13694.735422 |
| | 718370140913004 | INSULIN NOVOLIN | 9.64 | 13694.735422 |
| 719290220491 | 719290220491001 | INSULIN NPH | 61.44 | 6361.695255 |
| | 719290220491002 | INSULIN NPH | 61.44 | 6361.695255 |

Sample SAS Job for Example D
sample print of work.pmeds
PMED (HC-051A) records for unique linkidxs in work.pmedids

| LINKIDX | RXRECIDX | RXNAME | RXXP00X | PERWT00F |
|---|---|---|---|---|
| 719560320105 | 719560320105001 | INSULIN NPH | 61.44 | 10002.189560 |
| | 719560320105002 | INSULIN NPH | 61.44 | 10002.189560 |
| | 719560320105003 | INSULIN NPH | 61.44 | 10002.189560 |
| 720210190126 | 720210190126001 | INSULIN NOVOLIN | 9.64 | 12568.488328 |
| | 720210190126002 | INSULIN NOVOLIN | 9.64 | 12568.488328 |
| | 720210190126003 | INSULIN NOVOLIN | 9.64 | 12568.488328 |
| 721110260175 | 721110260175001 | INSULIN NPH | 61.44 | 7784.154032 |
| 722530160724 | 722530160724001 | INSULIN NPH | 61.44 | 15892.258263 |
| | 722530160724002 | INSULIN NPH | 61.44 | 15892.258263 |

HC-051I
Sample SAS Job for Example D

Sample SAS Job for Example D
Total Rx expenditures associated with other medical expenses for insulin

The MEANS Procedure

Analysis Variable : RXXP00X SUM OF PAYMENTS RXSF00X-RXOU00X(IMPUTED)

```
         N            Sum
     --------------------
      1428       66667.85
     --------------------
```

Sample SAS Job for Example D

Sample SAS Job for Example D
Total Rx expenditures associated with other medical expenses for insulin


Weighted


The MEANS Procedure

Analysis Variable : RXXP00X SUM OF PAYMENTS RXSF00X-RXOU00X(IMPUTED)

```
            N            Sum
      --------------------
      1428      714102690
      --------------------
```

HC-051I
Sample SAS Job for Example D