MEPS HC-067I:
Appendix to MEPS 2002 Event Files
HC-067A - HC-067H

December 2004

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A. Data Use Agreement

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

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

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

2. If the identity of any person or establishment should be discovered inadvertently, then (a) no use will be made of this knowledge, (b) the Director Office of Management AHRQ will be advised of this incident, (c) the information that would identify any individual or establishment will be safeguarded or destroyed, as requested by AHRQ, and (d) no one else will be informed of the discovered identity; and

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

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

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

B. Background

The Medical Expenditure Panel Survey (MEPS) provides nationally representative estimates of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian non-institutionalized 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, also known as NMES-1) was conducted in 1977 and the National Medical Expenditure Survey (NMES-2) in 1987. Since 1996, MEPS continues 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

The MEPS HC, a nationally representative survey of the U.S. civilian non-institutionalized 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 2 ½-year period. Using computer-assisted personal interviewing (CAPI) technology, data on medical expenditures and use for two 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 non-institutionalized population, with oversampling of Hispanics and blacks.

2.0   Medical Provider Component

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

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, eligibility requirements, 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 insurance providers identified by MEPS HC respondents) are linked back to data provided by those respondents. Data 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 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 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 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 electronic files.

Selected printed documents 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 you are requesting.

Additional information on MEPS is available from the MEPS project manager or the MEPS public use data manager at the Center for Financing, Access, and Cost Trends, Agency for Healthcare Research and Quality, 540 Gaither Road, Rockville, MD 20850 (301-427-1406).

C. Technical and Programming Information

1.0 General Information

This documentation describes the MEPS Public Use Release HC-067I, which is the Appendix to MEPS releases HC-067A through HC-067H. This release contains two data files, both of which are provided in ASCII (with related SAS and SPSS programming statements) 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 both HTML and 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 H67IF1CB.PDF and H67IF2CB.PDF). It contains the following sections:

>   Data File Information
>   Merging MEPS Data Files
>   Crosswalk of Clinical Classification Code to ICD-9-CM Code
>   Sample SAS Jobs for Linking

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 2002 event-level data files. File 1, the H67IF1 or CLNK file, is used for linking the MEPS condition file with the MEPS event files; File 2, the H67IF2 or RXLK file, is used for linking the MEPS prescribed medicines event file with other MEPS event files.

2.1 Using MEPS Data for Trend and Longitudinal Analysis

MEPS began in 1996 and several annual data files have been released. As more years of data are produced, MEPS will become increasingly valuable for examining health care trends. However, it is important to consider a variety of factors when examining trends over time using MEPS. Statistical significance tests should be conducted to assess the likelihood that observed trends are attributable to sampling variation. MEPS expenditure estimates are especially sensitive to sampling variation due to the underlying skewed distribution of expenditures. For example, 1 percent of the population accounts for about one-quarter of all expenditures. The extent to which observations with extremely high expenditures are captured in the MEPS sample varies from year to year (especially for smaller population subgroups), which can produce substantial shifts in estimates of means or totals that are simply an artifact of the sample(s). The length of

time being analyzed should also be considered. In particular, large shifts in survey estimates over short periods of time (e.g. from one year to the next) that are statistically significant should be interpreted with caution, unless they are attributable to known factors such as changes in public policy or MEPS survey methodology. Looking at changes over longer periods of time can provide a more complete picture of underlying trends. Analysts may wish to consider using techniques to smooth or stabilize trend analyses of MEPS data such as pooling time periods for comparison (e.g. 1996-97 versus 1998-99), working with moving averages, or using modeling techniques with several consecutive years of MEPS data to test the fit of specified patterns over time. Finally, researchers should be aware of the impact of multiple comparisons on Type I error because performing numerous statistical significance tests of trend increases the likelihood of inappropriately concluding a change is statistically significant.

The records on this file can be linked to all other 2002 MEPS-HC public use data sets by the sample person identifier (DUPERSID).

2.2   Codebook Format

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

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

2.3   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.

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

File 1 (H67IF1) or the CLNK file, contains the variables needed to link each record on the MEPS 2002 condition file, HC-069, with one or more records on the MEPS 2002 event files, HC-067A through HC-067H. 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 that uniquely identifies each condition for a person and corresponds to a unique record on the MEPS 2002 Condition file, HC-069. There may be more than one record on the CLNK file for a specific CONDIDX value.

EVNTIDX is the 12-digit number that uniquely identifies each event for a person and corresponds to a unique record on one of the MEPS 2002 event files, HC-067B through HC-067H. (EVNTIDX is not included on the 2002 Prescription Medicines event file, HC-067A; 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-067G
> 2 = OPAT - outpatient department visit event contained on MEPS release HC-067F
> 3 = EROM - emergency room visit event contained on MEPS release HC-067E
> 4 = STAZ – inpatient hospital stay event contained on MEPS release HC-067D
> 7 = HVIS - home health visit event contained on MEPS release HC-067H
> 8 = PMED - prescribed medicines event contained on MEPS release HC-067A

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

File 2 (H67IF2) or the RXLK file, contains the variables needed to link each record on the MEPS 2002 prescribed medicines file, HC-067A, with one or more records on the MEPS 2002 event files, HC-067B through HC-067H. 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 2002 event files, HC-067B through HC-067H. 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-067A 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-067A 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-067G
2 = OPAT - outpatient department visit event contained on MEPS release HC-067F
3 = EROM - emergency room visit event contained on MEPS release HC-067E
4 = STAZ – inpatient hospital stay event contained on MEPS release HC-067D
5 = DVIS - dental visit event contained on MEPS release HC-067B
6 = OMED - other medical expense event contained on MEPS release HC-067C

2.6   2002 Condition-Event Frequency Table

The files H67IT1.HTM and H67IT1.PDF contain the MEPS 2002 Condition-Event Frequency table. This table contains unweighted and weighted counts of records on the MEPS 2002 event files, HC-067A through HC-067H, for each of the condition, procedure and clinical classification codes contained on the MEPS 2002 condition file, HC-069. Attachment 1 contains a crosswalk of the clinical classification codes to ICD-9-CM codes. See the HC-069 document for additional information on these codes.

2.7   2002 Utilization and Expenditures Summary Table

The files H67IT2.HTM and H67IT2.PDF contain the MEPS 2002 Utilization and Expenditures Summary table. This table contains statistics for all of the utilization and expenditure variables contained on the MEPS 2002 Full Year Use and Expenditure Data file, HC-070. For each of these variables, the following statistics are provided from the HC-070 file, and from the corresponding event-level file(s) HC-067A through HC-067H:

Number of persons with positive person-level weight (PERWT02F) 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-070 variables from the event-level files.

3.0   Merging/Linking MEPS Data Files

This section provides information on using each of the two HC-067I files, RXLK and CLNK, to link with the files contained in MEPS releases HC-069 and HC-067A through HC-067H. 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-069), the Prescribed Medicines and Office-Based Medical Provider Visits Event Files (HC-067A and HC-067G)

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-069), the CLNK file (HC-067I1), the office-based medical provider visit event file (HC-067G), the RXLK file (HC-067I2), and the prescribed medicines event file (HC-067A). It includes the following major steps:

1.   From HC-069 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-067G 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-067G 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-067A linked to those visits.

6.   Using these record IDs obtain the linked records from the HC-067A 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-069) and the Prescribed Medicines Event File (HC-067A)

This example calculates the total expenditure for prescribed medicines associated with asthma, using the condition file (HC-069), the CLNK file and the prescribed medicines event file (HC-067A). It includes the following major steps:

1.   From HC-069 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-067A 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-069) and Office-Based Medical Provider Visits Event File (HC-067G)

This example calculates the total expenditures for office-based medical provider visits associated with asthma, using the condition file (HC-069), the CLNK file and the office-based medical provider visits event file (HC-067G). It includes the following major steps:

1.   From HC-069 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-067G 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-067G 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-067C)

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-067C). It includes the following major steps:

1.   From HC-067C 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-067A 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-CM Code Crosswalk

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
```

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   04082   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
79531   79539

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   0664   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

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

8   Other infections, including parasitic

V120	V1200	V1203	V1209	080	0810	0811	0812	0819	0820	0821
0822	0823	08240	08241	08249	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	V0181	V0189
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	V7178	V7182	V7183	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				

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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

20 Cancer, other respiratory and intrathoracic

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

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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 |

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 | | | | | | | | |

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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   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

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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		

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 |

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	2561	2562	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

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	27702	27703	27709

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	2777	2778	2779	2780	27800	27801	2781	2782	2783
2784	2788	7831	7832	78321	78322	7833	7834	78340	78341	78342
78343	7835	7837	7839	7947	7957	79579				

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	28521	28522	28529
2858	2859									

60   Acute posthemorrhagic anemia

2851

61   Sickle cell anemia

2825	28260	28261	28262	28263	28269

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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   79001   79009

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

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   29410   29411   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

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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   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

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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

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

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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
36583	36589	3659								

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

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	37281	37289	3729	3732	37400	37401	37402	37403
37404	37405	37410	37411	37412	37413	37414	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

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	78193						

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

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

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	35781
35782	35789	3579	3580	3581	3582	3588	3589	3590	3591	3592
3593	3594	3595	3596	3598	35981	35989	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

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

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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   41412   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   42820   42821   42822   42823   42830   42831   42832   42833
42840   42841   42842   42843   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

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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   4386   4387   43881
43882   43883   43884   43885   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   44321   44322   44323   44324   44329

116   Aortic and peripheral arterial embolism or thrombosis

4440   4441   44421   44422   44481   44489   4449   44501   44502   44581   44589

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   4548   4549

120   Hemorrhoids

4550   4551   4552   4553   4554   4555   4556   4557   4558   4559

121   Other diseases of veins and lymphatics

4563   4564   4565   4566   4568   4570   4571   4572   4578   4579   4591

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

45910	45911	45912	45913	45919	4592	45930	45931	45932	45933	45939
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	46400	46401	46410	46411	46420	46421	46430	46431
4644	46450	46451	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
4940	4941	496							

128   Asthma

49300	49301	49302	49310	49311	49312	49320	49321	49322	49390	49391
49392									

129   Aspiration pneumonitis, food/vomitus

5070

130   Pleurisy, pneumothorax, pulmonary collapse

5100	5109	5110	5111	5118	5119	5120	5128	5180	5181	5182

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

131   Respiratory failure, insufficiency, arrest (adult)

V461   V462   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	0075	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	52100	52101	52102	52103	52104	52105	52109
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	52510	52510	52511	52512
52513	52519	5252	5253	5258	5259	5260	5261	5262	5263	5264
5265	52681	52689	5269							

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 | 53012 | 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 | 53784 | 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 | | | | | | | | |

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

145   Intestinal obstruction without hernia

    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

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

155   Other gastrointestinal disorders

        V127   V1270   V1279   V416   V441   V442   V443   V444   V453   V473   V535
        V551   V552   V553   V554   5581   5582   5640   56400   56401   56402   56409
        5641   5645   5647   5648   56481   56489   5649   5680   56881   56882   56889
        5689   56981   56982   56983   56984   56985   56986   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   V5631   V5632   V568   585   7925

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

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	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	6000	6001	6002	6003	6009

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	6023	6028	6029	6030	6038	6039	605	6060
6061	6068	6069	6070	6073	60781	60782	60783	60784	60789	6079
6081	6082	6083	60881	60882	60883	60884	60885	60886	60887	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	7938	79380	79381
79389										

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

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

172   Ovarian cyst

6200   6201   6202

173   Menopausal disorders

V074   2563   25631   25639   6270   6271   6272   6273   6274   6278   6279

174   Female infertility

6280   6281   6282   6283   6284   6288   6289

175   Other female genital disorders

V132	V1321	V1329	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	79500	79501	79502					
79509										

176   Contraceptive and procreative management

V157	V2501	V2502	V2509	V251	V252	V253	V2540	V2541	V2542	V2543
V2549	V255	V258	V259	V260	V261	V262	V2621	V2622	V2629	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										

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

179   Postabortion complications

   6390   6391   6392   6393   6394   6395   6396   6398   6399

180   Ectopic pregnancy

   6330   63300   63301   6331   63310   63311   6332   63320   63321   6338   63380
   63381   6339   63390   63391

181   Other complications of pregnancy

   630   631   632   64300   64301   64303   64310   64311   64313   64320   64321
   64323   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   64510   65510   64511   64513   64520   64521   64523

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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   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

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

194   Forceps delivery

66950   66951

195   Other complications of birth, puerperium affecting management of mother

V230   V231   V232   V233   V234   V2341   V2349   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   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

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	69276	69277	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

7070	7071	70710	70711	70712	70713	70714	70715	70719	7078	7079

200   Other skin disorders

V133	V423	69275	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

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	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	71870	71871
71872	71873	71874	71875	71876	71877	71878	71879	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

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

206   Osteoporosis

73300   73301   73302   73303   73309

207   Pathological fracture

7331   73310   73311   73312   73313   73314   73315   73316   73319   73393   73394
73395

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

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   72783   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   78191   78192   78199   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

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	74783	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						

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

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

```
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

```
V2130    V2131    V2132    V2133    V2134    V2135    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    76520    76521    76522    76523    76524
76525    76526    76527    76528    76529
```

220   Intrauterine hypoxia and birth asphyxia

```
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
```

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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	77081
77082	77083	77084	77089	7709	7710	7711	7712	7713	7714	7715
7716	7717	7718	77181	77182	77183	77189	7720	7721	77210	77211
77212	77213	77214	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
7797	7798	77981	77982	77989	7799	78091	78092			

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	83969	83971	83979	8398	8399	9056		

226   Fracture of neck of femur (hip)

V5413	V5423	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							

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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

V5410	V5411	V5412	V5420	V5421	V5422	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	81345	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

V5414	V5415	V5416	V5424	V5425	V5426	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	82340	82341	82342	82380	82381	82382	82390	82391	82392	8240
8241	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	V5417	V5419	V5427	V5429	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	8407	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	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

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	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

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	41406	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	99687	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	99549	9586	9970	99700	99701	99702	99709	9971	9972	9973
9974	9975	99760	99761	99762	99769	99771	99772	99779	9979	99791
99799	9980	9981	99811	99812	99813	9982	9983	99832	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

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

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

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Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	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									

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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   99590   99591   99592   99593   99594

245   Syncope

7802

246   Fever of unknown origin

7806

247   Lymphadenitis

2891   2892   2893   683   7856

248   Gangrene

44024   7854

249   Shock

78550   78551   78559

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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   V1501   V1502   V1503   V1504
    V1505   V1507   V1508   V1509   V146   V147   V148   V149   V150   V727   4771
    5583   9957   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

    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   V5481   V5489   V549   V558   V559   V583   V584   V5841
    V5842   V5843   V5849   V5861   V5862   V5869   V5871   V5872   V5873   V5874   V5875
    V5876   V5877   V5878   V588   V5881   V5883   V5889   V589   V660   V665   V666
    V667   V669   V670   V6770   V6701   V6709   V6751   V6759   V676   V679

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

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	V1053	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	V4284
V4289	V429	V438	V4381	V4382	V4383	V4389	V447	V448	V449	V4571
V4572	V4573	V4574	V4575	V4576	4577	V4578	V4579	V4583	V4584	V4589
V460	V468	V469	V470	V471	V472	V479	V480	V488	V489	V498
V4981	V4982	V4989	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	V8301	V8302	V8381	V8389	3020	78002	78050	78051
78052	78053	78054	78055	78056	78057	78059	7809	78099	7815	7816
7823	78261	78262	7828	7829	7830	7836	7842	7901	7903	7906
7909	79091	79092	79093	79094	79099	7929	7932	7939	7949	7954
7963	7964	7965	7969	7980	7981	7982	7989	7992	7993	7998
7999										

260   All E Codes[2].

---

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[2] Classification system for E codes developed by CDC and incorporated into CCS is presented below.

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

E CODE CLASSIFICATION

E code	Category	ICD-9-CM codes					
2601	Cut/pierce	E9200-E9205 E986	E9208	E9209	E956	E966	E974
2602	Drowning/submersion	E8300-E8306 E8329 E9100-E9104 E984	E8308 E9108	E8309 E9109	E8320-E8326 E954	E8328 E964	
2603	Fall	E8800 E8801 E8839-E8846 E8849 E8860 E8869 E888 E9570-E9572 E9579	E8809-E8811 E885 E8880 E9681	E882 E8850-E8854 E8881 E9870-E9872	E8830-E8832 E8859- E8888 E9879	E8889	
2604	Fire/burn	E8900-E8903 E8930-E8932 E8938 E897 E8981 E9581 E8582 E9882 E9887	E8908-E8913 E8939 E899 E9587	E8918 E894 E9240-E9242 E961	E8919 E895 E9248 E9680	E892 E896 E9249 E9683 E9881	
2605	Firearm	E9220-E9224 E9654 E970	E9228 E9850-E9854	E9229	E9550-E9554	E9650	
2606	Machinery	E9190-E9199					
2607	Motor vehicle traffic (MVT)	E8100-E8199	E9585	E9685	E9885		
2608	Pedal cyclist, not MVT	E8003 E8013 E8073 E8206 E8261 E8269	E8023 E8216	E8033 E8226	E8043 E8236	E8053 E8246	E8063 E8256
2609	Pedestrian, not MVT	E8002 E8012 E8072 E8207 E8260 E8270	E8022 E8217 E8280	E8032 E8227 E8290	E8042 E8237	E8052 E8247	E8062 E8257
2610	Transport, not MVT	E8000 E8001 E8031 E8038-E8041 E8068-E8071 E8078 E8215 E8218-E8225 E8248-E8255 E8258 E8272-E8274 E8278 E8289 E8294 E8319 E8330-E8336 E8358-E8366 E8399 E8400-E819 E9586 E9886	E8008-E8011 E8048-E8051 E8079 E8228-E8235 E8259 E8279 E8298 E8338-E8346 E8368-E8376 E8426-E8450	E8018-E8021 E8058-E8061 E8200-E8205 E8238-E8245 E8262-E8264 E8282 E8284 E8299 E8348-8356 E8378-E8366 E8458	E8028- E8208- E8268 E8288 E8310-E8316 E8388 E8459	E8318	
2611	Natural/environment	E9000 E9001 E9029 E903	E9009-E9011 E9040-E9043	E9018-E9022 E9049-E9065	E9028 E9068-E907		

[1] All ICD-9-CM coding changes from January 1980 through September 2003 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).

Source: AHRQ, Center for Organization and Delivery Studies, Healthcare Cost and Utilization Project (HCUP).

		E908-E9084 E9088-E9094 E9098 E9099 E9280-E9283 E9583 E9883
2612	Overexertion	E927
2613	Poisoning	E8500-E851 E8520-E8525 E8528-E8532 E8538-E8543 E8548 E8550-E8556 E8558-E856 E857 E8580-8589 E8600-E8604 E8608-E8616 E8619-E8625 E8629-8644 E8650-E8655 E8658-E867 E8680-E8683 E8688-E8694 E8698 E8699 E9500-E9511 E9518 E9520 E9521 E9521 E9528 E9529 E9620-E9622 E9629 E972 E9800-E9811 E9818 E9820 E9821 E9828 E9829
2614	Struck by, against	E916 E9170-E9179 E9600 E9682 E973 E975
2615	Suffocation	E911 E912 E9130-E9133 E9138 E9139 E9530 E9531 E9538 E9539 E963 E9830 E9831 E9838 E9839
2616	Adverse effects of medical care	E8700-E8726 E8728-E8736 E8738-E8745 E8748 E8752 E8758-E8765 E8768 E8769 E8780-E8786 E8788-E8799
2617	Adverse effects of medical drugs	E9300-E9335 E9338-E9364 E9370-E9376 E9378-E9387 E9389-E9401 E9408-E9413 E9419-E9436 E9438-E9447 E9450-E9458 E9460-E9474 E9478-E9486 E9488-E9497 E9499
2618	Other specified and classifiable	E846 -E848 E914 E915 E918 E9210 E9211 E9218 E9219 E9225 E9230-E9232 E9238 E9239 E9250-E9252 E9258-E9265 E9268 E9269 E9290-E9295 E9555-E9557 E9559 E9580 E9584 E9601 E9655-E9659 E9670-E9679 E9684 E9686 E9687 E971 E978 E9790-E9799 E9855 E9856 E9857 E9880 E9884 E990 E9909-E9913 E9919 E992 E993 E994 E996 E9970-E9972
2619	Other specified, not elsewhere classified	E9288 E9298 E9588 E959 E9688 E969 E977 E9888 E989 E995 E9978 E998 E999 E9990 E9991
2620	Unspecified	E887 E9289 E9299 E9589 E9689 E976 E9889 E9979
2621	Place of occurrence	E8490-E8499

Attachment 2: Sample SAS Jobs for Linking Example

```
1                                          The SAS System              10:56 Thursday, October 28, 2004

NOTE: Copyright (c) 1999-2001 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 8.2 (TS2M0)
NOTE: This session is executing on the WIN_PRO  platform.



NOTE: This installation is running Base SAS hot fix bundle 82BX08.



NOTE: SAS initialization used:
      real time           2.39 seconds
      cpu time            0.48 seconds



NOTE: AUTOEXEC processing beginning; file is C:\progra~1\sasins~1\sas\v8\autoexec.sas.



NOTE: AUTOEXEC processing completed.

1          OPTIONS LS=132 PS=59;
2
3          TITLE1 "HC-067I";
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           0.12 seconds
      cpu time            0.01 seconds


24
```

```
25          *------------------------------------------------------------------------------------
26          * Get condition records coded as asthma.
27          *-----------------------------------------------------------------------------------;
28          DATA ASCONDS;
29            SET IN.H69 (KEEP=CONDIDX CCCODEX);
30            IF CCCODEX="128";
31
32          RUN;
```

NOTE: There were 120795 observations read from the data set IN.H69.
NOTE: The data set WORK.ASCONDS has 2159 observations and 2 variables.
NOTE: DATA statement used:
      real time   0.50 seconds
      cpu time   0.17 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 2159 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCONDS has 2159 observations and 2 variables.
NOTE: PROCEDURE SORT used:
      real time   0.07 seconds
      cpu time   0.01 seconds

```
38
39          proc print data=asconds (obs=50);
40            title3 "sample print of work.asconds - sorted by condidx";
41            title4 "COND (H69) 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   0.28 seconds
      cpu time   0.01 seconds

```
43
44          PROC SORT DATA=IN.H67IF1 OUT=CLNK; BY CONDIDX; RUN;
```

NOTE: There were 388065 observations read from the data set IN.H67IF1.
NOTE: The data set WORK.CLNK has 388065 observations and 5 variables.
NOTE: PROCEDURE SORT used:
      real time   23.14 seconds
      cpu time   2.49 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 388065 observations read from the data set WORK.CLNK.
NOTE: There were 2159 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCLNKS has 8833 observations and 3 variables.
NOTE: DATA statement used:
      real time             0.42 seconds
      cpu time              0.40 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             0.15 seconds
      cpu time              0.00 seconds


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

NOTE: There were 8833 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 8833 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time             0.03 seconds
      cpu time              0.03 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
      cpu time              0.00 seconds


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

```
NOTE: There were 8833 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 8830 observations and 2 variables.
NOTE: DATA statement used:
      real time           0.04 seconds
      cpu time            0.03 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           0.03 seconds
      cpu time            0.03 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.H67G (KEEP=EVNTIDX PERWT02F SEETLKPV);
84            IF PERWT02F > 0 & SEETLKPV NE 2;
85          RUN;

NOTE: There were 179745 observations read from the data set IN.H67G.
NOTE: The data set WORK.MVIS has 173591 observations and 3 variables.
NOTE: DATA statement used:
      real time           2.03 seconds
      cpu time            0.63 seconds


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

NOTE: There were 173591 observations read from the data set WORK.MVIS.
NOTE: The data set WORK.MVIS has 173591 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time           2.85 seconds

      cpu time            0.65 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 8830 observations read from the data set WORK.ASCLNKS.
NOTE: There were 173591 observations read from the data set WORK.MVIS.
NOTE: The data set WORK.ASMVIS has 2916 observations and 2 variables.
NOTE: DATA statement used:
      real time           0.18 seconds
      cpu time            0.18 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-067G) 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           0.03 seconds
      cpu time            0.01 seconds


104
105       *--------------------------------------------------------------------------------
106       * Get PMED IDs linked to the MVIS events which were for asthma.
107       *--------------------------------------------------------------------------------;
108       PROC SORT DATA=IN.H67IF2 OUT=RXLK; BY EVNTIDX; RUN;

NOTE: There were 72467 observations read from the data set IN.H67IF2.
NOTE: The data set WORK.RXLK has 72467 observations and 5 variables.
NOTE: PROCEDURE SORT used:
      real time           0.43 seconds
      cpu time            0.35 seconds


109
110       proc print data=rxlk (obs=140);
111         by evntidx;
112         id evntidx;
113         var linkidx eventype;
114         format eventype eventype.;
115         title3 "sample print of work.rxlk - sorted by evntidx";
116         title4 "Rx+event link file records (HC-67IF2)";
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           0.03 seconds
      cpu time            0.00 seconds


118
119       DATA PMEDIDS;
120       MERGE RXLK  (IN=INRXLK KEEP=EVNTIDX LINKIDX EVENTYPE)
121             ASMVIS(IN=INASMVIS KEEP=EVNTIDX);
122       BY EVNTIDX;
```

```
123          IF INRXLK & INASMVIS;
124       RUN;

NOTE: There were 72467 observations read from the data set WORK.RXLK.
NOTE: There were 2916 observations read from the data set WORK.ASMVIS.
NOTE: The data set WORK.PMEDIDS has 2468 observations and 3 variables.
NOTE: DATA statement used:
      real time           0.09 seconds
      cpu time            0.09 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           0.03 seconds
      cpu time            0.00 seconds


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

NOTE: There were 2468 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 2468 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time           0.01 seconds
      cpu time            0.00 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           0.03 seconds
      cpu time            0.01 seconds


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

```
NOTE: There were 2468 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 2264 observations and 1 variables.
NOTE: DATA statement used:
      real time           0.01 seconds
      cpu time            0.01 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           0.00 seconds
      cpu time            0.00 seconds


150
151        *-------------------------------------------------------------------------------------
152        * Get PMED records linked to MVIS events which were for asthma.
153        *------------------------------------------------------------------------------------;
154        PROC SORT DATA=IN.H67A OUT=PMED; BY LINKIDX; RUN;

NOTE: There were 339308 observations read from the data set IN.H67A.
NOTE: The data set WORK.PMED has 339308 observations and 70 variables.
NOTE: PROCEDURE SORT used:
      real time           7:22.73
      cpu time            34.74 seconds


155
156        DATA MVPMEDS;
157          MERGE PMED (KEEP=LINKIDX RXRECIDX  RXXP02X PERWT02F RXNAME)
158                PMEDIDS (IN=A);
159          BY LINKIDX;
160          IF A;
161        RUN;

NOTE: There were 339308 observations read from the data set WORK.PMED.
NOTE: There were 2264 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.MVPMEDS has 6328 observations and 5 variables.
NOTE: DATA statement used:
      real time           10.98 seconds
      cpu time            0.99 seconds


162
163        proc print data=mvpmeds (obs=200);
164          var rxrecidx rxname RXXP02X  PERWT02F;
165          by linkidx;
166          id linkidx;
167          title3 "sample print of work.mvpmeds";
168          title4 "PMED (HC-067A) 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 16-21.
NOTE: PROCEDURE PRINT used:
      real time           0.14 seconds
      cpu time            0.01 seconds


170
171        PROC MEANS DATA=MVPMEDS N SUM;
172          VAR RXXP02X;
173          TITLE3 "Total Rx expenditures associated with medical visits (excluding telephone) for asthma";
174        RUN;

NOTE: There were 6328 observations read from the data set WORK.MVPMEDS.
NOTE: The PROCEDURE MEANS printed page 22.
NOTE: PROCEDURE MEANS used:
      real time           0.25 seconds
      cpu time            0.01 seconds


175
176        PROC MEANS DATA=MVPMEDS  N SUM;
177          VAR RXXP02X;
178          WEIGHT PERWT02F;
179          TITLE3 "Total Rx expenditures associated with medical visits (excluding telephone) for asthma";
180          TITLE5 "Weighted";
181        RUN;

NOTE: There were 6328 observations read from the data set WORK.MVPMEDS.
NOTE: The PROCEDURE MEANS printed page 23.
NOTE: PROCEDURE MEANS used:
      real time           0.03 seconds
      cpu time            0.01 seconds


182
183
184

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414
NOTE: The SAS System used:
      real time           8:09.28
      cpu time            41.59 seconds
```

Sample SAS Job for Example A
sample print of work.asconds - sorted by condidx
COND (H69) records where cccodex=128

Obs	CONDIDX	CCCODEX
1	200210270023	128
2	200260120036	128
3	200300100028	128
4	200340280018	128
5	200390220116	128
6	200410170097	128
7	200530380017	128
8	200540230019	128
9	200640100022	128
10	200640100141	128
11	200760300018	128
12	200860130041	128
13	200880360010	128
14	201090290010	128
15	201100200048	128
16	201100440018	128
17	201150170015	128
18	201170490019	128
19	201170550019	128
20	201290280019	128
21	201550320028	128
22	201790120016	128
23	201790290043	128
24	201790360014	128
25	201790590029	128
26	201840320043	128
27	201860330010	128
28	201860330032	128
29	201930150013	128
30	201980300032	128
31	202000130025	128
32	202030180047	128
33	202170150026	128
34	202170290028	128
35	202240300029	128
36	202350170021	128
37	202620130056	128
38	202650560036	128
39	202680360017	128
40	202680360051	128
41	202680430038	128
42	202680590038	128
43	202740110040	128
44	202900140013	128
45	202990190017	128
46	203080160025	128
47	203600120037	128
48	203600290042	128
49	203650120019	128
50	203740440015	128

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


           CONDIDX         EVNTIDX         EVENTYPE


        200210270023    200210270069      8 PMED
                        200210270083      8 PMED


        200260120036    200260120056      1 MVIS
                        200260120190      8 PMED
                        200260120354      1 MVIS
                        200260120816      8 PMED
                        200260120847      8 PMED
                        200260120854      8 PMED


        200300100028    200300100019      1 MVIS
                        200300100026      8 PMED


        200340280018    200340280016      8 PMED
                        200340280030      8 PMED
                        200340280054      8 PMED
                        200340280061      8 PMED
                        200340280085      8 PMED
                        200340280092      1 MVIS
                        200340280143      8 PMED
                        200340280150      8 PMED


        200390220116    200390220363      8 PMED


        200410170097    200410170229      8 PMED
                        200410170236      8 PMED


        200530380017    200530380017      3 EROM
                        200530380024      3 EROM
                        200530380062      8 PMED
                        200530380106      8 PMED


        200540230019    200540230020      1 MVIS
                        200540230037      1 MVIS
                        200540230044      8 PMED
                        200540230051      8 PMED
                        200540230075      8 PMED
                        200540230126      1 MVIS
                        200540230164      8 PMED
                        200540230171      8 PMED
                        200540230188      8 PMED


        200640100022    200640100030      1 MVIS
                        200640100232      8 PMED
                        200640100249      8 PMED
                        200640100749      8 PMED
                        200640100883      8 PMED
                        200640100890      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

           200640100141   200640100605   2 OPAT
                          200640100612   2 OPAT
                          200640100756   8 PMED

           200760300018   200760300058   8 PMED
                          200760300161   8 PMED

           200860130041   200860130063   8 PMED
                          200860130070   8 PMED
                          200860130087   8 PMED
                          200860130094   8 PMED
                          200860130145   8 PMED
                          200860130234   8 PMED

           200880360010   200880360038   8 PMED
                          200880360103   8 PMED

           201090290010   201090290019   8 PMED
                          201090290026   8 PMED
                          201090290040   8 PMED

           201100200048   201100200124   1 MVIS
                          201100200131   1 MVIS
                          201100200155   1 MVIS
                          201100200162   8 PMED
                          201100200179   8 PMED

           201100440018   201100440028   1 MVIS
                          201100440080   8 PMED
                          201100440097   8 PMED
                          201100440100   8 PMED
                          201100440155   8 PMED

           201150170015   201150170292   8 PMED
                          201150170381   8 PMED

           201170490019   201170490059   8 PMED
                          201170490066   8 PMED

           201170550019   201170550012   1 MVIS
                          201170550029   1 MVIS
                          201170550036   1 MVIS
                          201170550043   1 MVIS
                          201170550050   1 MVIS

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

              Obs   CONDIDX   EVNTIDX   EVENTYPE

                1   200210270023   200210270069   8 PMED
                2   200210270023   200210270083   8 PMED
                3   200260120036   200260120056   1 MVIS
                4   200260120036   200260120190   8 PMED
                5   200260120036   200260120354   1 MVIS
                6   200260120036   200260120816   8 PMED
                7   200260120036   200260120847   8 PMED
                8   200260120036   200260120854   8 PMED
                9   200300100028   200300100019   1 MVIS
               10   200300100028   200300100026   8 PMED
               11   200340280018   200340280016   8 PMED
               12   200340280018   200340280030   8 PMED
               13   200340280018   200340280054   8 PMED
               14   200340280018   200340280061   8 PMED
               15   200340280018   200340280085   8 PMED
               16   200340280018   200340280092   1 MVIS
               17   200340280018   200340280143   8 PMED
               18   200340280018   200340280150   8 PMED
               19   200390220116   200390220363   8 PMED
               20   200410170097   200410170229   8 PMED
               21   200410170097   200410170236   8 PMED
               22   200530380017   200530380017   3 EROM
               23   200530380017   200530380024   3 EROM
               24   200530380017   200530380062   8 PMED
               25   200530380017   200530380106   8 PMED
               26   200540230019   200540230020   1 MVIS
               27   200540230019   200540230037   1 MVIS
               28   200540230019   200540230044   8 PMED
               29   200540230019   200540230051   8 PMED
               30   200540230019   200540230075   8 PMED
               31   200540230019   200540230126   1 MVIS
               32   200540230019   200540230164   8 PMED
               33   200540230019   200540230171   8 PMED
               34   200540230019   200540230188   8 PMED
               35   200640100022   200640100030   1 MVIS
               36   200640100022   200640100232   8 PMED
               37   200640100022   200640100249   8 PMED
               38   200640100141   200640100605   2 OPAT
               39   200640100141   200640100612   2 OPAT
               40   200640100022   200640100749   8 PMED
               41   200640100141   200640100756   8 PMED
               42   200640100022   200640100883   8 PMED
               43   200640100022   200640100890   8 PMED
               44   200760300018   200760300058   8 PMED
               45   200760300018   200760300161   8 PMED
               46   200860130041   200860130063   8 PMED
               47   200860130041   200860130070   8 PMED
               48   200860130041   200860130087   8 PMED
               49   200860130041   200860130094   8 PMED
               50   200860130041   200860130145   8 PMED

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

```
Obs      EVNTIDX        EVENTYPE

  1    200210270069     8 PMED
  2    200210270083     8 PMED
  3    200260120056     1 MVIS
  4    200260120190     8 PMED
  5    200260120354     1 MVIS
  6    200260120816     8 PMED
  7    200260120847     8 PMED
  8    200260120854     8 PMED
  9    200300100019     1 MVIS
 10    200300100026     8 PMED
 11    200340280016     8 PMED
 12    200340280030     8 PMED
 13    200340280054     8 PMED
 14    200340280061     8 PMED
 15    200340280085     8 PMED
 16    200340280092     1 MVIS
 17    200340280143     8 PMED
 18    200340280150     8 PMED
 19    200390220363     8 PMED
 20    200410170229     8 PMED
 21    200410170236     8 PMED
 22    200530380017     3 EROM
 23    200530380024     3 EROM
 24    200530380062     8 PMED
 25    200530380106     8 PMED
 26    200540230020     1 MVIS
 27    200540230037     1 MVIS
 28    200540230044     8 PMED
 29    200540230051     8 PMED
 30    200540230075     8 PMED
 31    200540230126     1 MVIS
 32    200540230164     8 PMED
 33    200540230171     8 PMED
 34    200540230188     8 PMED
 35    200640100030     1 MVIS
 36    200640100232     8 PMED
 37    200640100249     8 PMED
 38    200640100605     2 OPAT
 39    200640100612     2 OPAT
 40    200640100749     8 PMED
 41    200640100756     8 PMED
 42    200640100883     8 PMED
 43    200640100890     8 PMED
 44    200760300058     8 PMED
 45    200760300161     8 PMED
 46    200860130063     8 PMED
 47    200860130070     8 PMED
 48    200860130087     8 PMED
 49    200860130094     8 PMED
 50    200860130145     8 PMED
```

Sample SAS Job for Example A
sample print of work.asmvis
unique evntidxs from work.asclnks that are non-telephone MVIS (HC-067G) events

Obs	EVNTIDX	EVENTYPE
1	200260120056	1 MVIS
2	200260120354	1 MVIS
3	200300100019	1 MVIS
4	200340280092	1 MVIS
5	200540230020	1 MVIS
6	200540230037	1 MVIS
7	200540230126	1 MVIS
8	200640100030	1 MVIS
9	201100200124	1 MVIS
10	201100200131	1 MVIS
11	201100200155	1 MVIS
12	201100440028	1 MVIS
13	201170550012	1 MVIS
14	201170550029	1 MVIS
15	201170550036	1 MVIS
16	201170550043	1 MVIS
17	201170550050	1 MVIS
18	201170550067	1 MVIS
19	201170550074	1 MVIS
20	201290280058	1 MVIS
21	201290280065	1 MVIS
22	201290280072	1 MVIS
23	201790120016	1 MVIS
24	201790290016	1 MVIS
25	201790290023	1 MVIS
26	201790290030	1 MVIS
27	201790290047	1 MVIS
28	201790290054	1 MVIS
29	201790290061	1 MVIS
30	201790290078	1 MVIS
31	201790290249	1 MVIS
32	201790360030	1 MVIS
33	201790360047	1 MVIS
34	201790360054	1 MVIS
35	201790360061	1 MVIS
36	201790360078	1 MVIS
37	201790360112	1 MVIS
38	201860330072	1 MVIS
39	201860330130	1 MVIS
40	201860330147	1 MVIS
41	201860330154	1 MVIS
42	201980300011	1 MVIS
43	202030180032	1 MVIS
44	202030180056	1 MVIS
45	202170150088	1 MVIS
46	202620130237	1 MVIS
47	202680360044	1 MVIS
48	202740110017	1 MVIS
49	202740110024	1 MVIS
50	202740110031	1 MVIS

           Sample SAS Job for Example A
    sample print of work.rxlk - sorted by evntidx
       Rx+event link file records (HC-67IF2)

       EVNTIDX   LINKIDX   EVENTYPE

    200020380013   200020380020   1 MVIS
                    200020380037   1 MVIS

    200030260041   200030260123   1 MVIS

    200030260178   200030260250   1 MVIS

    200040180012   200040180067   1 MVIS

    200040180081   200040180187   4 STAZ

    200040180101   200040180207   1 MVIS

    200040180163   200040180187   1 MVIS

    200040180221   200040180276   1 MVIS

    200040180245   200040180283   1 MVIS

    200070160018   200070160049   1 MVIS
                    200070160056   1 MVIS

    200070160032   200070160049   1 MVIS

    200120180060   200120180084   1 MVIS
                    200120180091   1 MVIS
                    200120180104   1 MVIS
                    200120180111   1 MVIS

    200120180077   200120180128   1 MVIS

    200120250022   200120250060   1 MVIS

    200120250046   200120250077   3 EROM

    200120250128   200120250313   1 MVIS
                    200120250320   1 MVIS
                    200120250337   1 MVIS
                    200120250344   1 MVIS
                    200120250351   1 MVIS
                    200120250368   1 MVIS

    200140170015   200140170022   1 MVIS
                    200140170039   1 MVIS

    200140240046   200140240382   1 MVIS

    200140240180   200140240399   1 MVIS

Sample SAS Job for Example A
sample print of work.rxlk - sorted by evntidx
Rx+event link file records (HC-67IF2)

EVNTIDX	LINKIDX	EVENTYPE
200140240426	200140240433	1 MVIS
200150190012	200150190029	1 MVIS
	200150190036	1 MVIS
	200150190043	1 MVIS
	200150190050	1 MVIS
200160650045	200160650076	1 MVIS
200160650083	200160650103	1 MVIS
	200160650110	1 MVIS
200160730068	200160730082	1 MVIS
200160730075	200160730099	1 MVIS
200170120015	200170120046	1 MVIS
	200170120053	1 MVIS
200170120135	200170120142	1 MVIS
	200170120159	1 MVIS
200190140041	200190140072	1 MVIS
200190140058	200190140089	1 MVIS
	200190140096	1 MVIS
200200160021	200200160069	1 MVIS
200200230052	200200230076	5 DVIS
200200230090	200200230127	1 MVIS
	200200230134	1 MVIS
200210100045	200210100134	1 MVIS
200210270038	200210270069	1 MVIS
	200210270076	1 MVIS
	200210270083	1 MVIS
	200210270090	1 MVIS
200210340038	200210340076	1 MVIS
200210340069	200210340083	1 MVIS
200220150026	200220150040	1 MVIS
200220460019	200220460033	1 MVIS

                   Sample SAS Job for Example A
          sample print of work.rxlk - sorted by evntidx
              Rx+event link file records (HC-67IF2)

            EVNTIDX   LINKIDX   EVENTYPE

         200230100018   200230100032   1 MVIS

         200230100025   200230100049   1 MVIS

         200260120405   200260120412   1 MVIS
                         200260120429   1 MVIS

         200260120676   200260120683   3 EROM
                         200260120690   3 EROM

         200260290121   200260290258   1 MVIS

         200260290190   200260290265   2 OPAT

         200290180018   200290180049   1 MVIS

         200300100019   200300100026   1 MVIS

         200320100010   200320100065   1 MVIS
                         200320100072   1 MVIS
                         200320100089   1 MVIS
                         200320100096   1 MVIS

         200320100034   200320100109   1 MVIS

         200320100123   200320100130   1 MVIS
                         200320100147   1 MVIS
                         200320100154   1 MVIS

         200320100185   200320100243   4 STAZ
                         200320100250   4 STAZ
                         200320100267   4 STAZ
                         200320100274   4 STAZ
                         200320100281   4 STAZ
                         200320100298   4 STAZ

         200330150050   200330150081   3 EROM

         200330150067   200330150098   1 MVIS

         200340110054   200340110061   2 OPAT

         200360130010   200360130058   5 DVIS

         200360130109   200360130130   1 MVIS

         200360200027   200360200065   1 MVIS

         200360200072   200360200154   1 MVIS

                Sample SAS Job for Example A
         sample print of work.rxlk - sorted by evntidx
            Rx+event link file records (HC-67IF2)

           EVNTIDX   LINKIDX   EVENTYPE

        200390150010   200390150027   1 MVIS

        200390150034   200390150041   1 MVIS

        200390220010   200390220116   1 MVIS
                        200390220123   1 MVIS
                        200390220130   1 MVIS
                        200390220147   1 MVIS

        200390220072   200390220154   1 MVIS

        200390220089   200390220154   1 MVIS

        200390220192   200390220229   1 MVIS

        200390220205   200390220236   5 DVIS
                        200390220243   5 DVIS

        200390220281   200390220332   5 DVIS

        200410170154   200410170185   1 MVIS

        200440170026   200440170033   1 MVIS

        200450150104   200450150142   1 MVIS

        200450150128   200450150166   1 MVIS

        200460230018   200460230025   1 MVIS

        200460470018   200460470025   1 MVIS

        200480150018   200480150025   1 MVIS

        200480150032   200480150049   1 MVIS

        200510130051   200510130068   1 MVIS
                        200510130075   1 MVIS
                        200510130082   1 MVIS
                        200510130099   1 MVIS

        200510130119   200510130133   1 MVIS

        200520140018   200520140025   1 MVIS

        200520140032   200520140049   1 MVIS
                        200520140056   1 MVIS

        200530380017   200530380048   3 EROM

          Sample SAS Job for Example A
     sample print of work.rxlk - sorted by evntidx
       Rx+event link file records (HC-67IF2)

          EVNTIDX   LINKIDX   EVENTYPE

      200530380017   200530380055   3 EROM
                      200530380062   3 EROM
                      200530380079   3 EROM

      200530380024   200530380062   3 EROM

      200530380093   200530380106   3 EROM

      200540110049   200540110056   1 MVIS

      200540110070   200540110114   1 MVIS
                      200540110121   1 MVIS
                      200540110138   1 MVIS
                      200540110145   1 MVIS
                      200540110152   1 MVIS

      200540160013   200540160051   1 MVIS

      200540160171   200540160208   1 MVIS
                      200540160215   1 MVIS

      200540160188   200540160222   1 MVIS

      200540160253   200540160284   2 OPAT
                      200540160291   2 OPAT

      200540230020   200540230044   1 MVIS
                      200540230051   1 MVIS

      200540230037   200540230068   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

         200300100019   200300100026   1 MVIS

         200540230020   200540230044   1 MVIS
                        200540230051   1 MVIS

         200540230037   200540230068   1 MVIS
                        200540230075   1 MVIS

         200540230126   200540230164   1 MVIS
                        200540230171   1 MVIS
                        200540230188   1 MVIS

         200640100030   200640100136   1 MVIS
                        200640100150   1 MVIS

         201100200124   201100200162   1 MVIS
                        201100200179   1 MVIS

         201100440028   201100440080   1 MVIS
                        201100440097   1 MVIS
                        201100440100   1 MVIS

         201170550012   201170550098   1 MVIS

         201290280058   201290280089   1 MVIS

         201790120016   201790120023   1 MVIS
                        201790120030   1 MVIS
                        201790120047   1 MVIS

         201790290016   201790290150   1 MVIS
                        201790290167   1 MVIS
                        201790290174   1 MVIS
                        201790290181   1 MVIS
                        201790290198   1 MVIS
                        201790290201   1 MVIS
                        201790290218   1 MVIS
                        201790290225   1 MVIS

         201790290249   201790290256   1 MVIS
                        201790290263   1 MVIS
                        201790290270   1 MVIS
                        201790290287   1 MVIS
                        201790290294   1 MVIS
                        201790290307   1 MVIS
                        201790290314   1 MVIS
                        201790290321   1 MVIS
                        201790290338   1 MVIS

                    HC-067I   10:56 Thursday, October 28, 2004 13
              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
201790360112	201790360129	1 MVIS
	201790360136	1 MVIS
	201790360143	1 MVIS
201860330072	201860330109	1 MVIS
201860330130	201860330205	1 MVIS
	201860330212	1 MVIS
201980300011	201980300042	1 MVIS
	201980300059	1 MVIS
202170150088	202170150122	1 MVIS
	202170150146	1 MVIS
	202170150160	1 MVIS
	202170150177	1 MVIS
202620130237	202620130408	1 MVIS

```
  Obs      EVNTIDX         LINKIDX         EVENTYPE

   1     200300100019    200300100026      1 MVIS
   2     200540230020    200540230044      1 MVIS
   3     200540230020    200540230051      1 MVIS
   4     200540230037    200540230068      1 MVIS
   5     200540230037    200540230075      1 MVIS
   6     200540230126    200540230164      1 MVIS
   7     200540230126    200540230171      1 MVIS
   8     200540230126    200540230188      1 MVIS
   9     200640100030    200640100136      1 MVIS
  10     200640100030    200640100150      1 MVIS
  11     201100200124    201100200162      1 MVIS
  12     201100200124    201100200179      1 MVIS
  13     201100440028    201100440080      1 MVIS
  14     201100440028    201100440097      1 MVIS
  15     201100440028    201100440100      1 MVIS
  16     201170550012    201170550098      1 MVIS
  17     201290280058    201290280089      1 MVIS
  18     201790120016    201790120023      1 MVIS
  19     201790120016    201790120030      1 MVIS
  20     201790120016    201790120047      1 MVIS
  21     201790290016    201790290150      1 MVIS
  22     201790290016    201790290167      1 MVIS
  23     201790290016    201790290174      1 MVIS
  24     201790290016    201790290181      1 MVIS
  25     201790290016    201790290198      1 MVIS
  26     201790290016    201790290201      1 MVIS
  27     201790290016    201790290218      1 MVIS
  28     201790290016    201790290225      1 MVIS
  29     201790290249    201790290256      1 MVIS
  30     201790290249    201790290263      1 MVIS
  31     201790290249    201790290270      1 MVIS
  32     201790290249    201790290287      1 MVIS
  33     201790290249    201790290294      1 MVIS
  34     201790290249    201790290307      1 MVIS
  35     201790290249    201790290314      1 MVIS
  36     201790290249    201790290321      1 MVIS
  37     201790290249    201790290338      1 MVIS
  38     201790360112    201790360129      1 MVIS
  39     201790360112    201790360136      1 MVIS
  40     201790360112    201790360143      1 MVIS
  41     201860330072    201860330109      1 MVIS
  42     201860330130    201860330205      1 MVIS
  43     201860330130    201860330212      1 MVIS
  44     201980300011    201980300042      1 MVIS
  45     201980300011    201980300059      1 MVIS
  46     202170150088    202170150122      1 MVIS
  47     202170150088    202170150146      1 MVIS
  48     202170150088    202170150160      1 MVIS
  49     202170150088    202170150177      1 MVIS
  50     202620130237    202620130408      1 MVIS
```

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

```
         Obs      LINKIDX


           1     200300100026
           2     200540230044
           3     200540230051
           4     200540230068
           5     200540230075
           6     200540230164
           7     200540230171
           8     200540230188
           9     200640100136
          10     200640100150
          11     201100200162
          12     201100200179
          13     201100440080
          14     201100440097
          15     201100440100
          16     201170550098
          17     201290280089
          18     201790120023
          19     201790120030
          20     201790120047
          21     201790290150
          22     201790290167
          23     201790290174
          24     201790290181
          25     201790290198
          26     201790290201
          27     201790290218
          28     201790290225
          29     201790290256
          30     201790290263
          31     201790290270
          32     201790290287
          33     201790290294
          34     201790290307
          35     201790290314
          36     201790290321
          37     201790290338
          38     201790360129
          39     201790360136
          40     201790360143
          41     201860330109
          42     201860330205
          43     201860330212
          44     201980300042
          45     201980300059
          46     202170150122
          47     202170150146
          48     202170150160
          49     202170150177
          50     202620130408
```

                       Sample SAS Job for Example A
                       sample print of work.mvpmeds
               PMED (HC-067A) records for unique linkidxs in work.pmedids

```
  LINKIDX          RXRECIDX        RXNAME                   RXXP02X        PERWT02F

200300100026     200300100026001  BRONCHO SALINE            25.32        6875.179859

200540230044     200540230044001  ALBUTEROL SULFATE         16.50        6982.585232

200540230051     200540230051001  NEBULIZER                155.50        6982.585232

200540230068     200540230068001  AMOXIL (BUBBLE GUM)        9.80        6982.585232

200540230075     200540230075001  PRELONE (CHERRY)          24.01        6982.585232

200540230164     200540230164001  FLOVENT                   44.66        6982.585232

200540230171     200540230171001  ALBUTEROL                 22.96        6982.585232

200540230188     200540230188001  ORAPRED                   23.27        6982.585232

200640100136     200640100136001  CIPRO (W/DILUENT)         81.41       11866.144818

200640100150     200640100150001  SERZONE                   93.04       11866.144818
                 200640100150002  SERZONE                   93.04       11866.144818
                 200640100150003  SERZONE                   93.04       11866.144818

201100200162     201100200162001  ALBUTEROL  INHALER        19.79       15775.475999

201100200179     201100200179001  ADVAIR                   161.29       15775.475999

201100440080     201100440080001  ALBUTEROL                 21.28       17098.352782

201100440097     201100440097001  PRELONE                    7.41       17098.352782

201100440100     201100440100001  CROMOLYN NEBULIZER        75.75       17098.352782

201170550098     201170550098001  ALBUTEROL  INHALER        19.79        9275.716784

201290280089     201290280089001  BRONCHO SALINE             9.90        8416.575038
                 201290280089002  BRONCHO SALINE             9.90        8416.575038
                 201290280089003  BRONCHO SALINE             9.90        8416.575038

201790120023     201790120023001  ALBUTEROL                 24.99        1623.934114
                 201790120023002  ALBUTEROL                 24.99        1623.934114

201790120030     201790120030001  NAPROXEN NF               16.68        1623.934114

201790120047     201790120047001  AMPICILLIN                 9.99        1623.934114

201790290150     201790290150001  ALBUTEROL                 26.99        2381.510797
                 201790290150002  ALBUTEROL                 26.99        2381.510797
                 201790290150003  ALBUTEROL                 26.99        2381.510797
                 201790290150004  ALBUTEROL                 26.99        2381.510797
```

                        Sample SAS Job for Example A
                        sample print of work.mvpmeds
               PMED (HC-067A) records for unique linkidxs in work.pmedids

   LINKIDX   RXRECIDX   RXNAME   RXXP02X   PERWT02F

201790290150   201790290150005   ALBUTEROL   26.99   2381.510797

201790290167   201790290167001   ULTRAM   50.87   2381.510797
                201790290167002   ULTRAM   50.87   2381.510797
                201790290167003   ULTRAM   50.87   2381.510797
                201790290167004   ULTRAM   50.87   2381.510797
                201790290167005   ULTRAM   50.87   2381.510797

201790290174   201790290174001   ALTACE   133.84   2381.510797
                201790290174002   ALTACE   133.84   2381.510797
                201790290174003   ALTACE   133.84   2381.510797
                201790290174004   ALTACE   133.84   2381.510797
                201790290174005   ALTACE   133.84   2381.510797

201790290181   201790290181001   SINGULAIR   81.44   2381.510797
                201790290181002   SINGULAIR   81.44   2381.510797
                201790290181003   SINGULAIR   81.44   2381.510797
                201790290181004   SINGULAIR   81.44   2381.510797
                201790290181005   SINGULAIR   81.44   2381.510797

201790290198   201790290198001   GUAIFENEX DM   16.68   2381.510797
                201790290198002   GUAIFENEX DM   16.68   2381.510797
                201790290198003   GUAIFENEX DM   16.68   2381.510797

201790290201   201790290201001   NEURONTIN   110.00   2381.510797
                201790290201002   NEURONTIN   110.00   2381.510797

201790290218   201790290218001   AMITRIPTYLINE HCL   6.78   2381.510797
                201790290218002   AMITRIPTYLINE HCL   6.78   2381.510797
                201790290218003   AMITRIPTYLINE HCL   6.78   2381.510797
                201790290218004   AMITRIPTYLINE HCL   6.78   2381.510797
                201790290218005   AMITRIPTYLINE HCL   6.78   2381.510797

201790290225   201790290225001   ANEMAGEN (10X10)   14.89   2381.510797
                201790290225002   ANEMAGEN (10X10)   39.69   2381.510797
                201790290225003   ANEMAGEN (10X10)   39.69   2381.510797
                201790290225004   ANEMAGEN (10X10)   14.89   2381.510797
                201790290225005   ANEMAGEN (10X10)   39.69   2381.510797

201790290256   201790290256001   ALBUTEROL   26.99   2381.510797
                201790290256002   ALBUTEROL   26.99   2381.510797
                201790290256003   ALBUTEROL   26.99   2381.510797
                201790290256004   ALBUTEROL   26.99   2381.510797
                201790290256005   ALBUTEROL   26.99   2381.510797
                201790290256006   ALBUTEROL   26.99   2381.510797
                201790290256007   ALBUTEROL   26.99   2381.510797
                201790290256008   ALBUTEROL   26.99   2381.510797
                201790290256009   ALBUTEROL   26.99   2381.510797
                201790290256010   ALBUTEROL   26.99   2381.510797

```
                              HC-067I                      10:56 Thursday, October 28, 2004  18
                   Sample SAS Job for Example A
                   sample print of work.mvpmeds
             PMED (HC-067A) records for unique linkidxs in work.pmedids
```

```
  LINKIDX        RXRECIDX          RXNAME                    RXXP02X        PERWT02F

201790290263   201790290263001   ULTRAM                       46.75      2381.510797

201790290270   201790290270001   ALTACE                      133.84      2381.510797
               201790290270002   ALTACE                      133.84      2381.510797
               201790290270003   ALTACE                      133.84      2381.510797
               201790290270004   ALTACE                      133.84      2381.510797
               201790290270005   ALTACE                      133.84      2381.510797

201790290287   201790290287001   SINGULAIR                    81.44      2381.510797
               201790290287002   SINGULAIR                    81.44      2381.510797
               201790290287003   SINGULAIR                    81.44      2381.510797
               201790290287004   SINGULAIR                    81.44      2381.510797
               201790290287005   SINGULAIR                    81.44      2381.510797
               201790290287006   SINGULAIR                    81.44      2381.510797

201790290294   201790290294001   NEURONTIN                   110.00      2381.510797
               201790290294002   NEURONTIN                   110.00      2381.510797
               201790290294003   NEURONTIN                   110.00      2381.510797
               201790290294004   NEURONTIN                   110.00      2381.510797
               201790290294005   NEURONTIN                   110.00      2381.510797
               201790290294006   NEURONTIN                   110.00      2381.510797

201790290307   201790290307001   AMITRIPTYLINE HCL             6.78      2381.510797
               201790290307002   AMITRIPTYLINE HCL             6.78      2381.510797
               201790290307003   AMITRIPTYLINE HCL             6.78      2381.510797
               201790290307004   AMITRIPTYLINE HCL             6.78      2381.510797
               201790290307005   AMITRIPTYLINE HCL             6.78      2381.510797

201790290314   201790290314001   FLUNISOLIDE                  75.39      2381.510797
               201790290314002   FLUNISOLIDE                  75.39      2381.510797
               201790290314003   FLUNISOLIDE                  75.39      2381.510797
               201790290314004   FLUNISOLIDE                  75.39      2381.510797
               201790290314005   FLUNISOLIDE                  75.39      2381.510797

201790290321   201790290321001   HYDROCODONE/APAP              7.17      2381.510797
               201790290321002   HYDROCODONE/APAP              7.17      2381.510797
               201790290321003   HYDROCODONE/APAP              7.17      2381.510797
               201790290321004   HYDROCODONE/APAP              7.17      2381.510797
               201790290321005   HYDROCODONE/APAP              7.17      2381.510797

201790290338   201790290338001   IBUPROFEN 800MG TABLETS      22.67      2381.510797
               201790290338002   IBUPROFEN 800MG TABLETS      22.67      2381.510797
               201790290338003   IBUPROFEN 800MG TABLETS      22.67      2381.510797
               201790290338004   IBUPROFEN 800MG TABLETS      22.67      2381.510797
               201790290338005   IBUPROFEN 800MG TABLETS      22.67      2381.510797

201790360129   201790360129001   ALBUTEROL                    19.84      3060.514064
               201790360129002   ALBUTEROL                    19.84      3060.514064
               201790360129003   ALBUTEROL                    19.84      3060.514064
```

                    Sample SAS Job for Example A
                    sample print of work.mvpmeds
              PMED (HC-067A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
201790360129	201790360129004	ALBUTEROL	19.84	3060.514064
	201790360129005	ALBUTEROL	19.84	3060.514064
	201790360129006	ALBUTEROL	19.84	3060.514064
	201790360129007	ALBUTEROL	19.84	3060.514064
	201790360129008	ALBUTEROL	19.84	3060.514064
	201790360129009	ALBUTEROL	19.84	3060.514064
	201790360129010	ALBUTEROL	19.84	3060.514064
201790360136	201790360136001	SINGULAR	76.74	3060.514064
	201790360136002	SINGULAR	76.74	3060.514064
	201790360136003	SINGULAR	76.74	3060.514064
	201790360136004	SINGULAR	76.74	3060.514064
	201790360136005	SINGULAR	76.74	3060.514064
201790360143	201790360143001	DESOXIMETASONE	71.15	3060.514064
	201790360143002	DESOXIMETASONE	71.15	3060.514064
	201790360143003	DESOXIMETASONE	71.15	3060.514064
	201790360143004	DESOXIMETASONE	71.15	3060.514064
	201790360143005	DESOXIMETASONE	71.15	3060.514064
201860330109	201860330109001	ADDERALL	71.43	2561.461929
	201860330109002	ADDERALL	71.43	2561.461929
201860330205	201860330205001	CONCERTA	73.13	2561.461929
	201860330205002	CONCERTA	73.13	2561.461929
	201860330205003	CONCERTA	73.13	2561.461929
201860330212	201860330212001	ALBUTEROL	59.70	2561.461929
	201860330212002	ALBUTEROL	59.70	2561.461929
201980300042	201980300042001	NEOMYCIN/POLY/GRAM	5.98	12875.700659
201980300059	201980300059001	TRIAMCINOLONE ORAL INHALER	45.83	12875.700659
	201980300059002	TRIAMCINOLONE ORAL INHALER	45.83	12875.700659
202170150122	202170150122001	ALBUTEROL	18.78	9578.335265
	202170150122002	ALBUTEROL	18.78	9578.335265
	202170150122003	ALBUTEROL	18.78	9578.335265
	202170150122004	ALBUTEROL	18.78	9578.335265
	202170150122005	ALBUTEROL	18.78	9578.335265
	202170150122006	ALBUTEROL	18.78	9578.335265
	202170150122007	ALBUTEROL	18.78	9578.335265
202170150146	202170150146001	TYLENOL W/CODEINE #3	6.19	9578.335265
202170150160	202170150160001	FLOVENT	210.64	9578.335265
	202170150160002	FLOVENT	210.64	9578.335265
	202170150160003	FLOVENT	210.64	9578.335265
	202170150160004	FLOVENT	210.64	9578.335265

                       Sample SAS Job for Example A
                       sample print of work.mvpmeds
            PMED (HC-067A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
202170150160	202170150160005	FLOVENT	210.64	9578.335265
	202170150160006	FLOVENT	210.64	9578.335265
	202170150160007	FLOVENT	210.64	9578.335265
202170150177	202170150177001	VIOXX	13.58	9578.335265
	202170150177002	VIOXX	13.58	9578.335265
	202170150177003	VIOXX	13.58	9578.335265
	202170150177004	VIOXX	13.58	9578.335265
	202170150177005	VIOXX	13.58	9578.335265
	202170150177006	VIOXX	13.58	9578.335265
202620130408	202620130408001	NORVASC	65.23	8845.099617
	202620130408002	NORVASC	65.23	8845.099617
	202620130408003	NORVASC	65.23	8845.099617
202620130415	202620130415001	SEREVENT	167.66	8845.099617
202620130422	202620130422001	VANCERIL	99.82	8845.099617
202620130439	202620130439001	COMBIVENT	102.76	8845.099617
202620130446	202620130446001	ZOCOR (UNIT OF USE)	132.26	8845.099617
202680360075	202680360075001	BRONCHO SALINE	25.32	1722.753723
	202680360075002	BRONCHO SALINE	25.32	1722.753723
	202680360075003	BRONCHO SALINE	25.32	1722.753723
	202680360075004	BRONCHO SALINE	25.32	1722.753723
	202680360075005	BRONCHO SALINE	25.32	1722.753723
202680360082	202680360082001	PREDNISONE	3.34	1722.753723
202680360099	202680360099001	ZYRTEC	65.15	1722.753723
202680360102	202680360102001	ALBUTEROL	26.49	1722.753723
202740110106	202740110106001	DURAGESIC	414.23	3865.747467
202740110113	202740110113001	HYDROMET	10.13	3865.747467
202740110120	202740110120001	BONTRIL PDM	13.55	3865.747467
	202740110120002	BONTRIL PDM	13.55	3865.747467
202740110137	202740110137001	ZOLOFT	68.55	3865.747467
202740110144	202740110144001	NITROSTAT	9.25	3865.747467
202740110151	202740110151001	FLONASE	58.44	3865.747467
202740110168	202740110168001	AZMACORT	66.23	3865.747467

                            Sample SAS Job for Example A
                             sample print of work.mvpmeds
                   PMED (HC-067A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
202740110175	202740110175001	ALBUTEROL	22.94	3865.747467
202740110182	202740110182001	ALBUTEROL	19.12	3865.747467
202740110199	202740110199001	CIMETIDINE	9.80	3865.747467
202740110202	202740110202001	SPIRONOLACT	17.43	3865.747467
202740110219	202740110219001	ZAROXOLYN	29.99	3865.747467
202740110226	202740110226001	CARISOPRO	8.59	3865.747467
202740110233	202740110233001	CAPOTEN	112.33	3865.747467
202740110240	202740110240001	TOPROL XL	60.73	3865.747467
202740110257	202740110257001	BISACODYL	7.05	3865.747467
202740110264	202740110264001	PSYLLIUM FREEDA	13.99	3865.747467
202740110353	202740110353001	TOPAMAX (SPRINKLE)	157.25	3865.747467
202740110579	202740110579001	DURAGESIC	446.63	3865.747467
	202740110579002	DURAGESIC	446.63	3865.747467
	202740110579003	DURAGESIC	446.63	3865.747467
	202740110579004	DURAGESIC	446.63	3865.747467
	202740110579005	DURAGESIC	446.63	3865.747467
202740110586	202740110586001	HYDROMET	10.13	3865.747467
	202740110586002	HYDROMET	10.13	3865.747467

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

                            The MEANS Procedure

        Analysis Variable : RXXP02X SUM OF PAYMENTS RXSF02X-RXOU02X(IMPUTED)

                    N   Sum

                  6328   364959.66

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

                              Weighted

                        The MEANS Procedure

    Analysis Variable : RXXP02X SUM OF PAYMENTS RXSF02X-RXOU02X(IMPUTED)

               N   Sum

        6328   2587126925

```
1                                      The SAS System              11:08 Thursday, October 28, 2004

NOTE: Copyright (c) 1999-2001 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 8.2 (TS2M0)
NOTE: This session is executing on the WIN_PRO  platform.



NOTE: This installation is running Base SAS hot fix bundle 82BX08.


NOTE: SAS initialization used:
      real time             4.18 seconds
      cpu time              0.38 seconds


NOTE: AUTOEXEC processing beginning; file is C:\progra~1\sasins~1\sas\v8\autoexec.sas.


NOTE: AUTOEXEC processing completed.

1             OPTIONS LS=132 PS=59;
2
3             TITLE1 "HC-067I";
4             TITLE2 'Sample SAS Job for Example B';
5
6             LIBNAME IN '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 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             0.15 seconds
      cpu time              0.00 seconds


22
23        *------------------------------------------------------------------------------------
24        * Get condition records coded as asthma.
25        *------------------------------------------------------------------------------------;
```

```
26        DATA ASCONDS;
27          SET IN.H69 (KEEP=CONDIDX CCCODEX);
28          IF CCCODEX="128";
29        RUN;
```

NOTE: There were 120795 observations read from the data set IN.H69.
NOTE: The data set WORK.ASCONDS has 2159 observations and 2 variables.
NOTE: DATA statement used:
     real time   1.87 seconds
     cpu time   0.21 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 2159 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCONDS has 2159 observations and 2 variables.
NOTE: PROCEDURE SORT used:
     real time   0.07 seconds
     cpu time   0.03 seconds


```
35
36        proc print data=asconds (obs=50);
37          title3 "sample print of work.asconds - sorted by condidx";
38          title4 "COND (H69) 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   0.26 seconds
     cpu time   0.01 seconds


```
40
41        PROC SORT DATA=IN.H67IF1 OUT=CLNK; BY CONDIDX; RUN;
```

NOTE: There were 388065 observations read from the data set IN.H67IF1.
NOTE: The data set WORK.CLNK has 388065 observations and 5 variables.
NOTE: PROCEDURE SORT used:
     real time   21.18 seconds
     cpu time   2.56 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 388065 observations read from the data set WORK.CLNK.
NOTE: There were 2159 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCLNKS has 8833 observations and 3 variables.
NOTE: DATA statement used:
      real time            0.68 seconds
      cpu time             0.40 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            0.09 seconds
      cpu time             0.01 seconds


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

NOTE: There were 8833 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 8833 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time            0.03 seconds
      cpu time             0.03 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            0.03 seconds
      cpu 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 8833 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 8830 observations and 2 variables.
NOTE: DATA statement used:
```

```
      real time            0.04 seconds
      cpu time             0.04 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            0.03 seconds
      cpu time             0.01 seconds


75
76          *----------------------------------------------------------------------------
77          * Get PMED records linked to asthma condition records.
78          *---------------------------------------------------------------------------;
79          PROC SORT DATA=IN.H67A OUT=PMED; BY LINKIDX; RUN;

NOTE: There were 339308 observations read from the data set IN.H67A.
NOTE: The data set WORK.PMED has 339308 observations and 70 variables.
NOTE: PROCEDURE SORT used:
      real time            4:44.39
      cpu time             32.81 seconds


80
81          DATA ASPMEDS;
82            MERGE PMED (KEEP=LINKIDX RXRECIDX RXNAME RXXP02X  PERWT02F)
83                  ASCLNKS (IN=INASCLNK KEEP=EVNTIDX RENAME=(EVNTIDX=LINKIDX));
84            BY LINKIDX;
85            IF INASCLNK & PERWT02F>0;
86          RUN;

NOTE: There were 339308 observations read from the data set WORK.PMED.
NOTE: There were 8830 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASPMEDS has 12112 observations and 5 variables.
NOTE: DATA statement used:
      real time            7.42 seconds
      cpu time             1.15 seconds


87
88          proc print data=aspmeds (obs=300);
89             by linkidx;
90             id linkidx;
91             var rxrecidx rxname RXXP02X  PERWT02F;
92             title3 "sample print of work.aspmeds";
93             title4 "PMED (HC-067A) 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           0.17 seconds
      cpu time            0.00 seconds


95
96         PROC MEANS DATA=ASPMEDS N SUM;
97           VAR RXXP02X;
98           TITLE3 "Total Rx expenditures associated with asthma";
99         RUN;

NOTE: There were 12112 observations read from the data set WORK.ASPMEDS.
NOTE: The PROCEDURE MEANS printed page 16.
NOTE: PROCEDURE MEANS used:
      real time           0.21 seconds
      cpu time            0.03 seconds


100
101        PROC MEANS DATA=ASPMEDS N SUM;
102          VAR RXXP02X;
103          WEIGHT PERWT02F;
104          TITLE3 "Total Rx expenditures associated with asthma";
105          TITLE5 "Weighted";
106        RUN;

NOTE: There were 12112 observations read from the data set WORK.ASPMEDS.
NOTE: The PROCEDURE MEANS printed page 17.
NOTE: PROCEDURE MEANS used:
      real time           0.03 seconds
      cpu time            0.01 seconds


107
108

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414
NOTE: The SAS System used:
      real time           5:21.96
      cpu time           37.84 seconds
```

```
                Sample SAS Job for Example B
      sample print of work.asconds - sorted by condidx
          COND (H69) records where cccodex=128


         Obs      CONDIDX       CCCODEX


           1    200210270023      128
           2    200260120036      128
           3    200300100028      128
           4    200340280018      128
           5    200390220116      128
           6    200410170097      128
           7    200530380017      128
           8    200540230019      128
           9    200640100022      128
          10    200640100141      128
          11    200760300018      128
          12    200860130041      128
          13    200880360010      128
          14    201090290010      128
          15    201100200048      128
          16    201100440018      128
          17    201150170015      128
          18    201170490019      128
          19    201170550019      128
          20    201290280019      128
          21    201550320028      128
          22    201790120016      128
          23    201790290043      128
          24    201790360014      128
          25    201790590029      128
          26    201840320043      128
          27    201860330010      128
          28    201860330032      128
          29    201930150013      128
          30    201980300032      128
          31    202000130025      128
          32    202030180047      128
          33    202170150026      128
          34    202170290028      128
          35    202240300029      128
          36    202350170021      128
          37    202620130056      128
          38    202650560036      128
          39    202680360017      128
          40    202680360051      128
          41    202680430038      128
          42    202680590038      128
          43    202740110040      128
          44    202900140013      128
          45    202990190017      128
          46    203080160025      128
          47    203600120037      128
          48    203600290042      128
          49    203650120019      128
          50    203740440015      128
```

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

     CONDIDX   EVNTIDX   EVENTYPE

   200210270023   200210270069   8 PMED
                  200210270083   8 PMED

   200260120036   200260120056   1 MVIS
                  200260120190   8 PMED
                  200260120354   1 MVIS
                  200260120816   8 PMED
                  200260120847   8 PMED
                  200260120854   8 PMED

   200300100028   200300100019   1 MVIS
                  200300100026   8 PMED

   200340280018   200340280016   8 PMED
                  200340280030   8 PMED
                  200340280054   8 PMED
                  200340280061   8 PMED
                  200340280085   8 PMED
                  200340280092   1 MVIS
                  200340280143   8 PMED
                  200340280150   8 PMED

   200390220116   200390220363   8 PMED

   200410170097   200410170229   8 PMED
                  200410170236   8 PMED

   200530380017   200530380017   3 EROM
                  200530380024   3 EROM
                  200530380062   8 PMED
                  200530380106   8 PMED

   200540230019   200540230020   1 MVIS
                  200540230037   1 MVIS
                  200540230044   8 PMED
                  200540230051   8 PMED
                  200540230075   8 PMED
                  200540230126   1 MVIS
                  200540230164   8 PMED
                  200540230171   8 PMED
                  200540230188   8 PMED

   200640100022   200640100030   1 MVIS
                  200640100232   8 PMED
                  200640100249   8 PMED
                  200640100749   8 PMED
                  200640100883   8 PMED
                  200640100890   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

       200640100141   200640100605   2 OPAT
                       200640100612   2 OPAT
                       200640100756   8 PMED

       200760300018   200760300058   8 PMED
                       200760300161   8 PMED

       200860130041   200860130063   8 PMED
                       200860130070   8 PMED
                       200860130087   8 PMED
                       200860130094   8 PMED
                       200860130145   8 PMED
                       200860130234   8 PMED

       200880360010   200880360038   8 PMED
                       200880360103   8 PMED

       201090290010   201090290019   8 PMED
                       201090290026   8 PMED
                       201090290040   8 PMED

       201100200048   201100200124   1 MVIS
                       201100200131   1 MVIS
                       201100200155   1 MVIS
                       201100200162   8 PMED
                       201100200179   8 PMED

       201100440018   201100440028   1 MVIS
                       201100440080   8 PMED
                       201100440097   8 PMED
                       201100440100   8 PMED
                       201100440155   8 PMED

       201150170015   201150170292   8 PMED
                       201150170381   8 PMED

       201170490019   201170490059   8 PMED
                       201170490066   8 PMED

       201170550019   201170550012   1 MVIS
                       201170550029   1 MVIS
                       201170550036   1 MVIS
                       201170550043   1 MVIS
                       201170550050   1 MVIS

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

Obs	CONDIDX	EVNTIDX	EVENTYPE
1	200210270023	200210270069	8 PMED
2	200210270023	200210270083	8 PMED
3	200260120036	200260120056	1 MVIS
4	200260120036	200260120190	8 PMED
5	200260120036	200260120354	1 MVIS
6	200260120036	200260120816	8 PMED
7	200260120036	200260120847	8 PMED
8	200260120036	200260120854	8 PMED
9	200300100028	200300100019	1 MVIS
10	200300100028	200300100026	8 PMED
11	200340280018	200340280016	8 PMED
12	200340280018	200340280030	8 PMED
13	200340280018	200340280054	8 PMED
14	200340280018	200340280061	8 PMED
15	200340280018	200340280085	8 PMED
16	200340280018	200340280092	1 MVIS
17	200340280018	200340280143	8 PMED
18	200340280018	200340280150	8 PMED
19	200390220116	200390220363	8 PMED
20	200410170097	200410170229	8 PMED
21	200410170097	200410170236	8 PMED
22	200530380017	200530380017	3 EROM
23	200530380017	200530380024	3 EROM
24	200530380017	200530380062	8 PMED
25	200530380017	200530380106	8 PMED
26	200540230019	200540230020	1 MVIS
27	200540230019	200540230037	1 MVIS
28	200540230019	200540230044	8 PMED
29	200540230019	200540230051	8 PMED
30	200540230019	200540230075	8 PMED
31	200540230019	200540230126	1 MVIS
32	200540230019	200540230164	8 PMED
33	200540230019	200540230171	8 PMED
34	200540230019	200540230188	8 PMED
35	200640100022	200640100030	1 MVIS
36	200640100022	200640100232	8 PMED
37	200640100022	200640100249	8 PMED
38	200640100141	200640100605	2 OPAT
39	200640100141	200640100612	2 OPAT
40	200640100022	200640100749	8 PMED
41	200640100141	200640100756	8 PMED
42	200640100022	200640100883	8 PMED
43	200640100022	200640100890	8 PMED
44	200760300018	200760300058	8 PMED
45	200760300018	200760300161	8 PMED
46	200860130041	200860130063	8 PMED
47	200860130041	200860130070	8 PMED
48	200860130041	200860130087	8 PMED
49	200860130041	200860130094	8 PMED
50	200860130041	200860130145	8 PMED

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

```
          Obs      EVNTIDX        EVENTYPE

            1     200210270069     8 PMED
            2     200210270083     8 PMED
            3     200260120056     1 MVIS
            4     200260120190     8 PMED
            5     200260120354     1 MVIS
            6     200260120816     8 PMED
            7     200260120847     8 PMED
            8     200260120854     8 PMED
            9     200300100019     1 MVIS
           10     200300100026     8 PMED
           11     200340280016     8 PMED
           12     200340280030     8 PMED
           13     200340280054     8 PMED
           14     200340280061     8 PMED
           15     200340280085     8 PMED
           16     200340280092     1 MVIS
           17     200340280143     8 PMED
           18     200340280150     8 PMED
           19     200390220363     8 PMED
           20     200410170229     8 PMED
           21     200410170236     8 PMED
           22     200530380017     3 EROM
           23     200530380024     3 EROM
           24     200530380062     8 PMED
           25     200530380106     8 PMED
           26     200540230020     1 MVIS
           27     200540230037     1 MVIS
           28     200540230044     8 PMED
           29     200540230051     8 PMED
           30     200540230075     8 PMED
           31     200540230126     1 MVIS
           32     200540230164     8 PMED
           33     200540230171     8 PMED
           34     200540230188     8 PMED
           35     200640100030     1 MVIS
           36     200640100232     8 PMED
           37     200640100249     8 PMED
           38     200640100605     2 OPAT
           39     200640100612     2 OPAT
           40     200640100749     8 PMED
           41     200640100756     8 PMED
           42     200640100883     8 PMED
           43     200640100890     8 PMED
           44     200760300058     8 PMED
           45     200760300161     8 PMED
           46     200860130063     8 PMED
           47     200860130070     8 PMED
           48     200860130087     8 PMED
           49     200860130094     8 PMED
           50     200860130145     8 PMED
```

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-067A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
200210270069	200210270069001	DYPHYL-G	75.75	11440.484860
200210270083	200210270083001	ALBUTEROL	29.85	11440.484860
200260120190	200260120190001	SINGULAR	76.74	14422.861431
200260120816	200260120816001	SINGULAR	76.74	14422.861431
200260120847	200260120847001	ATROVENT	51.50	14422.861431
200260120854	200260120854001	ADVAIR	154.81	14422.861431
200300100026	200300100026001	BRONCHO SALINE	25.32	6875.179859
200340280016	200340280016001	ALBUTEROL	19.85	4001.735317
	200340280016002	ALBUTEROL	19.85	4001.735317
	200340280016003	ALBUTEROL	19.85	4001.735317
200340280030	200340280030001	SEREVENT	72.26	4001.735317
200340280054	200340280054001	AZMACORT	68.58	4001.735317
200340280061	200340280061001	ALBUTEROL	18.74	4001.735317
	200340280061002	ALBUTEROL	18.10	4001.735317
	200340280061003	ALBUTEROL	18.74	4001.735317
200340280085	200340280085001	NASONEX	59.50	4001.735317
	200340280085002	NASONEX	57.61	4001.735317
	200340280085003	NASONEX	57.61	4001.735317
	200340280085004	NASONEX	55.97	4001.735317
	200340280085005	NASONEX	57.61	4001.735317
	200340280085006	NASONEX	55.97	4001.735317
200340280143	200340280143001	SEREVENT	72.26	4001.735317
200340280150	200340280150001	AZMACORT	68.58	4001.735317
200390220363	200390220363001	ADVAIR	161.29	8338.461457
200410170229	200410170229001	BECONASE AQ	58.56	3886.379063
200410170236	200410170236001	ALBUTEROL	29.79	3886.379063
200530380062	200530380062001	ALBUTEROL	12.29	3847.961236
200530380106	200530380106001	ALBUTEROL	11.68	3847.961236
200540230044	200540230044001	ALBUTEROL SULFATE	16.50	6982.585232

                        Sample SAS Job for Example B
                        sample print of work.aspmeds
           PMED (HC-067A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
200540230051	200540230051001	NEBULIZER	155.50	6982.585232
200540230075	200540230075001	PRELONE (CHERRY)	24.01	6982.585232
200540230164	200540230164001	FLOVENT	44.66	6982.585232
200540230171	200540230171001	ALBUTEROL	22.96	6982.585232
200540230188	200540230188001	ORAPRED	23.27	6982.585232
200640100232	200640100232001	SINGULAIR	15.00	11866.144818
	200640100232002	SINGULAIR	15.00	11866.144818
	200640100232003	SINGULAIR	15.00	11866.144818
200640100249	200640100249001	ALBUTEROL	29.79	11866.144818
	200640100249002	ALBUTEROL	29.79	11866.144818
	200640100249003	ALBUTEROL	29.79	11866.144818
200640100749	200640100749001	SINGULAIR	104.76	11866.144818
	200640100749002	SINGULAIR	104.76	11866.144818
	200640100749003	SINGULAIR	104.76	11866.144818
	200640100749004	SINGULAIR	104.76	11866.144818
	200640100749005	SINGULAIR	104.76	11866.144818
200640100756	200640100756001	ALBUTEROL	29.79	11866.144818
	200640100756002	ALBUTEROL	29.79	11866.144818
	200640100756003	ALBUTEROL	29.79	11866.144818
	200640100756004	ALBUTEROL	29.79	11866.144818
	200640100756005	ALBUTEROL	29.79	11866.144818
200640100883	200640100883001	ALBUTEROL	29.79	11866.144818
	200640100883002	ALBUTEROL	29.79	11866.144818
	200640100883003	ALBUTEROL	29.79	11866.144818
200640100890	200640100890001	CLARITIN	76.64	11866.144818
	200640100890002	CLARITIN	76.64	11866.144818
	200640100890003	CLARITIN	76.64	11866.144818
200760300058	200760300058001	ALBUTEROL	52.89	1580.929768
	200760300058002	ALBUTEROL	52.89	1580.929768
200760300161	200760300161001	ALBUTEROL	52.89	1580.929768
200860130063	200860130063001	SINGULAIR (UNIT OF USE)	87.43	20904.059986
	200860130063002	SINGULAIR (UNIT OF USE)	87.43	20904.059986
	200860130063003	SINGULAIR (UNIT OF USE)	87.43	20904.059986
200860130070	200860130070001	SEREVENT	74.26	20904.059986

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-067A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
200860130087	200860130087001	ALBUTEROL	21.41	20904.059986
200860130094	200860130094001	DYPHYL-G	75.75	20904.059986
200860130145	200860130145001	SINGULAIR (UNIT OF USE)	87.43	20904.059986
	200860130145002	SINGULAIR (UNIT OF USE)	87.43	20904.059986
	200860130145003	SINGULAIR (UNIT OF USE)	87.43	20904.059986
	200860130145004	SINGULAIR (UNIT OF USE)	87.43	20904.059986
200860130234	200860130234001	DUONEB	49.56	20904.059986
200880360038	200880360038001	ALBUTEROL	29.79	22914.223159
200880360103	200880360103001	VENTOLIN	40.00	22914.223159
201090290019	201090290019001	SEREVENT	76.38	2229.654650
201090290026	201090290026001	SEREVENT	72.26	2229.654650
	201090290026002	SEREVENT	72.26	2229.654650
201090290040	201090290040001	SEREVENT	72.26	2229.654650
201100200162	201100200162001	ALBUTEROL INHALER	19.79	15775.475999
201100200179	201100200179001	ADVAIR	161.29	15775.475999
201100440080	201100440080001	ALBUTEROL	21.28	17098.352782
201100440097	201100440097001	PRELONE	7.41	17098.352782
201100440100	201100440100001	CROMOLYN NEBULIZER	75.75	17098.352782
201100440155	201100440155001	ALBUTEROL	40.99	17098.352782
201150170292	201150170292001	ALBUTEROL/IPRATROP	7.00	7331.777668
201150170381	201150170381001	ALBUTEROL/IPRATROP	7.00	7331.777668
201170490059	201170490059001	VENTOLIN	40.00	7606.136908
201170490066	201170490066001	ALBUTEROL	22.96	7606.136908
201170550098	201170550098001	ALBUTEROL INHALER	19.79	9275.716784
201290280089	201290280089001	BRONCHO SALINE	9.90	8416.575038
	201290280089002	BRONCHO SALINE	9.90	8416.575038
	201290280089003	BRONCHO SALINE	9.90	8416.575038
201790120023	201790120023001	ALBUTEROL	24.99	1623.934114

```
                     Sample SAS Job for Example B
                       sample print of work.aspmeds
             PMED (HC-067A) records which link to condition records coded as asthma


     LINKIDX         RXRECIDX        RXNAME                      RXXP02X        PERWT02F


201790120023    201790120023002    ALBUTEROL                     24.99       1623.934114

201790290150    201790290150001    ALBUTEROL                     26.99       2381.510797
                201790290150002    ALBUTEROL                     26.99       2381.510797
                201790290150003    ALBUTEROL                     26.99       2381.510797
                201790290150004    ALBUTEROL                     26.99       2381.510797
                201790290150005    ALBUTEROL                     26.99       2381.510797

201790290181    201790290181001    SINGULAIR                     81.44       2381.510797
                201790290181002    SINGULAIR                     81.44       2381.510797
                201790290181003    SINGULAIR                     81.44       2381.510797
                201790290181004    SINGULAIR                     81.44       2381.510797
                201790290181005    SINGULAIR                     81.44       2381.510797

201790290256    201790290256001    ALBUTEROL                     26.99       2381.510797
                201790290256002    ALBUTEROL                     26.99       2381.510797
                201790290256003    ALBUTEROL                     26.99       2381.510797
                201790290256004    ALBUTEROL                     26.99       2381.510797
                201790290256005    ALBUTEROL                     26.99       2381.510797
                201790290256006    ALBUTEROL                     26.99       2381.510797
                201790290256007    ALBUTEROL                     26.99       2381.510797
                201790290256008    ALBUTEROL                     26.99       2381.510797
                201790290256009    ALBUTEROL                     26.99       2381.510797
                201790290256010    ALBUTEROL                     26.99       2381.510797

201790290287    201790290287001    SINGULAIR                     81.44       2381.510797
                201790290287002    SINGULAIR                     81.44       2381.510797
                201790290287003    SINGULAIR                     81.44       2381.510797
                201790290287004    SINGULAIR                     81.44       2381.510797
                201790290287005    SINGULAIR                     81.44       2381.510797
                201790290287006    SINGULAIR                     81.44       2381.510797

201790290650    201790290650001    ALBUTEROL                     26.99       2381.510797
                201790290650002    ALBUTEROL                     26.99       2381.510797
                201790290650003    ALBUTEROL                     26.99       2381.510797
                201790290650004    ALBUTEROL                     26.99       2381.510797

201790290674    201790290674001    SINGULAIR                     81.44       2381.510797

201790360085    201790360085001    ALBUTEROL                     19.84       3060.514064
                201790360085002    ALBUTEROL                     19.84       3060.514064

201790360092    201790360092001    SINGULAR                      76.74       3060.514064
                201790360092002    SINGULAR                      76.74       3060.514064
                201790360092003    SINGULAR                      76.74       3060.514064

201790360129    201790360129001    ALBUTEROL                     19.84       3060.514064
                201790360129002    ALBUTEROL                     19.84       3060.514064
                201790360129003    ALBUTEROL                     19.84       3060.514064
```

                       Sample SAS Job for Example B
                       sample print of work.aspmeds
              PMED (HC-067A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
201790360129	201790360129004	ALBUTEROL	19.84	3060.514064
	201790360129005	ALBUTEROL	19.84	3060.514064
	201790360129006	ALBUTEROL	19.84	3060.514064
	201790360129007	ALBUTEROL	19.84	3060.514064
	201790360129008	ALBUTEROL	19.84	3060.514064
	201790360129009	ALBUTEROL	19.84	3060.514064
	201790360129010	ALBUTEROL	19.84	3060.514064
201790360136	201790360136001	SINGULAR	76.74	3060.514064
	201790360136002	SINGULAR	76.74	3060.514064
	201790360136003	SINGULAR	76.74	3060.514064
	201790360136004	SINGULAR	76.74	3060.514064
	201790360136005	SINGULAR	76.74	3060.514064
201790360181	201790360181001	SINGULAR	76.74	3060.514064
201790360198	201790360198001	THEOPHYLLINE	16.07	3060.514064
201790360201	201790360201001	ALBUTEROL	19.84	3060.514064
	201790360201002	ALBUTEROL	19.84	3060.514064
201840320209	201840320209001	ALBUTEROL	30.68	3651.586892
201860330065	201860330065001	ALBUTEROL	21.41	2561.461929
201860330116	201860330116001	PREDNISONE	8.99	2561.461929
201860330123	201860330123001	ALBUTEROL	29.85	2561.461929
201860330212	201860330212001	ALBUTEROL	59.70	2561.461929
	201860330212002	ALBUTEROL	59.70	2561.461929
201980300042	201980300042001	NEOMYCIN/POLY/GRAM	5.98	12875.700659
201980300059	201980300059001	TRIAMCINOLONE ORAL INHALER	45.83	12875.700659
	201980300059002	TRIAMCINOLONE ORAL INHALER	45.83	12875.700659
202030180094	202030180094001	PROVENTIL	38.86	3012.542202
	202030180094002	PROVENTIL	38.86	3012.542202
202030180107	202030180107001	ADVAIR	154.81	3012.542202
	202030180107002	ADVAIR	154.81	3012.542202
202170150122	202170150122001	ALBUTEROL	18.78	9578.335265
	202170150122002	ALBUTEROL	18.78	9578.335265
	202170150122003	ALBUTEROL	18.78	9578.335265
	202170150122004	ALBUTEROL	18.78	9578.335265
	202170150122005	ALBUTEROL	18.78	9578.335265
	202170150122006	ALBUTEROL	18.78	9578.335265

                                  Sample SAS Job for Example B
                                  sample print of work.aspmeds
                       PMED (HC-067A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
202170150122	202170150122007	ALBUTEROL	18.78	9578.335265
202170150160	202170150160001	FLOVENT	210.64	9578.335265
	202170150160002	FLOVENT	210.64	9578.335265
	202170150160003	FLOVENT	210.64	9578.335265
	202170150160004	FLOVENT	210.64	9578.335265
	202170150160005	FLOVENT	210.64	9578.335265
	202170150160006	FLOVENT	210.64	9578.335265
	202170150160007	FLOVENT	210.64	9578.335265
202170150526	202170150526001	ALBUTEROL	18.78	9578.335265
	202170150526002	ALBUTEROL	18.78	9578.335265
202170150533	202170150533001	FLOVENT	210.64	9578.335265
	202170150533002	FLOVENT	210.64	9578.335265
202170290170	202170290170001	ALBUTEROL	29.79	19354.593195
	202170290170002	ALBUTEROL	29.79	19354.593195
202240300103	202240300103001	ALBUTEROL	27.72	13242.284649
202350170244	202350170244001	ALBUTEROL SULFATE	13.73	5444.690060
	202350170244002	ALBUTEROL SULFATE	13.73	5444.690060
	202350170244003	ALBUTEROL SULFATE	13.73	5444.690060
202350170333	202350170333001	ALBUTEROL SULFATE	13.73	5444.690060
	202350170333002	ALBUTEROL SULFATE	13.73	5444.690060
	202350170333003	ALBUTEROL SULFATE	13.73	5444.690060
	202350170333004	ALBUTEROL SULFATE	13.73	5444.690060
	202350170333005	ALBUTEROL SULFATE	13.73	5444.690060
202350170439	202350170439001	ALBUTEROL SULFATE	13.73	5444.690060
	202350170439002	ALBUTEROL SULFATE	13.73	5444.690060
	202350170439003	ALBUTEROL SULFATE	13.73	5444.690060
	202350170439004	ALBUTEROL SULFATE	13.73	5444.690060
202620130162	202620130162001	ALBUTEROL	54.30	8845.099617
202620130179	202620130179001	SEREVENT INHALER	104.66	8845.099617
202620130186	202620130186001	VANCERIL	99.82	8845.099617
202620130415	202620130415001	SEREVENT	167.66	8845.099617
202620130422	202620130422001	VANCERIL	99.82	8845.099617
202620130439	202620130439001	COMBIVENT	102.76	8845.099617
202620130600	202620130600001	COMBIVENT	102.76	8845.099617

```
                       Sample SAS Job for Example B
                         sample print of work.aspmeds
              PMED (HC-067A) records which link to condition records coded as asthma


   LINKIDX           RXRECIDX         RXNAME                        RXXP02X        PERWT02F


202620130624    202620130624001    SEREVENT                        167.66      8845.099617


202620130631    202620130631001    VANCERIL                         99.82      8845.099617


202650560074    202650560074001    ALBUTEROL   INHALER              19.79      3595.909035
                202650560074002    ALBUTEROL   INHALER              19.79      3595.909035


202650560334    202650560334001    ALBUTEROL   INHALER              19.79      3595.909035


202680360075    202680360075001    BRONCHO SALINE                   25.32      1722.753723
                202680360075002    BRONCHO SALINE                   25.32      1722.753723
                202680360075003    BRONCHO SALINE                   25.32      1722.753723
                202680360075004    BRONCHO SALINE                   25.32      1722.753723
                202680360075005    BRONCHO SALINE                   25.32      1722.753723


202680360082    202680360082001    PREDNISONE                        3.34      1722.753723


202680360246    202680360246001    SINGULAIR                        15.00      1722.753723


202680360253    202680360253001    ALBUTEROL                        21.41      1722.753723


202680360260    202680360260001    PREDNISONE                        3.34      1722.753723


202680430068    202680430068001    ALBUTEROL                        15.08      1235.155999


202680430075    202680430075001    PREDNISONE                       11.80      1235.155999


202680590052    202680590052001    ALBUTEROL                        15.08      1500.255676


202740110168    202740110168001    AZMACORT                         66.23      3865.747467


202740110175    202740110175001    ALBUTEROL                        22.94      3865.747467


202740110182    202740110182001    ALBUTEROL                        19.12      3865.747467


202740110428    202740110428001    AZMACORT                         64.50      3865.747467
                202740110428002    AZMACORT                         64.50      3865.747467
                202740110428003    AZMACORT                         64.50      3865.747467
                202740110428004    AZMACORT                         64.50      3865.747467
                202740110428005    AZMACORT                         64.50      3865.747467
                202740110428006    AZMACORT                         64.50      3865.747467
                202740110428007    AZMACORT                         64.50      3865.747467


202740110435    202740110435001    ALBUTEROL (REFILL)               14.45      3865.747467
                202740110435002    ALBUTEROL (REFILL)               14.45      3865.747467
                202740110435003    ALBUTEROL (REFILL)               14.45      3865.747467
                202740110435004    ALBUTEROL (REFILL)               14.45      3865.747467
                202740110435005    ALBUTEROL (REFILL)               14.45      3865.747467
                202740110435006    ALBUTEROL (REFILL)               14.45      3865.747467
```

```
                        HC-067I                          11:08 Thursday, October 28, 2004  13
                   Sample SAS Job for Example B
                   sample print of work.aspmeds
            PMED (HC-067A) records which link to condition records coded as asthma
```

```
    LINKIDX        RXRECIDX       RXNAME                    RXXP02X      PERWT02F


202740110435   202740110435007   ALBUTEROL (REFILL)         14.45     3865.747467

202740110442   202740110442001   ALBUTEROL                  19.12     3865.747467
               202740110442002   ALBUTEROL                  19.12     3865.747467

202740110637   202740110637001   AZMACORT                   71.18     3865.747467
               202740110637002   AZMACORT                   71.18     3865.747467
               202740110637003   AZMACORT                   71.18     3865.747467

202740110644   202740110644001   ALBUTEROL                  22.94     3865.747467
               202740110644002   ALBUTEROL                  22.94     3865.747467
               202740110644003   ALBUTEROL                  22.94     3865.747467

202740110651   202740110651001   ALBUTEROL                  19.12     3865.747467
               202740110651002   ALBUTEROL                  19.12     3865.747467
               202740110651003   ALBUTEROL                  19.12     3865.747467

202990190049   202990190049001   ALBUTEROL                  10.59    11050.409291
               202990190049002   ALBUTEROL                  10.59    11050.409291

202990190056   202990190056001   SEREVENT                   74.26    11050.409291
               202990190056002   SEREVENT                   75.88    11050.409291

202990190063   202990190063001   FLOVENT                   104.92    11050.409291
               202990190063002   FLOVENT                   104.92    11050.409291

202990190145   202990190145001   ALBUTEROL                  10.59    11050.409291

202990190152   202990190152001   SEREVENT                   74.26    11050.409291

202990190169   202990190169001   FLOVENT                   104.92    11050.409291

202990190176   202990190176001   RANITIDINE HCL            175.80    11050.409291

202990190183   202990190183001   ALBUTEROL                  10.59    11050.409291

202990190190   202990190190001   SEREVENT                   72.75    11050.409291

202990190203   202990190203001   FLOVENT                   104.92    11050.409291

202990190210   202990190210001   RANITIDINE HCL            175.80    11050.409291

203080160051   203080160051001   ALBUTEROL                  19.84     2930.950078
               203080160051002   ALBUTEROL                  19.84     2930.950078

203080160164   203080160164001   NASACORT AQ                54.41     2930.950078

203080160284   203080160284001   NASONEX                    57.46     2930.950078
               203080160284002   NASONEX                    57.46     2930.950078
```

                Sample SAS Job for Example B
                sample print of work.aspmeds
        PMED (HC-067A) records which link to condition records coded as asthma

      LINKIDX   RXRECIDX   RXNAME   RXXP02X   PERWT02F

203080160284   203080160284003   NASONEX   57.46   2930.950078
                  203080160284004   NASONEX   57.46   2930.950078
                  203080160284005   NASONEX   57.46   2930.950078
                  203080160284006   NASONEX   57.46   2930.950078
                  203080160284007   NASONEX   57.46   2930.950078

203600120105   203600120105001   PREDNISONE   8.99   14729.271001
                  203600120105002   PREDNISONE   8.99   14729.271001

203600120143   203600120143001   COMBIVENT   50.39   14729.271001

203600290112   203600290112001   NEBULIZER   155.50   14710.824302

203600290218   203600290218001   SODIUM POLYSTYRENE SULFONATE   73.87   14710.824302

203600290225   203600290225001   IPRATROPIUM BROMIDE (VIAL)   88.85   14710.824302
                  203600290225002   IPRATROPIUM BROMIDE (VIAL)   88.85   14710.824302

203600290232   203600290232001   ALBUTEROL SULFATE (VIAL)   137.82   14710.824302
                  203600290232002   ALBUTEROL SULFATE (VIAL)   137.82   14710.824302
                  203600290232003   ALBUTEROL SULFATE (VIAL)   137.82   14710.824302

203650120025   203650120025001   OPTIHALER (METERED DOSE INHALER) 39.58   8228.034938

203740440038   203740440038001   ALBUTEROL   21.41   10847.674238

203740440052   203740440052001   ALBUTEROL   16.34   10847.674238
                  203740440052002   ALBUTEROL   16.34   10847.674238
                  203740440052003   ALBUTEROL   30.68   10847.674238

203740440090   203740440090001   ALBUTEROL   30.68   10847.674238

203840180275   203840180275001   NASONEX   69.68   21372.829443

204060130053   204060130053001   ZITHROMAX   27.45   19190.149525

204060130060   204060130060001   PREDNISONE   9.99   19190.149525

204060130104   204060130104001   ALBUTEROL   22.96   19190.149525
                  204060130104002   ALBUTEROL   22.96   19190.149525

204060130135   204060130135001   ALBUTEROL   22.96   19190.149525

204190190047   204190190047001   FLOVENT   85.65   15698.239641

204190190307   204190190307001   LEVAQUIN   108.14   15698.239641

204190190561   204190190561001   FLOVENT   85.65   15698.239641
                  204190190561002   FLOVENT   85.65   15698.239641

Sample SAS Job for Example B
sample print of work.aspmeds
PMED (HC-067A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
204340120065	204340120065001	ALBUTEROL	18.31	14898.017996
	204340120065002	ALBUTEROL	18.31	14898.017996
	204340120065003	ALBUTEROL	18.31	14898.017996
	204340120065004	ALBUTEROL	18.31	14898.017996
204350100028	204350100028001	CLARITIN	94.08	15127.369032

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

                         The MEANS Procedure

    Analysis Variable : RXXP02X SUM OF PAYMENTS RXSF02X-RXOU02X(IMPUTED)

                     N   Sum

               12112   728935.66

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

Weighted

The MEANS Procedure

Analysis Variable : RXXP02X SUM OF PAYMENTS RXSF02X-RXOU02X(IMPUTED)


```
        N            Sum
--------------------
    12112      5624031844
--------------------
```

```
1                                       The SAS System                   11:17 Thursday, October 28, 2004

NOTE: Copyright (c) 1999-2001 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 8.2 (TS2M0)
NOTE: This session is executing on the WIN_PRO  platform.



NOTE: This installation is running Base SAS hot fix bundle 82BX08.


NOTE: SAS initialization used:
      real time           3.29 seconds
      cpu time            0.29 seconds


NOTE: AUTOEXEC processing beginning; file is C:\progra~1\sasins~1\sas\v8\autoexec.sas.


NOTE: AUTOEXEC processing completed.

1
2            OPTIONS LS=132 PS=59;
3
4            TITLE1 "HC-067I";
5            TITLE2 'Sample SAS Job for Example C';
6
7            LIBNAME IN 'C:\DATA';
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           0.15 seconds
      cpu time            0.00 seconds



23
24           *--------------------------------------------------------------------------------
25           * Get conditions records coded as asthma.
26           *-------------------------------------------------------------------------------;
```

```
27        DATA ASCONDS;
28          SET IN.H69 (KEEP=CONDIDX CCCODEX);
29          IF CCCODEX="128";
30        RUN;
```

NOTE: There were 120795 observations read from the data set IN.H69.
NOTE: The data set WORK.ASCONDS has 2159 observations and 2 variables.
NOTE: DATA statement used:
      real time   1.51 seconds
      cpu time   0.21 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 2159 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCONDS has 2159 observations and 2 variables.
NOTE: PROCEDURE SORT used:
      real time   0.09 seconds
      cpu time   0.03 seconds

```
36
37        proc print data=asconds (obs=50);
38          title3 "sample print of work.asconds - sorted by condidx";
39          title4 "COND (HC-069) 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   0.28 seconds
      cpu time   0.03 seconds

```
41
42        PROC SORT DATA=IN.H67IF1 OUT=CLNK; BY CONDIDX; RUN;
```

NOTE: There were 388065 observations read from the data set IN.H67IF1.
NOTE: The data set WORK.CLNK has 388065 observations and 5 variables.
NOTE: PROCEDURE SORT used:
      real time   21.00 seconds
      cpu time   2.23 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 388065 observations read from the data set WORK.CLNK.
NOTE: There were 2159 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCLNKS has 8833 observations and 3 variables.
NOTE: DATA statement used:
      real time              0.43 seconds
      cpu time               0.40 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              0.54 seconds
      cpu time               0.01 seconds


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

NOTE: There were 8833 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 8833 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time              0.03 seconds
      cpu time               0.01 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              0.03 seconds
      cpu 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 8833 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 8830 observations and 2 variables.
```

```
NOTE: DATA statement used:
      real time           0.21 seconds
      cpu time            0.01 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           0.03 seconds
      cpu 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;
81           SET IN.H67G (KEEP=EVNTIDX PERWT02F SEETLKPV OBXP02X);
82           IF PERWT02F > 0 & SEETLKPV NE 2;
83         RUN;

NOTE: There were 179745 observations read from the data set IN.H67G.
NOTE: The data set WORK.MVIS has 173591 observations and 4 variables.
NOTE: DATA statement used:
      real time           3.75 seconds
      cpu time            0.56 seconds


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

NOTE: There were 173591 observations read from the data set WORK.MVIS.
NOTE: The data set WORK.MVIS has 173591 observations and 4 variables.
NOTE: PROCEDURE SORT used:
      real time           1.67 seconds
      cpu time            0.67 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 8830 observations read from the data set WORK.ASCLNKS.
NOTE: There were 173591 observations read from the data set WORK.MVIS.
```

```
NOTE: The data set WORK.ASMVIS has 2916 observations and 5 variables.
NOTE: DATA statement used:
      real time              0.31 seconds
      cpu time               0.18 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-067G) 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              0.03 seconds
      cpu time               0.00 seconds


102
103        PROC MEANS DATA=ASMVIS N SUM;
104          VAR OBXP02X;
105          TITLE3 "Total medical visit expenditures (excluding telephone) associated with asthma";
106        RUN;

NOTE: There were 2916 observations read from the data set WORK.ASMVIS.
NOTE: The PROCEDURE MEANS printed page 7.
NOTE: PROCEDURE MEANS used:
      real time              0.10 seconds
      cpu time               0.01 seconds


107
108        PROC MEANS DATA=ASMVIS SUM;
109          VAR OBXP02X;
110          WEIGHT PERWT02F;
111          TITLE3 "Total medical visit expenditures (excluding telephone) associated with asthma";
112          TITLE5 "Weighted";
113        RUN;

NOTE: There were 2916 observations read from the data set WORK.ASMVIS.
NOTE: The PROCEDURE MEANS printed page 8.
NOTE: PROCEDURE MEANS used:
      real time              0.03 seconds
      cpu 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             34.07 seconds
      cpu time               4.78 seconds
```

                    Sample SAS Job for Example C
          sample print of work.asconds - sorted by condidx
             COND (HC-069) records where cccodex=128

                 Obs   CONDIDX   CCCODEX

                  1   200210270023   128
                  2   200260120036   128
                  3   200300100028   128
                  4   200340280018   128
                  5   200390220116   128
                  6   200410170097   128
                  7   200530380017   128
                  8   200540230019   128
                  9   200640100022   128
                 10   200640100141   128
                 11   200760300018   128
                 12   200860130041   128
                 13   200880360010   128
                 14   201090290010   128
                 15   201100200048   128
                 16   201100440018   128
                 17   201150170015   128
                 18   201170490019   128
                 19   201170550019   128
                 20   201290280019   128
                 21   201550320028   128
                 22   201790120016   128
                 23   201790290043   128
                 24   201790360014   128
                 25   201790590029   128
                 26   201840320043   128
                 27   201860330010   128
                 28   201860330032   128
                 29   201930150013   128
                 30   201980300032   128
                 31   202000130025   128
                 32   202030180047   128
                 33   202170150026   128
                 34   202170290028   128
                 35   202240300029   128
                 36   202350170021   128
                 37   202620130056   128
                 38   202650560036   128
                 39   202680360017   128
                 40   202680360051   128
                 41   202680430038   128
                 42   202680590038   128
                 43   202740110040   128
                 44   202900140013   128
                 45   202990190017   128
                 46   203080160025   128
                 47   203600120037   128
                 48   203600290042   128
                 49   203650120019   128
                 50   203740440015   128

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

             CONDIDX   EVNTIDX   EVENTYPE

          200210270023   200210270069   8 PMED
                         200210270083   8 PMED

          200260120036   200260120056   1 MVIS
                         200260120190   8 PMED
                         200260120354   1 MVIS
                         200260120816   8 PMED
                         200260120847   8 PMED
                         200260120854   8 PMED

          200300100028   200300100019   1 MVIS
                         200300100026   8 PMED

          200340280018   200340280016   8 PMED
                         200340280030   8 PMED
                         200340280054   8 PMED
                         200340280061   8 PMED
                         200340280085   8 PMED
                         200340280092   1 MVIS
                         200340280143   8 PMED
                         200340280150   8 PMED

          200390220116   200390220363   8 PMED

          200410170097   200410170229   8 PMED
                         200410170236   8 PMED

          200530380017   200530380017   3 EROM
                         200530380024   3 EROM
                         200530380062   8 PMED
                         200530380106   8 PMED

          200540230019   200540230020   1 MVIS
                         200540230037   1 MVIS
                         200540230044   8 PMED
                         200540230051   8 PMED
                         200540230075   8 PMED
                         200540230126   1 MVIS
                         200540230164   8 PMED
                         200540230171   8 PMED
                         200540230188   8 PMED

          200640100022   200640100030   1 MVIS
                         200640100232   8 PMED
                         200640100249   8 PMED
                         200640100749   8 PMED
                         200640100883   8 PMED
                         200640100890   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

         200640100141   200640100605   2 OPAT
                        200640100612   2 OPAT
                        200640100756   8 PMED

         200760300018   200760300058   8 PMED
                        200760300161   8 PMED

         200860130041   200860130063   8 PMED
                        200860130070   8 PMED
                        200860130087   8 PMED
                        200860130094   8 PMED
                        200860130145   8 PMED
                        200860130234   8 PMED

         200880360010   200880360038   8 PMED
                        200880360103   8 PMED

         201090290010   201090290019   8 PMED
                        201090290026   8 PMED
                        201090290040   8 PMED

         201100200048   201100200124   1 MVIS
                        201100200131   1 MVIS
                        201100200155   1 MVIS
                        201100200162   8 PMED
                        201100200179   8 PMED

         201100440018   201100440028   1 MVIS
                        201100440080   8 PMED
                        201100440097   8 PMED
                        201100440100   8 PMED
                        201100440155   8 PMED

         201150170015   201150170292   8 PMED
                        201150170381   8 PMED

         201170490019   201170490059   8 PMED
                        201170490066   8 PMED

         201170550019   201170550012   1 MVIS
                        201170550029   1 MVIS
                        201170550036   1 MVIS
                        201170550043   1 MVIS
                        201170550050   1 MVIS

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

Obs	CONDIDX	EVNTIDX	EVENTYPE
1	200210270023	200210270069	8 PMED
2	200210270023	200210270083	8 PMED
3	200260120036	200260120056	1 MVIS
4	200260120036	200260120190	8 PMED
5	200260120036	200260120354	1 MVIS
6	200260120036	200260120816	8 PMED
7	200260120036	200260120847	8 PMED
8	200260120036	200260120854	8 PMED
9	200300100028	200300100019	1 MVIS
10	200300100028	200300100026	8 PMED
11	200340280018	200340280016	8 PMED
12	200340280018	200340280030	8 PMED
13	200340280018	200340280054	8 PMED
14	200340280018	200340280061	8 PMED
15	200340280018	200340280085	8 PMED
16	200340280018	200340280092	1 MVIS
17	200340280018	200340280143	8 PMED
18	200340280018	200340280150	8 PMED
19	200390220116	200390220363	8 PMED
20	200410170097	200410170229	8 PMED
21	200410170097	200410170236	8 PMED
22	200530380017	200530380017	3 EROM
23	200530380017	200530380024	3 EROM
24	200530380017	200530380062	8 PMED
25	200530380017	200530380106	8 PMED
26	200540230019	200540230020	1 MVIS
27	200540230019	200540230037	1 MVIS
28	200540230019	200540230044	8 PMED
29	200540230019	200540230051	8 PMED
30	200540230019	200540230075	8 PMED
31	200540230019	200540230126	1 MVIS
32	200540230019	200540230164	8 PMED
33	200540230019	200540230171	8 PMED
34	200540230019	200540230188	8 PMED
35	200640100022	200640100030	1 MVIS
36	200640100022	200640100232	8 PMED
37	200640100022	200640100249	8 PMED
38	200640100141	200640100605	2 OPAT
39	200640100141	200640100612	2 OPAT
40	200640100022	200640100749	8 PMED
41	200640100141	200640100756	8 PMED
42	200640100022	200640100883	8 PMED
43	200640100022	200640100890	8 PMED
44	200760300018	200760300058	8 PMED
45	200760300018	200760300161	8 PMED
46	200860130041	200860130063	8 PMED
47	200860130041	200860130070	8 PMED
48	200860130041	200860130087	8 PMED
49	200860130041	200860130094	8 PMED
50	200860130041	200860130145	8 PMED

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

```
        Obs      EVNTIDX        EVENTYPE

         1     200210270069     8 PMED
         2     200210270083     8 PMED
         3     200260120056     1 MVIS
         4     200260120190     8 PMED
         5     200260120354     1 MVIS
         6     200260120816     8 PMED
         7     200260120847     8 PMED
         8     200260120854     8 PMED
         9     200300100019     1 MVIS
        10     200300100026     8 PMED
        11     200340280016     8 PMED
        12     200340280030     8 PMED
        13     200340280054     8 PMED
        14     200340280061     8 PMED
        15     200340280085     8 PMED
        16     200340280092     1 MVIS
        17     200340280143     8 PMED
        18     200340280150     8 PMED
        19     200390220363     8 PMED
        20     200410170229     8 PMED
        21     200410170236     8 PMED
        22     200530380017     3 EROM
        23     200530380024     3 EROM
        24     200530380062     8 PMED
        25     200530380106     8 PMED
        26     200540230020     1 MVIS
        27     200540230037     1 MVIS
        28     200540230044     8 PMED
        29     200540230051     8 PMED
        30     200540230075     8 PMED
        31     200540230126     1 MVIS
        32     200540230164     8 PMED
        33     200540230171     8 PMED
        34     200540230188     8 PMED
        35     200640100030     1 MVIS
        36     200640100232     8 PMED
        37     200640100249     8 PMED
        38     200640100605     2 OPAT
        39     200640100612     2 OPAT
        40     200640100749     8 PMED
        41     200640100756     8 PMED
        42     200640100883     8 PMED
        43     200640100890     8 PMED
        44     200760300058     8 PMED
        45     200760300161     8 PMED
        46     200860130063     8 PMED
        47     200860130070     8 PMED
        48     200860130087     8 PMED
        49     200860130094     8 PMED
        50     200860130145     8 PMED
```

Sample SAS Job for Example C
sample print of work.asmvis
unique evntidxs from work.asclnks that are non-telephone MVIS (HC-067G) events

Obs	EVNTIDX	EVENTYPE	SEETLKPV	OBXP02X	PERWT02F
1	200260120056	1 MVIS	1	593.50	14422.86
2	200260120354	1 MVIS	1	1032.00	14422.86
3	200300100019	1 MVIS	1	663.69	6875.18
4	200340280092	1 MVIS	1	94.00	4001.74
5	200540230020	1 MVIS	1	80.00	6982.59
6	200540230037	1 MVIS	1	61.00	6982.59
7	200540230126	1 MVIS	1	176.63	6982.59
8	200640100030	1 MVIS	1	88.00	11866.14
9	201100200124	1 MVIS	1	95.00	15775.48
10	201100200131	1 MVIS	1	95.00	15775.48
11	201100200155	1 MVIS	1	32.35	15775.48
12	201100440028	1 MVIS	1	106.08	17098.35
13	201170550012	1 MVIS	1	86.49	9275.72
14	201170550029	1 MVIS	1	86.49	9275.72
15	201170550036	1 MVIS	1	131.56	9275.72
16	201170550043	1 MVIS	1	105.18	9275.72
17	201170550050	1 MVIS	1	113.75	9275.72
18	201170550067	1 MVIS	1	113.75	9275.72
19	201170550074	1 MVIS	1	73.00	9275.72
20	201290280058	1 MVIS	1	91.20	8416.58
21	201290280065	1 MVIS	1	63.72	8416.58
22	201290280072	1 MVIS	1	67.14	8416.58
23	201790120016	1 MVIS	1	12.00	1623.93
24	201790290016	1 MVIS	1	148.00	2381.51
25	201790290023	1 MVIS	1	210.00	2381.51
26	201790290030	1 MVIS	1	150.00	2381.51
27	201790290047	1 MVIS	1	113.00	2381.51
28	201790290054	1 MVIS	1	28.00	2381.51
29	201790290061	1 MVIS	1	245.00	2381.51
30	201790290078	1 MVIS	1	246.00	2381.51
31	201790290249	1 MVIS	1	336.00	2381.51
32	201790360030	1 MVIS	1	0.00	3060.51
33	201790360047	1 MVIS	1	40.00	3060.51
34	201790360054	1 MVIS	1	0.00	3060.51
35	201790360061	1 MVIS	1	0.00	3060.51
36	201790360078	1 MVIS	1	40.00	3060.51
37	201790360112	1 MVIS	1	6.00	3060.51
38	201860330072	1 MVIS	1	92.82	2561.46
39	201860330130	1 MVIS	1	130.27	2561.46
40	201860330147	1 MVIS	1	130.27	2561.46
41	201860330154	1 MVIS	1	130.27	2561.46
42	201980300011	1 MVIS	1	90.00	12875.70
43	202030180032	1 MVIS	1	154.97	3012.54
44	202030180056	1 MVIS	1	179.00	3012.54
45	202170150088	1 MVIS	1	93.00	9578.34
46	202620130237	1 MVIS	1	101.01	8845.10
47	202680360044	1 MVIS	1	55.00	1722.75
48	202740110017	1 MVIS	1	489.72	3865.75
49	202740110024	1 MVIS	1	70.31	3865.75
50	202740110031	1 MVIS	1	4636.60	3865.75

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

                          The MEANS Procedure

     Analysis Variable : OBXP02X SUM OF OBSF02X - OBOT02X (IMPUTED)

                    N   Sum

                 2916   305902.82

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


                                    Weighted


                             The MEANS Procedure


        Analysis Variable : OBXP02X SUM OF OBSF02X - OBOT02X (IMPUTED)


                                    Sum
                                ------------
                                 2042744316
                                ------------
```

NOTE: Copyright (c) 1999-2001 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 8.2 (TS2M0)
NOTE: This session is executing on the WIN_PRO platform.

NOTE: This installation is running Base SAS hot fix bundle 82BX08.

NOTE: SAS initialization used:
      real time   3.00 seconds
      cpu time   0.37 seconds

NOTE: AUTOEXEC processing beginning; file is C:\progra~1\sasins~1\sas\v8\autoexec.sas.

NOTE: AUTOEXEC processing completed.

```
1
2          OPTIONS LS=132 PS=59;
3
4          TITLE1 "HC-067I";
5          TITLE2 'Sample SAS Job for Example D';
6
7          LIBNAME IN 'C:\DATA';
NOTE: Libref IN was successfully assigned as follows:
      Engine:        V8
      Physical Name: C:\DATA
8
9          ***********************************************************************************
10         * Calculate the expenditures for prescribed medicines associated
11         * with insulin reported by the household as an other medical expense.
12         ***********************************************************************************;
13
14         PROC FORMAT;
15           VALUE EVENTYPE
16               1 = "1 MVIS"
17               2 = "2 OPAT"
18               3 = "3 EROM"
19               4 = "4 STAZ"
20               5 = "5 DVIS"
21               6 = "6 OMED"
22               7 = "7 HVIS"
23               8 = "8 PMED";
NOTE: Format EVENTYPE has been output.
24
25           VALUE OMTYPE
26              -9 = "-9 NOT ASCERTAINED"
27              -8 = "-8 DK"
28              -7 = "-7 REFUSED"
29              -1 = "-1 INAPPLICABLE"
30               1 = "1 GLASSES OR CONTACT LENSES"
```

```
31               2 = "2 INSULIN"
32               3 = "3 DIABETIC EQUIPMENT/SUPPLIES"
33               4 = "4 AMBULANCE SERVICES"
34               5 = "5 ORTHOPEDIC ITEMS"
35               6 = "6 HEARING DEVICES"
36               7 = "7 PROSTHESIS"
37               8 = "8 BATHROOM AIDS"
38               9 = "9 MEDICAL EQUIPMENT"
39               10 = "10 DISPOSABLE SUPPLIES"
40               11 = "11 ALTERATIONS/MODIFICATIONS"
41               91 = "91 OTHER"
42               ;
NOTE: Format OMTYPE has been output.
43        RUN;

NOTE: PROCEDURE FORMAT used:
      real time          0.15 seconds
      cpu time           0.04 seconds


44
45        *-------------------------------------------------------------------------------------
46        * Get other medical records for insulin for persons with positive weights.
47        *------------------------------------------------------------------------------------;
48
49        DATA OMED;
50          SET IN.H67C (KEEP=EVNTIDX PERWT02F OMTYPEX);
51          IF PERWT02F > 0 & OMTYPEX = 2;
52        RUN;

NOTE: There were 10564 observations read from the data set IN.H67C.
NOTE: The data set WORK.OMED has 669 observations and 3 variables.
NOTE: DATA statement used:
      real time          0.51 seconds
      cpu time           0.09 seconds


53
54        proc print data=omed (obs=100);
55          var evntidx OMTYPEX PERWT02F;
56          format OMTYPEX omtype.;
57          title3 "sample print of OMED (HC-067C) records where OMTYPEX=2";
58        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          0.32 seconds
      cpu time           0.04 seconds


59
60        *-------------------------------------------------------------------------------------
61        * Get PMED IDs linked to the OMED events which were for insulin.
62        *------------------------------------------------------------------------------------;
63
64        PROC SORT DATA=IN.H67IF2 OUT=RXLK; BY EVNTIDX; RUN;
```

```
NOTE: There were 72467 observations read from the data set IN.H67IF2.
NOTE: The data set WORK.RXLK has 72467 observations and 5 variables.
NOTE: PROCEDURE SORT used:
      real time              0.67 seconds
      cpu time               0.49 seconds


65
66          proc print data=rxlk (obs=150);
67            by evntidx;
68            id evntidx;
69            var linkidx eventype;
70            format eventype eventype.;
71            title3 "sample print of Rx+event link file records (HC-67IF2) - sorted by evntidx";
72          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              0.10 seconds
      cpu time               0.01 seconds


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

NOTE: There were 2056 observations read from the data set WORK.RXLK.
      WHERE eventype=6;
NOTE: The data set WORK.OMEDRXLK has 2056 observations and 5 variables.
NOTE: DATA statement used:
      real time              0.03 seconds
      cpu time               0.03 seconds


77          proc print data=omedrxlk (obs=120);
78            by evntidx;
79            id evntidx;
80            var linkidx eventype;
81            format eventype eventype.;
82            title3 "sample print of work.omedrxlk - sorted by evntidx";
83            title4 "Rx+event link file records (HC-67IF2) where eventype=6 (omed)";
84          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              0.04 seconds
      cpu time               0.03 seconds


85
86          DATA PMEDIDS;
87            MERGE RXLK (IN=INRXLK KEEP=EVNTIDX LINKIDX EVENTYPE)
88                  OMED (IN=INOMED KEEP=EVNTIDX);
```

```
89           BY EVNTIDX;
90           IF INRXLK & INOMED;
91        RUN;

NOTE: There were 72467 observations read from the data set WORK.RXLK.
NOTE: There were 669 observations read from the data set WORK.OMED.
NOTE: The data set WORK.PMEDIDS has 636 observations and 3 variables.
NOTE: DATA statement used:
      real time            0.07 seconds
      cpu time             0.07 seconds


92
93        proc print data=pmedids (obs=50);
94           by evntidx;
95           id evntidx;
96           format eventype eventype.;
97           title3 "sample print of work.pmedids - sorted by evntidx";
98           title4 "work.rxlk records for omed events for insulin";
99        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            0.04 seconds
      cpu time             0.01 seconds


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

NOTE: There were 636 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 636 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time            0.01 seconds
      cpu time             0.01 seconds


102
103       proc print data=pmedids (obs=50);
104          format eventype eventype.;
105          title3 "sample print of work.pmedids - sorted by linkidx";
106       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            0.03 seconds
      cpu time             0.00 seconds


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

```
113        RUN;

NOTE: There were 636 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 636 observations and 1 variables.
NOTE: DATA statement used:
      real time           0.00 seconds
      cpu time            0.00 seconds


114
115        proc print data=pmedids (obs=50);
116          title3 "sample print of unique linkidxs in work.pmedids";
117        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           0.01 seconds
      cpu time            0.01 seconds


118
119
120        *-------------------------------------------------------------------------------
121        * Get PMED records for OMED event which were for insulin.
122        *------------------------------------------------------------------------------;
123        PROC SORT DATA=IN.H67A OUT=PMED; BY LINKIDX; RUN;

NOTE: There were 339308 observations read from the data set IN.H67A.
NOTE: The data set WORK.PMED has 339308 observations and 70 variables.
NOTE: PROCEDURE SORT used:
      real time           4:56.39
      cpu time            31.24 seconds


124
125        DATA OMPMEDS;
126          MERGE PMED (KEEP=LINKIDX RXRECIDX  RXXP02X PERWT02F RXNAME)
127                PMEDIDS (IN=A);
128          BY LINKIDX;
129          IF A & PERWT02F>0;
130        RUN;

NOTE: There were 339308 observations read from the data set WORK.PMED.
NOTE: There were 636 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.OMPMEDS has 2372 observations and 5 variables.
NOTE: DATA statement used:
      real time           4.60 seconds
      cpu time            1.15 seconds


131
132        proc print data=ompmeds (obs=200);
133          by linkidx;
134          id linkidx;
135          var rxrecidx rxname RXXP02X  PERWT02F;
136          title3 "sample print of work.pmeds";
```

```
137          title4 "PMED (HC-067A) records for unique linkidxs in work.pmedids";
138       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              0.45 seconds
      cpu time               0.03 seconds


139
140       PROC MEANS DATA=OMPMEDS N SUM;
141         VAR RXXP02X;
142         TITLE3 "Total Rx expenditures associated with other medical expenses for insulin";
143       RUN;

NOTE: There were 2372 observations read from the data set WORK.OMPMEDS.
NOTE: The PROCEDURE MEANS printed page 23.
NOTE: PROCEDURE MEANS used:
      real time              0.28 seconds
      cpu time               0.01 seconds


144
145       PROC MEANS DATA=OMPMEDS N SUM;
146         VAR RXXP02X;
147         WEIGHT PERWT02F;
148         TITLE3 "Total Rx expenditures associated with other medical expenses for insulin";
149         TITLE5 "Weighted";
150       RUN;

NOTE: There were 2372 observations read from the data set WORK.OMPMEDS.
NOTE: The PROCEDURE MEANS printed page 24.
NOTE: PROCEDURE MEANS used:
      real time              0.03 seconds
      cpu time               0.00 seconds


151
152


NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414
NOTE: The SAS System used:
      real time              5:08.09

      cpu time              33.81 seconds
```

```
                        Sample SAS Job for Example D
              sample print of OMED (HC-067C) records where OMTYPEX=2


          Obs      EVNTIDX        OMTYPEX       PERWT02F

            1    200720190121    2 INSULIN       2612.83
            2    201070130115    2 INSULIN      21620.73
            3    201070130266    2 INSULIN      21620.73
            4    201150170165    2 INSULIN       7331.78
            5    201150170189    2 INSULIN       7331.78
            6    201290110034    2 INSULIN       9167.69
            7    201510150047    2 INSULIN       3187.58
            8    201510150338    2 INSULIN       3187.58
            9    202550130179    2 INSULIN       9537.04
           10    202650190124    2 INSULIN       2202.30
           11    202650560163    2 INSULIN       3595.91
           12    202750160146    2 INSULIN      11669.45
           13    202750160595    2 INSULIN      11669.45
           14    202940160115    2 INSULIN       2830.74
           15    202940160259    2 INSULIN       2830.74
           16    203410210144    2 INSULIN       4319.02
           17    204580280136    2 INSULIN      10839.14
           18    204580280181    2 INSULIN      10839.14
           19    204680150064    2 INSULIN       3236.75
           20    204910230033    2 INSULIN      15303.40
           21    204910230228    2 INSULIN      15303.40
           22    205150110154    2 INSULIN       3149.28
           23    205690140421    2 INSULIN       2534.07
           24    205780100312    2 INSULIN       2013.99
           25    206840120088    2 INSULIN       6979.34
           26    206840120177    2 INSULIN       6979.34
           27    206840120259    2 INSULIN       6979.34
           28    206860190055    2 INSULIN        676.01
           29    207220190207    2 INSULIN       4774.78
           30    207630150039    2 INSULIN      27483.31
           31    207630150111    2 INSULIN      27483.31
           32    207630150200    2 INSULIN      27483.31
           33    207930280056    2 INSULIN      12195.82
           34    207930280176    2 INSULIN      12195.82
           35    207930280570    2 INSULIN      12195.82
           36    208110150181    2 INSULIN       6376.10
           37    208390130032    2 INSULIN       4133.85
           38    208890670089    2 INSULIN       1064.59
           39    209860130065    2 INSULIN       8962.99
           40    209860130154    2 INSULIN       8962.99
           41    210130260187    2 INSULIN       5735.15
           42    210130260365    2 INSULIN       5735.15
           43    210690140199    2 INSULIN       7498.99
           44    210710260072    2 INSULIN       1390.33
           45    211140160036    2 INSULIN      20702.54
           46    211240120061    2 INSULIN       7121.78
           47    211240120256    2 INSULIN       7121.78
           48    211240120390    2 INSULIN       7121.78
           49    211550110332    2 INSULIN       1298.50
           50    211810130654    2 INSULIN      10782.45
           51    212870140662    2 INSULIN       3025.08
           52    213150200211    2 INSULIN       4322.26
           53    213150200386    2 INSULIN       4322.26
```

Sample SAS Job for Example D
sample print of OMED (HC-067C) records where OMTYPEX=2

Obs	EVNTIDX	OMTYPEX	PERWT02F
54	213370190042	2 INSULIN	10594.16
55	213370190193	2 INSULIN	10594.16
56	213700330020	2 INSULIN	6435.85
57	213700330133	2 INSULIN	6435.85
58	214240110428	2 INSULIN	9696.98
59	214400140059	2 INSULIN	4256.63
60	214400140528	2 INSULIN	4256.63
61	214990270075	2 INSULIN	4356.53
62	214990270171	2 INSULIN	4356.53
63	215320120836	2 INSULIN	6946.45
64	215550100463	2 INSULIN	6430.52
65	216010140246	2 INSULIN	12998.12
66	216130260669	2 INSULIN	5119.65
67	216820150098	2 INSULIN	25134.35
68	217020400037	2 INSULIN	2376.65
69	217020400099	2 INSULIN	2376.65
70	217080260073	2 INSULIN	3611.88
71	217080260155	2 INSULIN	3611.88
72	218200230058	2 INSULIN	15314.80
73	218200230394	2 INSULIN	15314.80
74	219470370014	2 INSULIN	17032.83
75	220010110025	2 INSULIN	2296.60
76	220780120152	2 INSULIN	1990.88
77	220780120392	2 INSULIN	1990.88
78	221090240064	2 INSULIN	2489.49
79	221090240153	2 INSULIN	2489.49
80	221110110424	2 INSULIN	4048.42
81	221110110835	2 INSULIN	4048.42
82	221220170051	2 INSULIN	2807.68
83	221220171030	2 INSULIN	2807.68
84	221870140052	2 INSULIN	5784.05
85	221870140367	2 INSULIN	5784.05
86	221870140792	2 INSULIN	5784.05
87	223060180028	2 INSULIN	8174.11
88	223060180080	2 INSULIN	8174.11
89	223360170039	2 INSULIN	8644.09
90	223360170135	2 INSULIN	8644.09
91	223360170197	2 INSULIN	8644.09
92	223390120349	2 INSULIN	1433.54
93	224090140201	2 INSULIN	8470.39
94	224090140547	2 INSULIN	8470.39
95	224100100031	2 INSULIN	5806.41
96	224100270031	2 INSULIN	6697.78
97	224100270308	2 INSULIN	6697.78
98	226780160062	2 INSULIN	1589.29
99	226780160257	2 INSULIN	1589.29
100	227060220024	2 INSULIN	8039.72

                      Sample SAS Job for Example D
sample print of Rx+event link file records (HC-67IF2) - sorted by evntidx

              EVNTIDX   LINKIDX   EVENTYPE

           200020380013   200020380020   1 MVIS
                           200020380037   1 MVIS

           200030260041   200030260123   1 MVIS

           200030260178   200030260250   1 MVIS

           200040180012   200040180067   1 MVIS

           200040180081   200040180187   4 STAZ

           200040180101   200040180207   1 MVIS

           200040180163   200040180187   1 MVIS

           200040180221   200040180276   1 MVIS

           200040180245   200040180283   1 MVIS

           200070160018   200070160049   1 MVIS
                           200070160056   1 MVIS

           200070160032   200070160049   1 MVIS

           200120180060   200120180084   1 MVIS
                           200120180091   1 MVIS
                           200120180104   1 MVIS
                           200120180111   1 MVIS

           200120180077   200120180128   1 MVIS

           200120250022   200120250060   1 MVIS

           200120250046   200120250077   3 EROM

           200120250128   200120250313   1 MVIS
                           200120250320   1 MVIS
                           200120250337   1 MVIS
                           200120250344   1 MVIS
                           200120250351   1 MVIS
                           200120250368   1 MVIS

           200140170015   200140170022   1 MVIS
                           200140170039   1 MVIS

           200140240046   200140240382   1 MVIS

           200140240180   200140240399   1 MVIS

           200140240426   200140240433   1 MVIS

                   Sample SAS Job for Example D
sample print of Rx+event link file records (HC-67IF2) - sorted by evntidx

               EVNTIDX   LINKIDX   EVENTYPE

            200150190012   200150190029   1 MVIS
                           200150190036   1 MVIS
                           200150190043   1 MVIS
                           200150190050   1 MVIS

            200160650045   200160650076   1 MVIS

            200160650083   200160650103   1 MVIS
                           200160650110   1 MVIS

            200160730068   200160730082   1 MVIS

            200160730075   200160730099   1 MVIS

            200170120015   200170120046   1 MVIS
                           200170120053   1 MVIS

            200170120135   200170120142   1 MVIS
                           200170120159   1 MVIS

            200190140041   200190140072   1 MVIS

            200190140058   200190140089   1 MVIS
                           200190140096   1 MVIS

            200200160021   200200160069   1 MVIS

            200200230052   200200230076   5 DVIS

            200200230090   200200230127   1 MVIS
                           200200230134   1 MVIS

            200210100045   200210100134   1 MVIS

            200210270038   200210270069   1 MVIS
                           200210270076   1 MVIS
                           200210270083   1 MVIS
                           200210270090   1 MVIS

            200210340038   200210340076   1 MVIS

            200210340069   200210340083   1 MVIS

            200220150026   200220150040   1 MVIS

            200220460019   200220460033   1 MVIS

            200230100018   200230100032   1 MVIS

            200230100025   200230100049   1 MVIS

                       Sample SAS Job for Example D
sample print of Rx+event link file records (HC-67IF2) - sorted by evntidx

              EVNTIDX   LINKIDX   EVENTYPE

           200260120405   200260120412   1 MVIS
                          200260120429   1 MVIS

           200260120676   200260120683   3 EROM
                          200260120690   3 EROM

           200260290121   200260290258   1 MVIS

           200260290190   200260290265   2 OPAT

           200290180018   200290180049   1 MVIS

           200300100019   200300100026   1 MVIS

           200320100010   200320100065   1 MVIS
                          200320100072   1 MVIS
                          200320100089   1 MVIS
                          200320100096   1 MVIS

           200320100034   200320100109   1 MVIS

           200320100123   200320100130   1 MVIS
                          200320100147   1 MVIS
                          200320100154   1 MVIS

           200320100185   200320100243   4 STAZ
                          200320100250   4 STAZ
                          200320100267   4 STAZ
                          200320100274   4 STAZ
                          200320100281   4 STAZ
                          200320100298   4 STAZ

           200330150050   200330150081   3 EROM

           200330150067   200330150098   1 MVIS

           200340110054   200340110061   2 OPAT

           200360130010   200360130058   5 DVIS

           200360130109   200360130130   1 MVIS

           200360200027   200360200065   1 MVIS

           200360200072   200360200154   1 MVIS

           200390150010   200390150027   1 MVIS

           200390150034   200390150041   1 MVIS

Sample SAS Job for Example D
sample print of Rx+event link file records (HC-67IF2) - sorted by evntidx

```
          EVNTIDX        LINKIDX        EVENTYPE

       200390220010    200390220116     1 MVIS
                       200390220123     1 MVIS
                       200390220130     1 MVIS
                       200390220147     1 MVIS

       200390220072    200390220154     1 MVIS

       200390220089    200390220154     1 MVIS

       200390220192    200390220229     1 MVIS

       200390220205    200390220236     5 DVIS
                       200390220243     5 DVIS

       200390220281    200390220332     5 DVIS

       200410170154    200410170185     1 MVIS

       200440170026    200440170033     1 MVIS

       200450150104    200450150142     1 MVIS

       200450150128    200450150166     1 MVIS

       200460230018    200460230025     1 MVIS

       200460470018    200460470025     1 MVIS

       200480150018    200480150025     1 MVIS

       200480150032    200480150049     1 MVIS

       200510130051    200510130068     1 MVIS
                       200510130075     1 MVIS
                       200510130082     1 MVIS
                       200510130099     1 MVIS

       200510130119    200510130133     1 MVIS

       200520140018    200520140025     1 MVIS

       200520140032    200520140049     1 MVIS
                       200520140056     1 MVIS

       200530380017    200530380048     3 EROM
                       200530380055     3 EROM
                       200530380062     3 EROM
                       200530380079     3 EROM

       200530380024    200530380062     3 EROM
```

                      Sample SAS Job for Example D
sample print of Rx+event link file records (HC-67IF2) - sorted by evntidx

              EVNTIDX   LINKIDX   EVENTYPE

          200530380093   200530380106   3 EROM

          200540110049   200540110056   1 MVIS

          200540110070   200540110114   1 MVIS
                         200540110121   1 MVIS
                         200540110138   1 MVIS
                         200540110145   1 MVIS
                         200540110152   1 MVIS

          200540160013   200540160051   1 MVIS

          200540160171   200540160208   1 MVIS
                         200540160215   1 MVIS

          200540160188   200540160222   1 MVIS

          200540160253   200540160284   2 OPAT
                         200540160291   2 OPAT

          200540230020   200540230044   1 MVIS
                         200540230051   1 MVIS

          200540230037   200540230068   1 MVIS
                         200540230075   1 MVIS

          200540230126   200540230164   1 MVIS
                         200540230171   1 MVIS
                         200540230188   1 MVIS

          200550130019   200550130026   1 MVIS

          200560250015   200560250022   1 MVIS

          200560320015   200560320022   1 MVIS

          200590180014   200590180038   3 EROM

          200590250014   200590250045   1 MVIS

          200590250038   200590250052   1 MVIS

                  Sample SAS Job for Example D
       sample print of work.omedrxlk - sorted by evntidx
     Rx+event link file records (HC-67IF2) where eventype=6 (omed)

          EVNTIDX   LINKIDX   EVENTYPE

       200600100063   200600100070   6 OMED

       200600100145   200600100152   6 OMED

       200720190121   200720190138   6 OMED

       200720190145   200720190152   6 OMED

       201030140440   201030140457   6 OMED

       201070130115   201070130122   6 OMED

       201070130266   201070130273   6 OMED

       201070130280   201070130297   6 OMED

       201070130406   201070130413   6 OMED

       201150170165   201150170172   6 OMED

       201150170189   201150170196   6 OMED

       201290110034   201290110041   6 OMED

       201290110058   201290110065   6 OMED

       201510150047   201510150054   6 OMED

       201510150061   201510150078   6 OMED

       201510150150   201510150167   6 OMED

       201510150338   201510150345   6 OMED

       201510150352   201510150369   6 OMED

       201950120027   201950120034   6 OMED

       202550130179   202550130186   6 OMED

       202550130193   202550130206   6 OMED

       202620130117   202620130124   6 OMED

       202650190124   202650190131   6 OMED

       202650190148   202650190155   6 OMED

       202650560163   202650560170   6 OMED

                 Sample SAS Job for Example D
         sample print of work.omedrxlk - sorted by evntidx
      Rx+event link file records (HC-67IF2) where eventype=6 (omed)

          EVNTIDX   LINKIDX   EVENTYPE

      202650560187   202650560194   6 OMED

      202750160122   202750160139   6 OMED

      202750160146   202750160153   6 OMED

      202750160595   202750160608   6 OMED

      202750160615   202750160622   6 OMED

      202940160115   202940160122   6 OMED

      202940160139   202940160146   6 OMED

      202940160259   202940160266   6 OMED

      202940160273   202940160280   6 OMED

      203300140219   203300140226   6 OMED

      203300140339   203300140346   6 OMED

      203310310256   203310310263   6 OMED

      203310310458   203310310465   6 OMED

      203310310472   203310310489   6 OMED

      203410210144   203410210151   6 OMED

      203410210168   203410210175   6 OMED

      203450100024   203450100031   6 OMED

      203450100106   203450100113   6 OMED

      203520150091   203520150104   6 OMED

      203960100053   203960100060   6 OMED

      203960100231   203960100248   6 OMED

      204460190262   204460190279   6 OMED

      204490250015   204490250022   6 OMED

      204580280030   204580280047   6 OMED

      204580280112   204580280129   6 OMED

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by evntidx
Rx+event link file records (HC-67IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
204580280136	204580280143	6 OMED
204580280181	204580280198	6 OMED
204580280201	204580280218	6 OMED
204680150064	204680150071	6 OMED
204680150139	204680150146	6 OMED
204910230033	204910230040	6 OMED
204910230057	204910230064	6 OMED
204910230204	204910230211	6 OMED
204910230228	204910230235	6 OMED
205070150146	205070150153	6 OMED
205070150280	205070150297	6 OMED
205150110154	205150110161	6 OMED
205150110178	205150110185	6 OMED
205560200153	205560200160	6 OMED
205690140421	205690140438	6 OMED
205690140445	205690140452	6 OMED
205780100292	205780100305	6 OMED
205780100312	205780100329	6 OMED
205860130063	205860130070	6 OMED
205890360099	205890360102	6 OMED
206150150052	206150150069	6 OMED
206150150292	206150150305	6 OMED
206400270092	206400270105	6 OMED
206440150071	206440150088	6 OMED
206440150204	206440150211	6 OMED

Sample SAS Job for Example D
sample print of work.omedrxlk - sorted by evntidx
Rx+event link file records (HC-67IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
206440150317	206440150324	6 OMED
206490100637	206490100644	6 OMED
206630270237	206630270244	6 OMED
206680190030	206680190047	6 OMED
206680190441	206680190458	6 OMED
206840120088	206840120095	6 OMED
206840120108	206840120115	6 OMED
206840120177	206840120184	6 OMED
206840120191	206840120204	6 OMED
206840120259	206840120266	6 OMED
206840120273	206840120280	6 OMED
206860190055	206860190062	6 OMED
206860190079	206860190086	6 OMED
207140160197	207140160200	6 OMED
207220190207	207220190214	6 OMED
207220190334	207220190341	6 OMED
207240280092	207240280105	6 OMED
207630150039	207630150046	6 OMED
207630150053	207630150060	6 OMED
207630150111	207630150128	6 OMED
207630150135	207630150142	6 OMED
207630150200	207630150217	6 OMED
207630150224	207630150231	6 OMED
207930280056	207930280063	6 OMED
207930280176	207930280183	6 OMED

```
            HC-067I                           11:18 Thursday, October 28, 2004  12
        Sample SAS Job for Example D
  sample print of work.omedrxlk - sorted by evntidx
Rx+event link file records (HC-67IF2) where eventype=6 (omed)
```

EVNTIDX	LINKIDX	EVENTYPE
207930280190	207930280203	6 OMED
207930280570	207930280587	6 OMED
207930280594	207930280607	6 OMED
208110150181	208110150198	6 OMED
208110150201	208110150218	6 OMED
208390130032	208390130049	6 OMED
208390130056	208390130063	6 OMED
208890670089	208890670096	6 OMED
208890670109	208890670116	6 OMED
208960230254	208960230261	6 OMED
209120290036	209120290043	6 OMED
209860130065	209860130072	6 OMED
209860130089	209860130096	6 OMED
209860130154	209860130161	6 OMED
209860130178	209860130185	6 OMED
209960290073	209960290080	6 OMED
210130260187	210130260194	6 OMED
210130260207	210130260214	6 OMED
210130260365	210130260372	6 OMED
210130260389	210130260396	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

      200720190121   200720190138   6 OMED

      201070130115   201070130122   6 OMED

      201070130266   201070130273   6 OMED

      201150170165   201150170172   6 OMED

      201150170189   201150170196   6 OMED

      201290110034   201290110041   6 OMED

      201510150047   201510150054   6 OMED

      201510150338   201510150345   6 OMED

      202550130179   202550130186   6 OMED

      202650190124   202650190131   6 OMED

      202650560163   202650560170   6 OMED

      202750160146   202750160153   6 OMED

      202750160595   202750160608   6 OMED

      202940160115   202940160122   6 OMED

      202940160259   202940160266   6 OMED

      203410210144   203410210151   6 OMED

      204580280136   204580280143   6 OMED

      204580280181   204580280198   6 OMED

      204680150064   204680150071   6 OMED

      204910230033   204910230040   6 OMED

      204910230228   204910230235   6 OMED

      205150110154   205150110161   6 OMED

      205690140421   205690140438   6 OMED

      205780100312   205780100329   6 OMED

      206840120088   206840120095   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

       206840120177   206840120184   6 OMED

       206840120259   206840120266   6 OMED

       206860190055   206860190062   6 OMED

       207220190207   207220190214   6 OMED

       207630150039   207630150046   6 OMED

       207630150111   207630150128   6 OMED

       207630150200   207630150217   6 OMED

       207930280056   207930280063   6 OMED

       207930280176   207930280183   6 OMED

       207930280570   207930280587   6 OMED

       208110150181   208110150198   6 OMED

       208390130032   208390130049   6 OMED

       208890670089   208890670096   6 OMED

       209860130065   209860130072   6 OMED

       209860130154   209860130161   6 OMED

       210130260187   210130260194   6 OMED

       210130260365   210130260372   6 OMED

       210690140199   210690140202   6 OMED

       210710260072   210710260089   6 OMED

       211140160036   211140160043   6 OMED

       211240120061   211240120078   6 OMED

       211240120256   211240120263   6 OMED

       211240120390   211240120403   6 OMED

       211550110332   211550110349   6 OMED

       211810130654   211810130661   6 OMED

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   Obs     EVNTIDX         LINKIDX        EVENTYPE

    1    200720190121    200720190138     6 OMED
    2    201070130115    201070130122     6 OMED
    3    201070130266    201070130273     6 OMED
    4    201150170165    201150170172     6 OMED
    5    201150170189    201150170196     6 OMED
    6    201290110034    201290110041     6 OMED
    7    201510150047    201510150054     6 OMED
    8    201510150338    201510150345     6 OMED
    9    202550130179    202550130186     6 OMED
   10    202650190124    202650190131     6 OMED
   11    202650560163    202650560170     6 OMED
   12    202750160146    202750160153     6 OMED
   13    202750160595    202750160608     6 OMED
   14    202940160115    202940160122     6 OMED
   15    202940160259    202940160266     6 OMED
   16    203410210144    203410210151     6 OMED
   17    204580280136    204580280143     6 OMED
   18    204580280181    204580280198     6 OMED
   19    204680150064    204680150071     6 OMED
   20    204910230033    204910230040     6 OMED
   21    204910230228    204910230235     6 OMED
   22    205150110154    205150110161     6 OMED
   23    205690140421    205690140438     6 OMED
   24    205780100312    205780100329     6 OMED
   25    206840120088    206840120095     6 OMED
   26    206840120177    206840120184     6 OMED
   27    206840120259    206840120266     6 OMED
   28    206860190055    206860190062     6 OMED
   29    207220190207    207220190214     6 OMED
   30    207630150039    207630150046     6 OMED
   31    207630150111    207630150128     6 OMED
   32    207630150200    207630150217     6 OMED
   33    207930280056    207930280063     6 OMED
   34    207930280176    207930280183     6 OMED
   35    207930280570    207930280587     6 OMED
   36    208110150181    208110150198     6 OMED
   37    208390130032    208390130049     6 OMED
   38    208890670089    208890670096     6 OMED
   39    209860130065    209860130072     6 OMED
   40    209860130154    209860130161     6 OMED
   41    210130260187    210130260194     6 OMED
   42    210130260365    210130260372     6 OMED
   43    210690140199    210690140202     6 OMED
   44    210710260072    210710260089     6 OMED
   45    211140160036    211140160043     6 OMED
   46    211240120061    211240120078     6 OMED
   47    211240120256    211240120263     6 OMED
   48    211240120390    211240120403     6 OMED
   49    211550110332    211550110349     6 OMED
   50    211810130654    211810130661     6 OMED
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            Obs      LINKIDX

              1      200720190138
              2      201070130122
              3      201070130273
              4      201150170172
              5      201150170196
              6      201290110041
              7      201510150054
              8      201510150345
              9      202550130186
             10      202650190131
             11      202650560170
             12      202750160153
             13      202750160608
             14      202940160122
             15      202940160266
             16      203410210151
             17      204580280143
             18      204580280198
             19      204680150071
             20      204910230040
             21      204910230235
             22      205150110161
             23      205690140438
             24      205780100329
             25      206840120095
             26      206840120184
             27      206840120266
             28      206860190062
             29      207220190214
             30      207630150046
             31      207630150128
             32      207630150217
             33      207930280063
             34      207930280183
             35      207930280587
             36      208110150198
             37      208390130049
             38      208890670096
             39      209860130072
             40      209860130161
             41      210130260194
             42      210130260372
             43      210690140202
             44      210710260089
             45      211140160043
             46      211240120078
             47      211240120263
             48      211240120403
             49      211550110349
             50      211810130661
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                              HC-067I                          11:18 Thursday, October 28, 2004  17
                       Sample SAS Job for Example D
                        sample print of work.pmeds
                 PMED (HC-067A) records for unique linkidxs in work.pmedids
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   LINKIDX          RXRECIDX         RXNAME                                   RXXP02X        PERWT02F

200720190138    200720190138001    NOVOLIN INSULIN                             85.44       2612.831833
                200720190138002    NOVOLIN INSULIN                             85.44       2612.831833

201070130122    201070130122001    INSULIN REG HUMAN                           24.54      21620.734548

201070130273    201070130273001    HUMULIN R (VIAL)                           106.24      21620.734548

201150170172    201150170172001    INSULIN REG HUMAN                           28.25       7331.777668

201150170196    201150170196001    INSULIN                                     56.50       7331.777668
                201150170196002    INSULIN                                     56.50       7331.777668
                201150170196003    INSULIN                                     56.50       7331.777668
                201150170196004    INSULIN                                     56.50       7331.777668
                201150170196005    INSULIN                                     56.50       7331.777668
                201150170196006    INSULIN                                     56.50       7331.777668
                201150170196007    INSULIN                                     56.50       7331.777668
                201150170196008    INSULIN                                     56.50       7331.777668

201290110041    201290110041001    INSULIN                                     56.50       9167.694953
                201290110041002    INSULIN                                     56.50       9167.694953

201510150054    201510150054001    HUMULIN 70/30 (VIAL)                        47.39       3187.584836

201510150345    201510150345001    HUMULIN 70/30 (VIAL)                        49.63       3187.584836
                201510150345002    HUMULIN 70/30 (VIAL)                        47.39       3187.584836
                201510150345003    HUMULIN 70/30 (VIAL)                        49.63       3187.584836

202550130186    202550130186001    HUMULIN 70/30 (VIAL)                        69.23       9537.044568
                202550130186002    HUMULIN 70/30 (VIAL)                        69.23       9537.044568
                202550130186003    HUMULIN 70/30 (VIAL)                        69.23       9537.044568
                202550130186004    HUMULIN 70/30 (VIAL)                        69.23       9537.044568

202650190131    202650190131001    INSULIN                                     56.50       2202.301704
                202650190131002    INSULIN                                     56.50       2202.301704
                202650190131003    INSULIN                                     56.50       2202.301704
                202650190131004    INSULIN                                     56.50       2202.301704

202650560170    202650560170001    INSULIN                                     56.50       3595.909035
                202650560170002    INSULIN                                     56.50       3595.909035
                202650560170003    INSULIN                                     56.50       3595.909035
                202650560170004    INSULIN                                     56.50       3595.909035

202750160153    202750160153001    NOVOLIN INSULIN                             33.50      11669.454487
                202750160153002    NOVOLIN INSULIN                             33.50      11669.454487

202750160608    202750160608001    INSULIN REG HUMAN                          113.00      11669.454487
                202750160608002    INSULIN REG HUMAN                          113.00      11669.454487
                202750160608003    INSULIN REG HUMAN                          113.00      11669.454487
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                              HC-067I                          11:18 Thursday, October 28, 2004  18
                       Sample SAS Job for Example D
                        sample print of work.pmeds
                PMED (HC-067A) records for unique linkidxs in work.pmedids
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  LINKIDX           RXRECIDX         RXNAME                                RXXP02X         PERWT02F


202940160122     202940160122001    HUMULIN N (VIAL)                        26.59        2830.742845
                 202940160122002    HUMULIN N (VIAL)                        26.59        2830.742845


202940160266     202940160266001    HUMULIN N (VIAL)                        26.59        2830.742845


203410210151     203410210151001    INSULIN                                 56.50        4319.020693
                 203410210151002    INSULIN                                 56.50        4319.020693
                 203410210151003    INSULIN                                 56.50        4319.020693
                 203410210151004    INSULIN                                 56.50        4319.020693


204580280143     204580280143001    HUMALOG (VIAL)                         114.21       10839.142625
                 204580280143002    HUMALOG (VIAL)                         114.31       10839.142625


204580280198     204580280198001    HUMALOG (VIAL)                         123.45       10839.142625


204680150071     204680150071001    HUMULIN N (VIAL)                        25.01        3236.752656
                 204680150071002    HUMULIN N (VIAL)                        25.01        3236.752656
                 204680150071003    HUMULIN N (VIAL)                        25.01        3236.752656
                 204680150071004    HUMULIN N (VIAL)                        25.01        3236.752656
                 204680150071005    HUMULIN N (VIAL)                        25.01        3236.752656
                 204680150071006    HUMULIN N (VIAL)                        25.01        3236.752656


204910230040     204910230040001    HUMALOG (VIAL)                          50.09       15303.398114
                 204910230040002    HUMALOG (VIAL)                          50.09       15303.398114
                 204910230040003    HUMALOG (VIAL)                          50.09       15303.398114
                 204910230040004    HUMALOG (VIAL)                          50.09       15303.398114


204910230235     204910230235001    HUMULIN R (VIAL)                        26.56       15303.398114
                 204910230235002    HUMULIN R (VIAL)                        26.56       15303.398114
                 204910230235003    HUMULIN R (VIAL)                        26.56       15303.398114
                 204910230235004    HUMULIN R (VIAL)                        26.56       15303.398114
                 204910230235005    HUMULIN R (VIAL)                        26.56       15303.398114
                 204910230235006    HUMULIN R (VIAL)                        26.56       15303.398114
                 204910230235007    HUMULIN R (VIAL)                        26.56       15303.398114
                 204910230235008    HUMULIN R (VIAL)                        26.56       15303.398114


205150110161     205150110161001    HUMULIN N (VIAL)                        53.12        3149.284850
                 205150110161002    HUMULIN N (VIAL)                        53.12        3149.284850
                 205150110161003    HUMULIN N (VIAL)                        53.12        3149.284850
                 205150110161004    HUMULIN N (VIAL)                        53.12        3149.284850


205690140438     205690140438001    INSULIN                                 56.50        2534.065709
                 205690140438002    INSULIN                                 56.50        2534.065709
                 205690140438003    INSULIN                                 56.50        2534.065709
                 205690140438004    INSULIN                                 56.50        2534.065709
                 205690140438005    INSULIN                                 56.50        2534.065709
                 205690140438006    INSULIN                                 56.50        2534.065709


205780100329     205780100329001    INSULIN                                 56.50        2013.993709
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                              HC-067I                          11:18 Thursday, October 28, 2004  19
                    Sample SAS Job for Example D
                     sample print of work.pmeds
              PMED (HC-067A) records for unique linkidxs in work.pmedids
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    LINKIDX          RXRECIDX          RXNAME                                          RXXP02X        PERWT02F


205780100329      205780100329002    INSULIN                                           56.50        2013.993709


206840120095      206840120095001    HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE)      28.59        6979.341326
                  206840120095002    HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE)      28.59        6979.341326


206840120184      206840120184001    INSULIN                                           56.50        6979.341326
                  206840120184002    INSULIN                                           56.50        6979.341326


206840120266      206840120266001    HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE)     100.80        6979.341326
                  206840120266002    HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE)     100.80        6979.341326
                  206840120266003    HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE)     100.80        6979.341326


206860190062      206860190062001    INSULIN                                           56.50         676.014985
                  206860190062002    INSULIN                                           56.50         676.014985


207220190214      207220190214001    HUMULIN 50/50 (VIAL)                             159.36        4774.778386


207630150046      207630150046001    INSULIN                                           56.50       27483.314168
                  207630150046002    INSULIN                                           56.50       27483.314168


207630150128      207630150128001    INSULIN                                           56.50       27483.314168
                  207630150128002    INSULIN                                           56.50       27483.314168
                  207630150128003    INSULIN                                           56.50       27483.314168
                  207630150128004    INSULIN                                           56.50       27483.314168
                  207630150128005    INSULIN                                           56.50       27483.314168


207630150217      207630150217001    INSULIN                                           56.50       27483.314168
                  207630150217002    INSULIN                                           56.50       27483.314168


207930280063      207930280063001    LANTUS                                            41.96       12195.822895


207930280183      207930280183001    HUMULIN R                                         25.99       12195.822895
                  207930280183002    HUMULIN R                                         25.99       12195.822895
                  207930280183003    HUMULIN R                                         25.99       12195.822895
                  207930280183004    HUMULIN R                                         25.99       12195.822895
                  207930280183005    HUMULIN R                                         25.99       12195.822895


207930280587      207930280587001    NOVOLIN N                                        126.03       12195.822895
                  207930280587002    NOVOLIN N                                        126.03       12195.822895
                  207930280587003    NOVOLIN N                                        126.03       12195.822895
                  207930280587004    NOVOLIN N                                        126.03       12195.822895
                  207930280587005    NOVOLIN N                                        126.03       12195.822895
                  207930280587006    NOVOLIN N                                        126.03       12195.822895
                  207930280587007    NOVOLIN N                                        126.03       12195.822895


208110150198      208110150198001    INSULIN                                           56.50        6376.102194
                  208110150198002    INSULIN                                           56.50        6376.102194


208390130049      208390130049001    HUMULIN N (VIAL)                                  79.68        4133.854314
```

                      Sample SAS Job for Example D
                       sample print of work.pmeds
                PMED (HC-067A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
208890670096	208890670096001	INSULIN	56.50	1064.591057
	208890670096002	INSULIN	56.50	1064.591057
	208890670096003	INSULIN	56.50	1064.591057
	208890670096004	INSULIN	56.50	1064.591057
209860130072	209860130072001	HUMALOG (VIAL)	100.18	8962.990676
	209860130072002	HUMALOG (VIAL)	100.18	8962.990676
	209860130072003	HUMALOG (VIAL)	100.18	8962.990676
209860130161	209860130161001	HUMALOG (VIAL)	100.18	8962.990676
	209860130161002	HUMALOG (VIAL)	100.18	8962.990676
	209860130161003	HUMALOG (VIAL)	100.18	8962.990676
	209860130161004	HUMALOG (VIAL)	100.18	8962.990676
	209860130161005	HUMALOG (VIAL)	100.18	8962.990676
210130260194	210130260194001	INSULIN REG	49.99	5735.151824
	210130260194002	INSULIN REG	49.99	5735.151824
	210130260194003	INSULIN REG	49.99	5735.151824
	210130260194004	INSULIN REG	49.99	5735.151824
210130260372	210130260372001	HUMULIN 70/30 (VIAL)	53.12	5735.151824
	210130260372002	HUMULIN 70/30 (VIAL)	26.56	5735.151824
	210130260372003	HUMULIN 70/30 (VIAL)	53.12	5735.151824
	210130260372004	HUMULIN 70/30 (VIAL)	26.56	5735.151824
	210130260372005	HUMULIN 70/30 (VIAL)	53.12	5735.151824
	210130260372006	HUMULIN 70/30 (VIAL)	53.12	5735.151824
	210130260372007	HUMULIN 70/30 (VIAL)	26.56	5735.151824
	210130260372008	HUMULIN 70/30 (VIAL)	53.12	5735.151824
210690140202	210690140202001	INSULIN	56.50	7498.987726
	210690140202002	INSULIN	56.50	7498.987726
210710260089	210710260089001	INSULIN NPH-REGULAR	54.59	1390.333896
	210710260089002	INSULIN NPH-REGULAR	106.20	1390.333896
211140160043	211140160043001	LANTUS	42.88	20702.535217
211240120078	211240120078001	INSULIN	56.50	7121.783346
	211240120078002	INSULIN	56.50	7121.783346
211240120263	211240120263001	INSULIN	26.56	7121.783346
	211240120263002	INSULIN	26.56	7121.783346
	211240120263003	INSULIN	26.56	7121.783346
	211240120263004	INSULIN	26.56	7121.783346
	211240120263005	INSULIN	26.56	7121.783346
	211240120263006	INSULIN	26.56	7121.783346
211240120403	211240120403001	INSULIN	75.21	7121.783346
	211240120403002	INSULIN	75.21	7121.783346

                       Sample SAS Job for Example D
                        sample print of work.pmeds
                PMED (HC-067A) records for unique linkidxs in work.pmedids

   LINKIDX   RXRECIDX   RXNAME   RXXP02X   PERWT02F

 211240120403   211240120403003   INSULIN   75.21   7121.783346
                 211240120403004   INSULIN   75.21   7121.783346
                 211240120403005   INSULIN   75.21   7121.783346
                 211240120403006   INSULIN   75.21   7121.783346
                 211240120403007   INSULIN   75.21   7121.783346

 211550110349   211550110349001   INSULIN REG HUMAN   113.00   1298.502799
                 211550110349002   INSULIN REG HUMAN   113.00   1298.502799
                 211550110349003   INSULIN REG HUMAN   113.00   1298.502799

 211810130661   211810130661001   INSULIN   56.50   10782.451426

 212870140679   212870140679001   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679002   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679003   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679004   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679005   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679006   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679007   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679008   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679009   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679010   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679011   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679012   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679013   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679014   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679015   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679016   HUMULIN R (VIAL)   27.24   3025.084636
                 212870140679017   HUMULIN R (VIAL)   27.24   3025.084636

 213150200228   213150200228001   HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE) 94.72   4322.255432
                 213150200228002   HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE) 94.72   4322.255432
                 213150200228003   HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE) 94.72   4322.255432

 213150200393   213150200393001   HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE) 101.96   4322.255432
                 213150200393002   HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE) 101.96   4322.255432
                 213150200393003   HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE) 101.96   4322.255432
                 213150200393004   HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE) 101.96   4322.255432
                 213150200393005   HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE) 101.96   4322.255432
                 213150200393006   HUMALOG MIX 75/25 PEN (PREFILLED DISPOSABLE) 101.96   4322.255432

 213370190059   213370190059001   INSULIN REG HUMAN   113.00   10594.159083

 213370190206   213370190206001   INSULIN REG HUMAN   28.25   10594.159083

 213700330037   213700330037001   INSULIN   56.50   6435.851684

 213700330140   213700330140001   HUMULIN R (VIAL)   24.00   6435.851684
                 213700330140002   HUMULIN R (VIAL)   24.00   6435.851684

Sample SAS Job for Example D
sample print of work.pmeds
PMED (HC-067A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP02X	PERWT02F
213700330140	213700330140003	HUMULIN R (VIAL)	24.00	6435.851684
	213700330140004	HUMULIN R (VIAL)	24.00	6435.851684
	213700330140005	HUMULIN R (VIAL)	24.00	6435.851684
	213700330140006	HUMULIN R (VIAL)	24.00	6435.851684
	213700330140007	HUMULIN R (VIAL)	24.00	6435.851684
214240110435	214240110435001	INSULIN	56.50	9696.980668
214400140066	214400140066001	HUMULIN N (VIAL)	53.50	4256.634182
	214400140066002	HUMULIN N (VIAL)	53.50	4256.634182
	214400140066003	HUMULIN N (VIAL)	53.50	4256.634182
	214400140066004	HUMULIN N (VIAL)	53.50	4256.634182

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

                             The MEANS Procedure

     Analysis Variable : RXXP02X SUM OF PAYMENTS RXSF02X-RXOU02X(IMPUTED)

                          N   Sum

                       2372   141423.50

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

                                    Weighted

                              The MEANS Procedure

         Analysis Variable : RXXP02X SUM OF PAYMENTS RXSF02X-RXOU02X(IMPUTED)

                             N   Sum

                       2372   1006392685