

**MEPS HC-059I:
Appendix to MEPS 2001 Event Files
HC-059A - HC-059H**

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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-059I, which is the Appendix to MEPS releases HC-059A through HC-059H. 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 H59IF1CB.PDF and H59IF2CB.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 2001 event-level data files. File 1, the H59IF1 or CLNK file, is used for linking the MEPS condition file with the MEPS event files; File 2, the H59IF2 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 expenditures 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 trends 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 trends increases the likelihood of inappropriately concluding a change is statistically significant.

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, (H59IF1) or the CLNK file, contains the variables needed to link each record on the MEPS 2001 condition file, HC-061, with one or more records on the MEPS 2001 event files, HC-059A through HC-059H. 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 2001 Condition file, HC-061. 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 2001 event files, HC-059B through HC-059H. (EVNTIDX is not included on the 2001 Prescription Medicines event file, HC-059A; 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 EVENTTYPE 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-059G
- 2 = OPAT - outpatient department visit event contained on MEPS release HC-059F
- 3 = EROM - emergency room visit event contained on MEPS release HC-059E
- 4 = STAZ - hospital inpatient stay event contained on MEPS release HC-059D
- 7 = HVIS - home health visit event contained on MEPS release HC-059H
- 8 = PMED - prescribed medicines event contained on MEPS release HC-059A

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

File 2, (H59IF2) or the RXLK file, contains the variables needed to link each record on the MEPS 2001 prescribed medicines file, HC-059A, with one or more records on the MEPS 2001 event files, HC-059B through HC-059H. 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 2001 event files, HC-059B through HC-059H. 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-059A 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-059A 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-059G
- 2 = OPAT - outpatient department visit event contained on MEPS release HC-059F
- 3 = EROM - emergency room visit event contained on MEPS release HC-059E
- 4 = STAZ - hospital inpatient stay event contained on MEPS release HC-059D
- 5 = DVIS - dental visit event contained on MEPS release HC-059B
- 6 = OMED - other medical expense event contained on MEPS release HC-059C

2.6 2001 Condition-Event Frequency Table

The files H59IT1.HTM and H59IT1.PDF contain the MEPS 2001 Condition-Event Frequency table. This table contains unweighted and weighted counts of records on the MEPS 2001 event files, HC-059A through HC-059H, for each of the condition, procedure and clinical classification codes contained on the MEPS 2001 condition file, HC-061. Attachment 1 contains a crosswalk of the clinical classification codes to ICD-9-CM codes. See the HC-061 document for additional information on these codes.

2.7 2001 Utilization and Expenditures Summary Table

The files H59IT2.HTM and H59IT2.PDF contain the MEPS 2001 Utilization and Expenditures Summary table. This table contains statistics for all of the utilization and expenditure variables contained on the MEPS 2001 Full Year Use and Expenditure Data file, HC-060. For each of these variables, the following statistics are provided from the HC-060 file, and from the corresponding event-level file(s) HC-059A through HC-059H:

Number of persons with positive person-level weight (PERWT01F) 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-060 variables from the event-level files.

3.0 Merging/Linking MEPS Data Files

This section provides information on using each of the two HC-059I files, RXLK and CLNK, to link with the files contained in MEPS releases HC-061 and HC-059A through HC-059H. 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-061), the Prescribed Medicines and Office-Based Medical Provider Visits Event Files (HC-059A and HC-059G)

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-061), the CLNK file, the office-based medical provider visit event file (HC-059G), the RXLK file, and the prescribed medicines event file (HC-059A). It includes the following major steps:

1. From HC-061 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-059G 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-059G 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-059A linked to those visits.
6. Using these record IDs obtain the linked records from the HC-059A 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-059) and the Prescribed Medicines Event File (HC-059A)

This example calculates the total expenditure for prescribed medicines associated with asthma, using the condition file (HC-061), the CLNK file and the prescribed medicines event file (HC-059A). It includes the following major steps:

1. From HC-061 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-059A 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-059) and Office-Based Medical Provider Visits Event File (HC-059G)

This example calculates the total expenditures for office-based medical provider visits associated with asthma, using the condition file (HC-061), the CLNK file and the office-based medical provider visits event file (HC-059G). It includes the following major steps:

1. From HC-061 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-059G 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-059G 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-059C)

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-059C). It includes the following major steps:

1. From HC-059C 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-059A 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

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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			

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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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

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

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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

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							

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

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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				
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		

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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								
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									

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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								
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			

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(with all coding changes valid from January 1980 through September 2003¹)

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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
	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							

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Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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			

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47 Other and unspecified benign neoplasm

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

48 Thyroid disorders

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

49 Diabetes mellitus without complication

25000	25001	7902	7915	7916						
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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								

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

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

52	Nutritional deficiencies										
	V121	260	261	262	2630	2631	2632	2638	2639	2640	2641
	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652
	2660	2661	2662	2669	267	2680	2681	2682	2689	2690	2691
	2692	2693	2698	2699	7994						
53	Disorders of lipid metabolism										
	2720	2721	2722	2723	2724						
54	Gout and other crystal arthropathies										
	2740	27410	27411	27419	27481	27482	27489	2749	71210	71211	71212
	71213	71214	71215	71216	71217	71218	71219	71220	71221	71222	71223
	71224	71225	71226	71227	71228	71229	71230	71231	71232	71233	71234
	71235	71236	71237	71238	71239	71280	71281	71282	71283	71284	71285
	71286	71287	71288	71289	71290	71291	71292	71293	71294	71295	71296
	71297	71298	71299								
55	Fluid and electrolyte disorders										
	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	
56	Cystic fibrosis										
	27700	27701	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				

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Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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					
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

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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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
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										

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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).

Attachment 1
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(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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					

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							

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

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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
	34431	34432	3444	34440	34441	34442	3445	34460	3448	34481	34489
	3449	7814									

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

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(with all coding changes valid from January 1980 through September 2003¹)

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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								

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

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

89 Blindness and vision defects

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

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

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

91 Other eye disorders

V411	V425	V430	V456	V4561	V4569	V522	V531	V720	36020	36021
36023	36024	36029	36030	36031	36032	36033	36034	36040	36041	36042
36043	36044	36050	36051	36052	36053	36054	36055	36059	36060	36061
36062	36063	36064	36065	36069	36081	36089	3609	36330	36331	36332
36333	36334	36335	36340	36341	36342	36343	36350	36351	36352	36353
36354	36355	36356	36357	36361	36362	36363	36370	36371	36372	3638
3639	36441	36442	36451	36452	36453	36454	36455	36456	36457	36459
36460	36461	36462	36463	36464	36470	36471	36472	36473	36474	36475
36476	36477	3648	3649	37000	37001	37002	37003	37004	37005	37006
37007	37060	37061	37062	37063	37064	37100	37101	37102	37103	37104

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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
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		

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Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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
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					

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

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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						
102	Nonspecific chest pain										
	78650	78651	78659								
103	Pulmonary heart disease										
	4150	4151	41519	4160	4161	4168	4169	4170	4171	4178	4179

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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		
112	Transient cerebral ischemia										
	4350	4351	4352	4353	4358	4359					

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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	

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121	Other diseases of veins and lymphatics											
	4563	4564	4565	4566	4568	4570	4571	4572	4578	4579	4591	
	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									

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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
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				

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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			

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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								
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				

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149	Biliary tract disease										
	57400	57401	57410	57411	57420	57421	57430	57431	57440	57441	57450
	57451	57460	57461	57470	57471	57480	57481	57490	57491	5750	5751
	57510	57511	57512	5752	5753	5754	5755	5756	5758	5759	5760
	5761	5762	5763	5764	5765	5768	5769	7933			
150	Liver disease, alcohol-related										
	5710	5711	5712	5713							
151	Other liver diseases										
	V427	570	5715	5716	5718	5719	5720	5721	5722	5723	5724
	5728	5730	5734	5738	5739	7824	7891	7895	7904	7905	7948
152	Pancreatic disorders (not diabetes)										
	5770	5771	5772	5778	5779	5794					
153	Gastrointestinal hemorrhage										
	4560	45620	5307	53082	53100	53101	53120	53121	53140	53141	53160
	53161	53200	53201	53220	53221	53240	53241	53260	53261	53300	53301
	53320	53321	53340	53341	53360	53361	53400	53401	53420	53421	53440
	53441	53460	53461	5693	5780	5781	5789				
154	Noninfectious gastroenteritis										
	5589										
155	Other gastrointestinal disorders										
	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						

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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				
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

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	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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Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

	63681	63682	63690	63691	63692	63700	63701	63702	63710	63711	63712
	63720	63721	63722	63730	63731	63732	63740	63741	63742	63750	63751
	63752	63760	63761	63762	63770	63771	63772	63780	63781	63782	63790
	63791	63792	6380	6381	6382	6383	6384	6385	6386	6387	6388
	6389										
179	Postabortion complications										
	6390	6391	6392	6393	6394	6395	6396	6398	6399		
180	Ectopic pregnancy										
	6330	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, abruption 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						

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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	
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								

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

190	Fetal distress and abnormal forces of labor											
	65630	65631	65633	66100	66101	66103	66110	66111	66113	66120	66121	
	66123	66130	66131	66133	66140	66141	66143	66190	66191	66193	66200	
	66201	66203	66210	66211	66213	66220	66221	66223	66230	66231	66233	
191	Polyhydramnios and other problems of amniotic cavity											
	65700	65701	65703	65800	65801	65803	65810	65811	65813	65820	65821	
	65823	65830	65831	65833	65840	65841	65843	65880	65881	65883	65890	
	65891	65893	7923									
192	Umbilical cord complication											
	66300	66301	66303	66310	66311	66313	66320	66321	66323	66330	66331	
	66333	66340	66341	66343	66350	66351	66353	66360	66361	66363	66380	
	66381	66383	66390	66391	66393							
193	Trauma to perineum and vulva											
	66400	66401	66404	66410	66411	66414	66420	66421	66424	66430	66431	
	66434	66440	66441	66444	66450	66451	66454	66480	66481	66484	66490	
	66491	66494										
194	Forceps delivery											
	66950	66951										
195	Other complications of birth, puerperium affecting management of mother											
	V230	V231	V232	V233	V234	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	

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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									

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	

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

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

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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
	73079	73080	73081	73082	73083	73084	73085	73086	73087	73088	73089
	73090	73091	73092	73093	73094	73095	73096	73097	73098	73099	

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Attachment 1
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(with all coding changes valid from January 1980 through September 2003¹)

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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

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

	72231	72232	72239	7224	72251	72252	7226	72270	72271	72272	72273
	72280	72281	72282	72283	72290	72291	72292	72293	7230	7231	7232
	7233	7234	7235	7236	7237	7238	7239	72400	72401	72402	72409
	7241	7242	7243	7244	7245	7246	72470	72471	72479	7248	7249
206	Osteoporosis										
	73300	73301	73302	73303	73309						
207	Pathological fracture										
	7331	73310	73311	73312	73313	73314	73315	73316	73319	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

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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
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							

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

216	Nervous system congenital anomalies										
	7400	7401	7402	74100	74101	74102	74103	74190	74191	74192	74193
	7420	7421	7422	7423	7424	74251	74253	74259	7428	7429	
217	Other congenital anomalies										
	V136	V1369	74300	74303	74306	74310	74311	74312	74320	74321	74322
	74330	74331	74332	74333	74334	74335	74336	74337	74339	74341	74342
	74343	74344	74345	74346	74347	74348	74349	74351	74352	74353	74354
	74355	74356	74357	74358	74359	74361	74362	74363	74364	74365	74366
	74369	7438	7439	74400	74401	74402	74403	74404	74405	74409	7441
	74421	74422	74423	74424	74429	7443	74441	74442	74443	74446	74447
	74449	7445	74481	74482	74483	74484	74489	7449	7480	7481	7482
	7483	7484	7485	74860	74861	74869	7488	7489	74900	74901	74902
	74903	74904	74910	74911	74912	74913	74914	74920	74921	74922	74923
	74924	74925	7540	7541	7542	75430	75431	75432	75433	75435	75440
	75441	75442	75443	75444	75450	75451	75452	75453	75459	75460	75461
	75462	75469	75470	75471	75479	75481	75482	75489	75500	75501	75502
	75510	75511	75512	75513	75514	75520	75521	75522	75523	75524	75525
	75526	75527	75528	75529	75530	75531	75532	75533	75534	75535	75536
	75537	75538	75539	7554	75550	75551	75552	75553	75554	75555	75556
	75557	75558	75559	75560	75561	75562	75563	75564	75565	75566	75567
	75569	7558	7559	7560	75610	75611	75612	75613	75614	75615	75616
	75617	75619	7562	7563	7564	75650	75651	75652	75653	75654	75655
	75656	75659	7566	7567	75670	75671	75679	75681	75682	75683	75689
	7569	7570	7571	7572	75731	75732	75733	75739	7574	7575	7576
	7578	7579	7580	7581	7582	7583	7584	7585	7586	7587	7588
	75881	75889	7589	7590	7591	7592	7593	7594	7595	7596	7597
	7598	75981	75982	75983	75989	7599	7952				
218	Liveborn										
	V300	V3000	V3001	V301	V302	V310	V3100	V3101	V311	V312	V320
	V3200	V3201	V321	V322	V330	V3300	V3301	V331	V332	V340	V3400
	V3401	V341	V342	V350	V3500	V3501	V351	V352	V360	V3600	V3601
	V361	V362	V370	V3700	V3701	V371	V372	V390	V3900	V3901	V391
	V392										

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

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(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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
	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

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Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

	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							
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

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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

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Attachment 1
Clinical Classification Software—DIAGNOSES
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This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

	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

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Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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

234 Crushing injury or internal injury

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

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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
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

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

	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
	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

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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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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									
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

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

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

	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									

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Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

249	Shock										
	78550	78551	78559								
250	Nausea and vomiting										
	7870	78701	78702	78703							
251	Abdominal pain										
	7890	78900	78901	78902	78903	78904	78905	78906	78907	78909	78960
	78961	78962	78963	78964	78965	78966	78967	78969			
252	Malaise and fatigue										
	7807	78071	78079								
253	Allergic reactions										
	V071	V140	V141	V142	V143	V144	V145	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

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Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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	
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

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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

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 Codes².

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Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

E CODE CLASSIFICATION

E code	Category	ICD-9-CM codes					
2601	Cut/pierce	E9200-E9205	E9208	E9209	E956	E966	E974 E986
2602	Drowning/submersion	E8300-E8306	E8308	E8309	E8320-E8326	E8328	E8329 E9100-E9104 E9108 E9109 E954 E964 E984
2603	Fall	E8800	E8801	E8809-E8811	E882	E8830-E8832	E8839-E8846 E8849 E885 E8850-E8854 E8859- E8860 E8869 E888 E8880 E8881 E8888 E8889 E9570-E9572 E9579 E9681 E9870-E9872 E9879
2604	Fire/burn	E8900-E8903	E8908-E8913	E8918	E8919	E892	E8930-E8932 E8938 E8939 E894 E895 E896 E897 E8981 E899 E9240-E9242 E9248 E9249 E9581 E8582 E9587 E961 E9680 E9683 E9881 E9882 E9887
2605	Firearm	E9220-E9224	E9228	E9229	E9550-E9554	E9650	E9654 E970 E9850-E9854
2606	Machinery	E9190-E9199					
2607	Motor vehicle traffic (MVT)	E8100-E8199	E9585	E9685	E9885		
2608	Pedal cyclist, not MVT	E8003	E8013	E8023	E8033	E8043	E8053 E8063 E8073 E8206 E8216 E8226 E8236 E8246 E8256 E8261 E8269
2609	Pedestrian, not MVT	E8002	E8012	E8022	E8032	E8042	E8052 E8062 E8072 E8207 E8217 E8227 E8237 E8247 E8257 E8260 E8270 E8280 E8290
2610	Transport, not MVT	E8000	E8001	E8008-E8011	E8018-E8021	E8028-	E8031 E8038-E8041 E8048-E8051 E8058-E8061 E8068-E8071 E8078 E8079 E8200-E8205 E8208- E8215 E8218-E8225 E8228-E8235 E8238-E8245 E8248-E8255 E8258 E8259 E8262-E8264 E8268

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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

		E8272-E8274	E8278	E8279	E8282	E8284	E8288
		E8289	E8294	E8298	E8299	E8310-E8316	E8318
		E8319	E8330-E8336	E8338-E8346	E8348-8356		
		E8358-E8366	E8368-E8376	E8378-E8366	E8388		
		E8399	E8400-E819	E8426-E8450	E8458	E8459	
		E9586	E9886				
2611	Natural/environment	E9000	E9001	E9009-E9011	E9018-E9022	E9028	
		E9029	E903	E9040-E9043	E9049-E9065	E9068-E907	
		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, againstE916	E9170-E9179	E9600	E9682	E973	E975	
2615	Suffocation	E911	E912	E9130-E9133	E9138	E9139	E9530
		E9531	E9538	E9539	E963	E9830	E9831
		E9839				E9838	
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

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).

Attachment 1
Clinical Classification Software—DIAGNOSES
(with all coding changes valid from January 1980 through September 2003¹)

This document provides a listing of ICD-9-CM codes included in each CCS diagnosis category.

		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						

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).

Attachment 2: Sample SAS Jobs for Linking Example

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 82BX07.

NOTE: SAS initialization used:
real time 3.64 seconds
cpu time 0.39 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-059I";

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

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";

21

NOTE: Format EVENTYPE has been output.

22

23

RUN;

NOTE: PROCEDURE FORMAT used:

real time 0.14 seconds

cpu time 0.01 seconds

24

```

25      *-----
26      * Get condition records coded as asthma.
27      *-----;
28      DATA ASCONDS;
29          SET IN.H61 (KEEP=CONDIDX CCCODEX);
30          IF CCCODEX="128";
31
32      RUN;

```

NOTE: There were 102489 observations read from the data set IN.H61.
NOTE: The data set WORK.ASCONDS has 1695 observations and 2 variables.
NOTE: DATA statement used:

real time	0.40 seconds
cpu time	0.13 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 1695 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCONDS has 1695 observations and 2 variables.
NOTE: PROCEDURE SORT used:

real time	0.04 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 (H61) 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	0.26 seconds
cpu time	0.01 seconds

```

43
44      PROC SORT DATA=IN.H59IF1 OUT=CLNK; BY CONDIDX; RUN;

```

NOTE: There were 314599 observations read from the data set IN.H59IF1.
NOTE: The data set WORK.CLNK has 314599 observations and 5 variables.
NOTE: PROCEDURE SORT used:

real time	3.45 seconds
cpu time	1.76 seconds

```

45
46      DATA ASCLNKS;
47          MERGE CLNK (IN=INCLNK KEEP=CONDIDX EVNTIDX EVENTTYPE)
48                  ASCONDS(IN=INASCOND KEEP=CONDIDX);
49          BY CONDIDX;

```

```
50     IF INCLNK & INASCOND;
51     RUN;
```

```
NOTE: There were 314599 observations read from the data set WORK.CLNK.
NOTE: There were 1695 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCLNKs has 7046 observations and 3 variables.
NOTE: DATA statement used:
      real time           0.35 seconds
      cpu time            0.31 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           0.07 seconds
      cpu time            0.03 seconds
```

```
60
61     PROC SORT DATA=ASCLNKs; BY EVNTIDx; RUN;
```

```
NOTE: There were 7046 observations read from the data set WORK.ASCLNKs.
NOTE: The data set WORK.ASCLNKs has 7046 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time           0.01 seconds
      cpu time            0.01 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           0.03 seconds
      cpu time            0.03 seconds
```

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

NOTE: There were 7046 observations read from the data set WORK.ASCLNKS.
 NOTE: The data set WORK.ASCLNKS has 7033 observations and 2 variables.
 NOTE: DATA statement used:
 real time 0.01 seconds
 cpu time 0.01 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 0.01 seconds
 cpu time 0.01 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.H59G (KEEP=EVNTIDX PERWT01F SEETLKPV);
84         IF PERWT01F > 0 & SEETLKPV NE 2;
85     RUN;
```

NOTE: There were 147490 observations read from the data set IN.H59G.
 NOTE: The data set WORK.MVIS has 142776 observations and 3 variables.
 NOTE: DATA statement used:
 real time 2.10 seconds
 cpu time 0.42 seconds

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

NOTE: There were 142776 observations read from the data set WORK.MVIS.
 NOTE: The data set WORK.MVIS has 142776 observations and 3 variables.
 NOTE: PROCEDURE SORT used:
 real time 0.40 seconds
 cpu time 0.39 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 7033 observations read from the data set WORK.ASCLNKS.

NOTE: There were 142776 observations read from the data set WORK.MVIS.

NOTE: The data set WORK.ASMVIS has 2238 observations and 2 variables.

NOTE: DATA statement used:

```
real time      0.17 seconds
cpu time       0.15 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-059G) 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      0.01 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.H59IF2 OUT=RXLK; BY EVNTIDX; RUN;
```

NOTE: There were 60519 observations read from the data set IN.H59IF2.

NOTE: The data set WORK.RXLK has 60519 observations and 5 variables.

NOTE: PROCEDURE SORT used:

```
real time      0.48 seconds
cpu time       0.26 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-59IF2)";
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       0.03 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 60519 observations read from the data set WORK.RXLK.
NOTE: There were 2238 observations read from the data set WORK.ASMVIS.
NOTE: The data set WORK.PMEDIDS has 1861 observations and 3 variables.
NOTE: DATA statement used:

```
real time      0.07 seconds
cpu time       0.07 seconds
```

```
125
126     proc print data=pmedids (obs=50);
127         by evtidx;
128         id evtidx;
129         format eventype eventype.;
130         title3 "sample print of work.pmedids - sorted by evtidx";
131         title4 "work.rxlk records for evtidxs 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      0.01 seconds
cpu time       0.00 seconds
```

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

NOTE: There were 1861 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 1861 observations and 3 variables.

NOTE: PROCEDURE SORT used:

```
real time      0.03 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      0.01 seconds
cpu time       0.00 seconds
```

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

NOTE: There were 1861 observations read from the data set WORK.PMEDIDS.
 NOTE: The data set WORK.PMEDIDS has 1780 observations and 1 variables.
 NOTE: DATA statement used:
 real time 0.00 seconds
 cpu time 0.00 seconds

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

NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
 NOTE: The PROCEDURE PRINT printed page 15.
 NOTE: PROCEDURE PRINT used:
 real time 0.01 seconds
 cpu time 0.01 seconds

```
150
151     *-----
152     * Get PMED records linked to MVIS events which were for asthma.
153     *-----;
154     PROC SORT DATA=IN.H59A OUT=PMED; BY LINKIDX; RUN;
```

NOTE: There were 277866 observations read from the data set IN.H59A.
 NOTE: The data set WORK.PMED has 277866 observations and 74 variables.
 NOTE: PROCEDURE SORT used:
 real time 3:06.45
 cpu time 21.10 seconds

```
155
156     DATA MVPMEDS;
157         MERGE PMED (KEEP=LINKIDX RXRECIDX RXXP01X PERWT01F RXNAME)
158             PMEDIDS (IN=A);
159         BY LINKIDX;
160         IF A;
161     RUN;
```

NOTE: There were 277866 observations read from the data set WORK.PMED.
 NOTE: There were 1780 observations read from the data set WORK.PMEDIDS.
 NOTE: The data set WORK.MVPMEDS has 4599 observations and 5 variables.
 NOTE: DATA statement used:
 real time 2.68 seconds
 cpu time 0.96 seconds

```
162
163     proc print data=mvpmeds (obs=200);
164         var rxrecidx rxname RXXP01X PERWT01F;
165         by linkidx;
166         id linkidx;
167         title3 "sample print of work.mvpmeds";
168         title4 "PMED (HC-059A) records for unique linkidxs in work.pmedids";
169     run;
```

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

NOTE: The PROCEDURE PRINT printed pages 16-22.

NOTE: PROCEDURE PRINT used:

real time	0.48 seconds
cpu time	0.01 seconds

```
170
171     PROC MEANS DATA=MVPMEDS N SUM;
172     VAR RXXP01X;
173     TITLE3 "Total Rx expenditures associated with medical visits (excluding telephone) for asthma";
174     RUN;
```

NOTE: There were 4599 observations read from the data set WORK.MVPMEDS.

NOTE: The PROCEDURE MEANS printed page 23.

NOTE: PROCEDURE MEANS used:

real time	0.29 seconds
cpu time	0.01 seconds

```
175
176     PROC MEANS DATA=MVPMEDS N SUM;
177     VAR RXXP01X;
178     WEIGHT PERWT01F;
179     TITLE3 "Total Rx expenditures associated with medical visits (excluding telephone) for asthma";
180     TITLE5 "Weighted";
181     RUN;
```

NOTE: There were 4599 observations read from the data set WORK.MVPMEDS.

NOTE: The PROCEDURE MEANS printed page 24.

NOTE: PROCEDURE MEANS used:

real time	0.01 seconds
cpu time	0.00 seconds

```
182
183
184
```

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

NOTE: The SAS System used:

real time	3:24.11
cpu time	26.34 seconds

Sample SAS Job for Example A
sample print of work.asconds - sorted by condidx
COND (H61) records where cccodex=128

Obs	CONDIDX	CCCODEX
1	400060150010	128
2	400060220025	128
3	400100460013	128
4	400120250093	128
5	400150180047	128
6	400150320017	128
7	400420120055	128
8	400500160056	128
9	400630140015	128
10	400670280087	128
11	400700390037	128
12	400830280016	128
13	400840180025	128
14	400840320017	128
15	400850110076	128
16	400990200047	128
17	401160130036	128
18	401650150017	128
19	401700450040	128
20	401710240020	128
21	401840370020	128
22	401870110028	128
23	401870350010	128
24	402060410053	128
25	402160430011	128
26	402160660010	128
27	402190190014	128
28	402260280015	128
29	402350120018	128
30	402530190024	128
31	402720640014	128
32	402740320012	128
33	402970200016	128
34	403000160011	128
35	403110150117	128
36	403210170016	128
37	403210480013	128
38	403230280069	128
39	403320410016	128
40	403330360012	128
41	403340270061	128
42	403510210075	128
43	403860370035	128
44	404130470038	128
45	404210160041	128
46	404550260035	128
47	404670140024	128
48	404760860025	128
49	404770150034	128
50	404790560018	128

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

CONDIDX	EVNTIDX	EVENTYPE
400100460013	400100460012	8 PMED
	400100460029	8 PMED
	400100460036	8 PMED
	400100460043	8 PMED
400120250093	400120250196	8 PMED
400150180047	400150180038	1 MVIS
	400150180076	8 PMED
	400150180083	8 PMED
	400150180090	8 PMED
	400150180463	1 MVIS
	400150180470	1 MVIS
	400150180507	8 PMED
400150320017	400150320014	1 MVIS
	400150320021	1 MVIS
	400150320038	1 MVIS
	400150320045	1 MVIS
	400150320052	1 MVIS
	400150320069	1 MVIS
	400150320090	1 MVIS
	400150320103	1 MVIS
	400150320110	8 PMED
400420120055	400420120077	8 PMED
	400420120180	8 PMED
400500160056	400500160080	8 PMED
	400500160097	8 PMED
400630140015	400630140025	1 MVIS
	400630140049	4 STAZ
	400630140056	3 EROM
	400630140070	8 PMED
	400630140087	8 PMED
	400630140107	8 PMED
	400630140145	1 MVIS
	400630140152	8 PMED
	400630140169	8 PMED
	400630140183	8 PMED
	400630140227	8 PMED
	400630140234	8 PMED
	400630140258	8 PMED
400670280087	400670280130	8 PMED
	400670280147	8 PMED
	400670280154	8 PMED
	400670280161	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
400670280087	400670280250	8 PMED
400700390037	400700390041	8 PMED
400830280016	400830280011	8 PMED
400840180025	400840180019	2 OPAT
	400840180040	2 OPAT
	400840180095	8 PMED
	400840180108	8 PMED
	400840180115	8 PMED
	400840180122	8 PMED
	400840180146	1 MVIS
	400840180204	8 PMED
	400840180211	8 PMED
	400840180228	8 PMED
	400840180259	8 PMED
	400840180297	2 OPAT
	400840180300	2 OPAT
	400840180317	2 OPAT
	400840180331	2 OPAT
	400840180379	8 PMED
400840180386	8 PMED	
400840180393	8 PMED	
400840320017	400840320026	2 OPAT
	400840320033	2 OPAT
	400840320191	2 OPAT
400850110076	400850110226	8 PMED
	400850110308	1 MVIS
	400850110315	1 MVIS
	400850110322	1 MVIS
	400850110360	1 MVIS
	400850110377	1 MVIS
	400850110428	8 PMED
	400850110435	8 PMED
400990200047	400990200092	8 PMED

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

Obs	CONDIDX	EVNTIDX	EVENTYPE
1	400100460013	400100460012	8 PMED
2	400100460013	400100460029	8 PMED
3	400100460013	400100460036	8 PMED
4	400100460013	400100460043	8 PMED
5	400120250093	400120250196	8 PMED
6	400150180047	400150180038	1 MVIS
7	400150180047	400150180076	8 PMED
8	400150180047	400150180083	8 PMED
9	400150180047	400150180090	8 PMED
10	400150180047	400150180463	1 MVIS
11	400150180047	400150180470	1 MVIS
12	400150180047	400150180507	8 PMED
13	400150320017	400150320014	1 MVIS
14	400150320017	400150320021	1 MVIS
15	400150320017	400150320038	1 MVIS
16	400150320017	400150320045	1 MVIS
17	400150320017	400150320052	1 MVIS
18	400150320017	400150320069	1 MVIS
19	400150320017	400150320090	1 MVIS
20	400150320017	400150320103	1 MVIS
21	400150320017	400150320110	8 PMED
22	400420120055	400420120077	8 PMED
23	400420120055	400420120180	8 PMED
24	400500160056	400500160080	8 PMED
25	400500160056	400500160097	8 PMED
26	400630140015	400630140025	1 MVIS
27	400630140015	400630140049	4 STAZ
28	400630140015	400630140056	3 EROM
29	400630140015	400630140070	8 PMED
30	400630140015	400630140087	8 PMED
31	400630140015	400630140107	8 PMED
32	400630140015	400630140145	1 MVIS
33	400630140015	400630140152	8 PMED
34	400630140015	400630140169	8 PMED
35	400630140015	400630140183	8 PMED
36	400630140015	400630140227	8 PMED
37	400630140015	400630140234	8 PMED
38	400630140015	400630140258	8 PMED
39	400670280087	400670280130	8 PMED
40	400670280087	400670280147	8 PMED
41	400670280087	400670280154	8 PMED
42	400670280087	400670280161	8 PMED
43	400670280087	400670280250	8 PMED
44	400700390037	400700390041	8 PMED
45	400830280016	400830280011	8 PMED
46	400840180025	400840180019	2 OPAT
47	400840180025	400840180040	2 OPAT
48	400840180025	400840180095	8 PMED
49	400840180025	400840180108	8 PMED
50	400840180025	400840180115	8 PMED

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

Obs	EVNTIDX	EVENTYPE
1	400100460012	8 PMED
2	400100460029	8 PMED
3	400100460036	8 PMED
4	400100460043	8 PMED
5	400120250196	8 PMED
6	400150180038	1 MVIS
7	400150180076	8 PMED
8	400150180083	8 PMED
9	400150180090	8 PMED
10	400150180463	1 MVIS
11	400150180470	1 MVIS
12	400150180507	8 PMED
13	400150320014	1 MVIS
14	400150320021	1 MVIS
15	400150320038	1 MVIS
16	400150320045	1 MVIS
17	400150320052	1 MVIS
18	400150320069	1 MVIS
19	400150320090	1 MVIS
20	400150320103	1 MVIS
21	400150320110	8 PMED
22	400420120077	8 PMED
23	400420120180	8 PMED
24	400500160080	8 PMED
25	400500160097	8 PMED
26	400630140025	1 MVIS
27	400630140049	4 STAZ
28	400630140056	3 EROM
29	400630140070	8 PMED
30	400630140087	8 PMED
31	400630140107	8 PMED
32	400630140145	1 MVIS
33	400630140152	8 PMED
34	400630140169	8 PMED
35	400630140183	8 PMED
36	400630140227	8 PMED
37	400630140234	8 PMED
38	400630140258	8 PMED
39	400670280130	8 PMED
40	400670280147	8 PMED
41	400670280154	8 PMED
42	400670280161	8 PMED
43	400670280250	8 PMED
44	400700390041	8 PMED
45	400830280011	8 PMED
46	400840180019	2 OPAT
47	400840180040	2 OPAT
48	400840180095	8 PMED
49	400840180108	8 PMED
50	400840180115	8 PMED

Sample SAS Job for Example A
 sample print of work.asmvis
 unique evntidxs from work.asclnks that are non-telephone MVIS (HC-059G) events

Obs	EVNTIDX	EVENTYPE
1	400150180038	1 MVIS
2	400150180463	1 MVIS
3	400150180470	1 MVIS
4	400150320014	1 MVIS
5	400150320021	1 MVIS
6	400150320038	1 MVIS
7	400150320045	1 MVIS
8	400150320052	1 MVIS
9	400150320069	1 MVIS
10	400150320090	1 MVIS
11	400150320103	1 MVIS
12	400630140025	1 MVIS
13	400630140145	1 MVIS
14	400840180146	1 MVIS
15	400850110308	1 MVIS
16	400850110315	1 MVIS
17	400850110322	1 MVIS
18	400850110360	1 MVIS
19	400850110377	1 MVIS
20	401650150016	1 MVIS
21	401870350013	1 MVIS
22	402160660102	1 MVIS
23	402260280014	1 MVIS
24	402260280038	1 MVIS
25	402530190036	1 MVIS
26	402530190043	1 MVIS
27	402530190125	1 MVIS
28	402530190132	1 MVIS
29	402530190149	1 MVIS
30	402530190245	1 MVIS
31	402530190276	1 MVIS
32	402720640014	1 MVIS
33	402720640021	1 MVIS
34	402720640069	1 MVIS
35	402970200015	1 MVIS
36	402970200039	1 MVIS
37	402970200046	1 MVIS
38	402970200053	1 MVIS
39	402970200128	1 MVIS
40	402970200135	1 MVIS
41	402970200142	1 MVIS
42	402970200159	1 MVIS
43	402970200166	1 MVIS
44	402970200262	1 MVIS
45	402970200286	1 MVIS
46	403000160012	1 MVIS
47	403000160029	1 MVIS
48	403210170015	1 MVIS
49	403210480046	1 MVIS
50	403210480053	1 MVIS

Sample SAS Job for Example A
 sample print of work.rxlk - sorted by evntidx
 Rx+event link file records (HC-59IF2)

EVNTIDX	LINKIDX	EVENTYPE
400010130020	400010130051	1 MVIS
400010130037	400010130044	6 OMED
400010130068	400010130075	6 OMED
400010200075	400010200082	1 MVIS
400070150018	400070150025	1 MVIS
400070150049	400070150056	3 EROM
400100150029	400100150118	1 MVIS
400110130013	400110130020	1 MVIS
400110130037	400110130068	5 DVIS
400110130044	400110130068	5 DVIS
400110200044	400110200051	2 OPAT
400110370013	400110370020	1 MVIS
400110370037	400110370044	1 MVIS
	400110370051	1 MVIS
400120250014	400120250069	1 MVIS
400120250021	400120250076	1 MVIS
400120250038	400120250076	1 MVIS
400120250083	400120250090	1 MVIS
400120250110	400120250134	2 OPAT
	400120250141	2 OPAT
400130170019	400130170071	4 STAZ
	400130170088	4 STAZ
	400130170095	4 STAZ
	400130170108	4 STAZ
	400130170115	4 STAZ
	400130170122	4 STAZ
	400130170139	4 STAZ
	400130170146	4 STAZ
	400130170153	4 STAZ
	400130170160	4 STAZ

Sample SAS Job for Example A
 sample print of work.rxlk - sorted by evntidx
 Rx+event link file records (HC-59IF2)

EVNTIDX	LINKIDX	EVENTYPE
400130240160	400130240259	1 MVIS
400150180014	400150180052	3 EROM
400150180021	400150180069	1 MVIS
400150180038	400150180076	1 MVIS
	400150180083	1 MVIS
	400150180090	1 MVIS
400150180134	400150180487	2 OPAT
400150180141	400150180494	2 OPAT
400150320090	400150320110	1 MVIS
400170190012	400170190050	1 MVIS
400170190029	400170190067	1 MVIS
400170190149	400170190156	1 MVIS
	400170190163	1 MVIS
	400170190170	1 MVIS
	400170190187	1 MVIS
400170260050	400170260067	1 MVIS
	400170260074	1 MVIS
400170260101	400170260149	1 MVIS
400180180015	400180180022	1 MVIS
400180180039	400180180046	1 MVIS
400180350012	400180350029	3 EROM
400190150014	400190150083	1 MVIS
	400190150090	1 MVIS
	400190150103	1 MVIS
	400190150110	1 MVIS
	400190150127	1 MVIS
	400190150134	1 MVIS
400190150052	400190150141	1 MVIS
400190150069	400190150076	6 OMED
400190150165	400190150209	1 MVIS

Sample SAS Job for Example A
 sample print of work.rxlk - sorted by evntidx
 Rx+event link file records (HC-59IF2)

EVNTIDX	LINKIDX	EVENTYPE
400190150172	400190150209	1 MVIS
400190150196	400190150216	1 MVIS
400190150292	400190150312	1 MVIS
	400190150329	1 MVIS
	400190150336	1 MVIS
	400190150343	1 MVIS
	400190150350	1 MVIS
	400190150367	1 MVIS
400190220052	400190220083	1 MVIS
400190220069	400190220076	6 OMED
400190220305	400190220456	1 MVIS
	400190220463	1 MVIS
400190220312	400190220487	1 MVIS
400190220329	400190220494	1 MVIS
400190390045	400190390254	1 MVIS
400190390069	400190390261	1 MVIS
400190390165	400190390254	1 MVIS
400190390196	400190390278	1 MVIS
400200100035	400200100042	1 MVIS
400200270028	400200270035	1 MVIS
400200270080	400200270131	1 MVIS
400230180015	400230180039	1 MVIS
400230180022	400230180046	1 MVIS
400230180077	400230180104	1 MVIS
	400230180111	1 MVIS
400230180091	400230180128	1 MVIS
400230320053	400230320104	1 MVIS
400230490015	400230490022	1 MVIS
	400230490039	1 MVIS

Sample SAS Job for Example A
 sample print of work.rxlk - sorted by evntidx
 Rx+event link file records (HC-59IF2)

EVNTIDX	LINKIDX	EVENTYPE
400250210017	400250210024	1 MVIS
400280170016	400280170061	5 DVIS
	400280170078	5 DVIS
400280240023	400280240030	1 MVIS
400290360092	400290360105	1 MVIS
400290430054	400290430078	1 MVIS
400290430061	400290430085	1 MVIS
400300180052	400300180069	1 MVIS
	400300180076	1 MVIS
400300180090	400300180110	1 MVIS
400340190014	400340190196	1 MVIS
	400340190209	1 MVIS
	400340190216	1 MVIS
400340190021	400340190223	1 MVIS
400340190189	400340190230	2 OPAT
400340190590	400340190709	1 MVIS
	400340190716	1 MVIS
	400340190723	1 MVIS
400340190603	400340190709	1 MVIS
	400340190716	1 MVIS
	400340190723	1 MVIS
400350300016	400350300023	1 MVIS
	400350300030	1 MVIS
400350300047	400350300054	1 MVIS
400350470016	400350470023	1 MVIS
400360130011	400360130100	3 EROM
400360130028	400360130117	2 OPAT
	400360130124	2 OPAT
	400360130131	2 OPAT
	400360130148	2 OPAT
400360130066	400360130155	4 STAZ

Sample SAS Job for Example A
 sample print of work.rxlk - sorted by evntidx
 Rx+event link file records (HC-59IF2)

EVNTIDX	LINKIDX	EVENTYPE
400360130066	400360130162	4 STAZ
	400360130179	4 STAZ
400380140010	400380140027	1 MVIS
	400380140034	1 MVIS
	400380140041	1 MVIS
	400380140058	1 MVIS
400400190102	400400190157	1 MVIS
400400190119	400400190164	1 MVIS
	400400190171	1 MVIS
400400190133	400400190140	6 OMED
400400190397	400400190400	6 OMED
400400190688	400400190695	6 OMED
400420120022	400420120053	1 MVIS
	400420120060	1 MVIS
	400420120077	1 MVIS
	400420120084	1 MVIS
	400420120091	1 MVIS
	400420120104	1 MVIS
400420120135	400420120166	2 OPAT
400450280031	400450280106	1 MVIS

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

EVNTIDX	LINKIDX	EVENTYPE
400150180038	400150180076	1 MVIS
	400150180083	1 MVIS
	400150180090	1 MVIS
400150320090	400150320110	1 MVIS
400630140145	400630140152	1 MVIS
	400630140169	1 MVIS
	400630140176	1 MVIS
	400630140183	1 MVIS
401650150016	401650150112	1 MVIS
402260280014	402260280021	1 MVIS
402260280038	402260280045	1 MVIS
402720640014	402720640038	1 MVIS
	402720640045	1 MVIS
402720640021	402720640052	1 MVIS
402720640069	402720640083	1 MVIS
	402720640090	1 MVIS
402970200015	402970200077	1 MVIS
402970200039	402970200077	1 MVIS
	402970200084	1 MVIS
402970200128	402970200197	1 MVIS
402970200166	402970200200	1 MVIS
402970200262	402970200293	1 MVIS
403000160012	403000160036	1 MVIS
	403000160043	1 MVIS
403210480046	403210480111	1 MVIS
403210480084	403210480128	1 MVIS
403210480173	403210480231	1 MVIS
403320410025	403320410049	1 MVIS
	403320410056	1 MVIS
	403320410063	1 MVIS

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

EVNTIDX	LINKIDX	EVENTYPE
403330360014	403330360021	1 MVIS
403340270075	403340270119	1 MVIS
404130470060	404130470077	1 MVIS
404550260205	404550260212	1 MVIS
	404550260229	1 MVIS
	404550260236	1 MVIS
	404550260243	1 MVIS
	404550260250	1 MVIS
404550260267	1 MVIS	
404760860037	404760860044	1 MVIS
	404760860051	1 MVIS
404770150200	404770150255	1 MVIS
404840150029	404840150036	1 MVIS
	404840150043	1 MVIS
	404840150050	1 MVIS
405330290011	405330290035	1 MVIS
405470360064	405470360088	1 MVIS
405540510016	405540510023	1 MVIS
	405540510030	1 MVIS
406030880019	406030880026	1 MVIS

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

Obs	EVNTIDX	LINKIDX	EVENTYPE
1	400150180038	400150180076	1 MVIS
2	400150180038	400150180083	1 MVIS
3	400150180038	400150180090	1 MVIS
4	400150320090	400150320110	1 MVIS
5	400630140145	400630140152	1 MVIS
6	400630140145	400630140169	1 MVIS
7	400630140145	400630140176	1 MVIS
8	400630140145	400630140183	1 MVIS
9	401650150016	401650150112	1 MVIS
10	402260280014	402260280021	1 MVIS
11	402260280038	402260280045	1 MVIS
12	402720640014	402720640038	1 MVIS
13	402720640014	402720640045	1 MVIS
14	402720640021	402720640052	1 MVIS
15	402720640069	402720640083	1 MVIS
16	402720640069	402720640090	1 MVIS
17	402970200015	402970200077	1 MVIS
18	402970200039	402970200077	1 MVIS
19	402970200039	402970200084	1 MVIS
20	402970200128	402970200197	1 MVIS
21	402970200166	402970200200	1 MVIS
22	402970200262	402970200293	1 MVIS
23	403000160012	403000160036	1 MVIS
24	403000160012	403000160043	1 MVIS
25	403210480046	403210480111	1 MVIS
26	403210480084	403210480128	1 MVIS
27	403210480173	403210480231	1 MVIS
28	403320410025	403320410049	1 MVIS
29	403320410025	403320410056	1 MVIS
30	403320410025	403320410063	1 MVIS
31	403330360014	403330360021	1 MVIS
32	403340270075	403340270119	1 MVIS
33	404130470060	404130470077	1 MVIS
34	404550260205	404550260212	1 MVIS
35	404550260205	404550260229	1 MVIS
36	404550260205	404550260236	1 MVIS
37	404550260205	404550260243	1 MVIS
38	404550260205	404550260250	1 MVIS
39	404550260205	404550260267	1 MVIS
40	404760860037	404760860044	1 MVIS
41	404760860037	404760860051	1 MVIS
42	404770150200	404770150255	1 MVIS
43	404840150029	404840150036	1 MVIS
44	404840150029	404840150043	1 MVIS
45	404840150029	404840150050	1 MVIS
46	405330290011	405330290035	1 MVIS
47	405470360064	405470360088	1 MVIS
48	405540510016	405540510023	1 MVIS
49	405540510016	405540510030	1 MVIS
50	406030880019	406030880026	1 MVIS

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

Obs	LINKIDX
1	400150180076
2	400150180083
3	400150180090
4	400150320110
5	400630140152
6	400630140169
7	400630140176
8	400630140183
9	401650150112
10	402260280021
11	402260280045
12	402720640038
13	402720640045
14	402720640052
15	402720640083
16	402720640090
17	402970200077
18	402970200084
19	402970200197
20	402970200200
21	402970200293
22	403000160036
23	403000160043
24	403210480111
25	403210480128
26	403210480231
27	403320410049
28	403320410056
29	403320410063
30	403330360021
31	403340270119
32	404130470077
33	404550260212
34	404550260229
35	404550260236
36	404550260243
37	404550260250
38	404550260267
39	404760860044
40	404760860051
41	404770150255
42	404840150036
43	404840150043
44	404840150050
45	405330290035
46	405470360088
47	405540510023
48	405540510030
49	406030880026
50	406030880033

Sample SAS Job for Example A
 sample print of work.mvpmeds

PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
400150180076	400150180076001	FLOVENT	109.99	6058.14
	400150180076002	FLOVENT	109.99	6058.14
	400150180076003	FLOVENT	109.99	6058.14
400150180083	400150180083001	SEREVENT DISKUS	92.99	6058.14
	400150180083002	SEREVENT DISKUS	92.99	6058.14
400150180090	400150180090001	NEBULIZER	29.09	6058.14
400150320110	400150320110001	SINGULAIR (UNIT OF USE)	94.99	6682.32
	400150320110002	SINGULAIR (UNIT OF USE)	94.99	6682.32
	400150320110003	SINGULAIR (UNIT OF USE)	94.99	6682.32
	400150320110004	SINGULAIR (UNIT OF USE)	94.99	6682.32
400630140152	400630140152001	ALBUTEROL	43.40	13871.65
	400630140152002	ALBUTEROL	43.40	13871.65
	400630140152003	ALBUTEROL	43.40	13871.65
400630140169	400630140169001	AEROBID	67.01	13871.65
	400630140169002	AEROBID	67.01	13871.65
	400630140169003	AEROBID	67.01	13871.65
400630140176	400630140176001	CALAN SR (CAPLET)	104.29	13871.65
	400630140176002	CALAN SR (CAPLET)	104.29	13871.65
	400630140176003	CALAN SR (CAPLET)	104.29	13871.65
400630140183	400630140183001	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140183002	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140183003	SINGULAIR (UNIT OF USE)	165.12	13871.65
401650150112	401650150112001	ALBUTEROL	17.90	5825.09
402260280021	402260280021001	BRONCHO SALINE	11.49	11925.78
402260280045	402260280045001	BRONCHO SALINE	11.49	11925.78
402720640038	402720640038001	RIBAVIRIN	12.00	5630.79
402720640045	402720640045001	TRIMOX	10.66	5630.79
402720640052	402720640052001	AUGMENTIN (ORANGE-RASPBERRY)	38.64	5630.79
402720640083	402720640083001	ZITHROMAX	93.99	5630.79
402720640090	402720640090001	METAPROTERENOL SULFATE (S.F., CHERRY)	10.99	5630.79
402970200077	402970200077001	ASPIRIN/BUTALBITAL/CAFFEINE	32.99	3865.36
402970200084	402970200084001	AEROBID	61.79	3865.36

Sample SAS Job for Example A
 sample print of work.mvpmeds

PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
402970200197	402970200197001	IBUPROFEN	11.00	3865.36
	402970200197002	IBUPROFEN	11.00	3865.36
402970200200	402970200200001	PREDNISONE	3.90	3865.36
402970200293	402970200293001	QVAR	52.04	3865.36
403000160036	403000160036001	AEROBID	59.88	6256.73
	403000160036002	AEROBID	59.88	6256.73
403000160043	403000160043001	CLARITIN	76.16	6256.73
	403000160043002	CLARITIN	76.16	6256.73
403210480111	403210480111001	ZYRTEC	59.37	9525.99
	403210480111002	ZYRTEC	59.37	9525.99
	403210480111003	ZYRTEC	59.37	9525.99
	403210480111004	ZYRTEC	59.37	9525.99
	403210480111005	ZYRTEC	59.37	9525.99
	403210480111006	ZYRTEC	59.37	9525.99
	403210480111007	ZYRTEC	59.37	9525.99
	403210480111008	ZYRTEC	59.37	9525.99
403210480128	403210480128001	XOPENEX (P.F.)	50.00	9525.99
	403210480128002	XOPENEX (P.F.)	50.00	9525.99
	403210480128003	XOPENEX (P.F.)	50.00	9525.99
	403210480128004	XOPENEX (P.F.)	50.00	9525.99
	403210480128005	XOPENEX (P.F.)	50.00	9525.99
	403210480128006	XOPENEX (P.F.)	50.00	9525.99
403210480231	403210480231001	ORAPRED	20.00	9525.99
403320410049	403320410049001	SINGULAIR	96.10	16804.20
403320410056	403320410056001	RYNA-12 S (STRAWBERRY-CURRENT)	33.98	16804.20
403320410063	403320410063001	EXTENDRYL JR	21.59	16804.20
403330360021	403330360021001	ALBUTEROL	24.99	7144.93
403340270119	403340270119001	ADVAIR DISKUS 100/50	94.00	9231.69
404130470077	404130470077001	ALBUTEROL	59.58	10582.91
404550260212	404550260212001	TOPROL XL	10.31	10940.94
	404550260212002	TOPROL XL	10.31	10940.94
	404550260212003	TOPROL XL	10.31	10940.94
404550260229	404550260229001	ZESTRIL	29.62	10940.94
	404550260229002	ZESTRIL	29.62	10940.94

Sample SAS Job for Example A
 sample print of work.mvpmeds

PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
404550260236	404550260236001	ZOLOFT	63.63	10940.94
	404550260236002	ZOLOFT	63.63	10940.94
404550260243	404550260243001	ALBUTEROL	14.49	10940.94
	404550260243002	ALBUTEROL	14.49	10940.94
404550260250	404550260250001	RHINOCORT	37.09	10940.94
404550260267	404550260267001	PULMICORT TURBUHALER	112.02	10940.94
	404550260267002	PULMICORT TURBUHALER	112.02	10940.94
404760860044	404760860044001	PENICILLIN	3.73	12567.27
	404760860044002	PENICILLIN	3.73	12567.27
	404760860044003	PENICILLIN	3.73	12567.27
404760860051	404760860051001	BRONCHO SALINE	10.29	12567.27
404770150255	404770150255001	AMLODIPINE BESYLATE	3.50	7311.39
404840150036	404840150036001	AZMACORT INHALER	145.10	8327.04
404840150043	404840150043001	ALBUTEROL	59.58	8327.04
404840150050	404840150050001	GUAIFENEX G	10.00	8327.04
405330290035	405330290035001	PREDNISONE	3.90	3431.38
405470360088	405470360088001	BRONCHO SALINE	13.95	10596.70
405540510023	405540510023001	PREDNISOLONE	6.59	4284.67
405540510030	405540510030001	FLOVENT	48.54	4284.67
406030880026	406030880026001	-9	12.27	5767.46
406030880033	406030880033001	AMOXICILLIN	8.62	5767.46
406080560049	406080560049001	ALBUTEROL SULFATE	6.99	12674.24
406490290039	406490290039001	VENTOLIN INHALER	37.30	3874.54
	406490290039002	VENTOLIN INHALER	37.30	3874.54
406500250118	406500250118001	PREVACID	106.56	3497.65
	406500250118002	PREVACID	106.56	3497.65
406500250125	406500250125001	THEOPHYLLINE	12.39	3497.65
	406500250125002	THEOPHYLLINE	12.39	3497.65
406500250132	406500250132001	CLARITIN-D 24 HOUR	74.01	3497.65

Sample SAS Job for Example A
 sample print of work.mvpmeds

PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
406500250132	406500250132002	CLARITIN-D 24 HOUR	74.01	3497.65
406500250149	406500250149001	SINGULAIR (UNIT OF USE)	70.72	3497.65
	406500250149002	SINGULAIR (UNIT OF USE)	70.72	3497.65
406500250156	406500250156001	VIOXX	102.24	3497.65
	406500250156002	VIOXX	102.24	3497.65
406500250163	406500250163001	SEREVENT	65.76	3497.65
	406500250163002	SEREVENT	65.76	3497.65
406500250170	406500250170001	ALBUTEROL	27.67	3497.65
	406500250170002	ALBUTEROL	27.67	3497.65
406500250187	406500250187001	HEMOCYTE PLUS (10X10, CHILD PROOF PKG)	14.48	3497.65
	406500250187002	HEMOCYTE PLUS (10X10, CHILD PROOF PKG)	14.48	3497.65
406710320071	406710320071001	ADVAIR DISKUS 100/50	103.94	5902.99
406710320088	406710320088001	ALBUTEROL	21.41	5902.99
406740430129	406740430129001	ALBUTEROL	44.79	10203.32
	406740430129002	ALBUTEROL	44.79	10203.32
406740430136	406740430136001	ZITHROMAX	27.34	10203.32
	406740430136002	ZITHROMAX	27.34	10203.32
406740430143	406740430143001	PULMICORT	141.54	10203.32
406740430167	406740430167001	NASONEX	56.96	10203.32
406900310157	406900310157001	CLARITIN	76.15	12041.71
407090230405	407090230405001	VOLMAX	56.00	11568.99
	407090230405002	VOLMAX	56.00	11568.99
407090230412	407090230412001	PREDNISONE	1.06	11568.99
407090230429	407090230429001	AZMACORT	62.20	11568.99
407090230436	407090230436001	SINGULAIR (UNIT OF USE)	82.56	11568.99
	407090230436002	SINGULAIR (UNIT OF USE)	82.56	11568.99
	407090230436003	SINGULAIR (UNIT OF USE)	82.56	11568.99
407210580105	407210580105001	BRONCHO SALINE	10.29	6256.57
	407210580105002	BRONCHO SALINE	10.29	6256.57
	407210580105003	BRONCHO SALINE	10.29	6256.57
	407210580105004	BRONCHO SALINE	10.29	6256.57
	407210580105005	BRONCHO SALINE	10.29	6256.57

Sample SAS Job for Example A
 sample print of work.mvpmeds

PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
407210580167	407210580167001	BRONCHO SALINE	10.29	6256.57
	407210580167002	BRONCHO SALINE	10.29	6256.57
	407210580167003	BRONCHO SALINE	10.29	6256.57
407210580198	407210580198001	BRONCHO SALINE	10.29	6256.57
407850320048	407850320048001	SINGULAIR	74.33	12502.40
	407850320048002	SINGULAIR	74.33	12502.40
407850320055	407850320055001	NASONEX	65.99	12502.40
	407850320055002	NASONEX	65.99	12502.40
	407850320055003	NASONEX	65.99	12502.40
407850320062	407850320062001	ALLEGRA	33.58	12502.40
	407850320062002	ALLEGRA	33.58	12502.40
408040140025	408040140025001	VITAPLEX PLUS	5.00	10253.59
408290380042	408290380042001	ALUPENT	28.73	16114.59
408370160749	408370160749001	ZITHROMAX Z-PAK (3X6)	37.46	18743.69
	408370160749002	ZITHROMAX Z-PAK (3X6)	37.46	18743.69
408370160756	408370160756001	METHYLPREDNISOLONE	11.34	18743.69
408630240034	408630240034001	NASONEX	65.99	2337.96
408630240041	408630240041001	ALBUTEROL	16.37	2337.96
	408630240041002	ALBUTEROL	16.37	2337.96
	408630240041003	ALBUTEROL	16.37	2337.96
	408630240041004	ALBUTEROL	16.37	2337.96
	408630240041005	ALBUTEROL	16.37	2337.96
408630240058	408630240058001	ADVAIR DISKUS	183.73	2337.96
409050420037	409050420037001	ALBUTEROL	17.99	7103.16
409050420044	409050420044001	CLARITIN	76.16	7103.16
409050420051	409050420051001	AMOXICILLIN	20.36	7103.16
	409050420051002	AMOXICILLIN	20.36	7103.16
409050420068	409050420068001	FLONASE	57.71	7103.16
409400130020	409400130020001	INFUSION SET MMT 316	90.00	6041.80
	409400130020002	INFUSION SET MMT 316	90.00	6041.80
	409400130020003	INFUSION SET MMT 316	90.00	6041.80
409400130037	409400130037001	METHYLPREDNISOLONE (UNIT OF USE)	12.70	6041.80

Sample SAS Job for Example A
sample print of work.mvpmeds

PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
409400130037	409400130037002	METHYLPREDNISOLONE (UNIT OF USE)	12.70	6041.80
	409400130037003	METHYLPREDNISOLONE (UNIT OF USE)	12.70	6041.80
409400130044	409400130044001	ALBUTEROL	24.27	6041.80
	409400130044002	ALBUTEROL	24.27	6041.80
	409400130044003	ALBUTEROL	24.27	6041.80
409400130051	409400130051001	ASPIRIN/CARISOPRODOL	18.75	6041.80
	409400130051002	ASPIRIN/CARISOPRODOL	18.75	6041.80
	409400130051003	ASPIRIN/CARISOPRODOL	18.75	6041.80
	409400130051004	ASPIRIN/CARISOPRODOL	18.75	6041.80
409410200562	409410200562001	ALBUTEROL	23.49	12230.92
409410200579	409410200579001	ALBUTEROL SULFATE	8.99	12230.92
409410200586	409410200586001	IMITREX	213.77	12230.92
409410200593	409410200593001	ATROVENT	43.55	12230.92
409410200606	409410200606001	SEREVENT	69.54	12230.92
409410200613	409410200613001	LORAZEPAM	16.95	12230.92
409490140139	409490140139001	ATROVENT	40.58	10288.22
	409490140139002	ATROVENT	40.58	10288.22
409490140146	409490140146001	GUAIFENESIN/PHENYLPROPANOLAMINE	9.75	10288.22
	409490140146002	GUAIFENESIN/PHENYLPROPANOLAMINE	9.75	10288.22
409490140540	409490140540001	APAP/HYDROCODONE BITARTRATE	29.89	10288.22
	409490140540002	APAP/HYDROCODONE BITARTRATE	29.89	10288.22
	409490140540003	APAP/HYDROCODONE BITARTRATE	29.89	10288.22
	409490140540004	APAP/HYDROCODONE BITARTRATE	29.89	10288.22
409490140557	409490140557001	ATROVENT	40.58	10288.22
	409490140557002	ATROVENT	40.58	10288.22
	409490140557003	ATROVENT	40.58	10288.22
	409490140557004	ATROVENT	40.58	10288.22
409490140564	409490140564001	GUAIFENESIN/PHENYLPROPANOLAMINE	9.75	10288.22
	409490140564002	GUAIFENESIN/PHENYLPROPANOLAMINE	9.75	10288.22
	409490140564003	GUAIFENESIN/PHENYLPROPANOLAMINE	9.75	10288.22
	409490140564004	GUAIFENESIN/PHENYLPROPANOLAMINE	9.75	10288.22
409490140571	409490140571001	LORAZEPAM	23.80	10288.22
	409490140571002	LORAZEPAM	23.80	10288.22
	409490140571003	LORAZEPAM	23.80	10288.22
	409490140571004	LORAZEPAM	23.80	10288.22

Sample SAS Job for Example A
 sample print of work.mvpmeds

PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
409490140588	409490140588001	MECLIZINE HCL	7.79	10288.22
	409490140588002	MECLIZINE HCL	7.79	10288.22
	409490140588003	MECLIZINE HCL	7.79	10288.22
	409490140588004	MECLIZINE HCL	7.79	10288.22
409490140595	409490140595001	QUININE SULFATE	7.91	10288.22
	409490140595002	QUININE SULFATE	7.91	10288.22

Sample SAS Job for Example A

Total Rx expenditures associated with medical visits (excluding telephone) for asthma

The MEANS Procedure

Analysis Variable : RXXP01X SUM OF PAYMENTS RXSF01X-RXOU01X(IMPUTED)

N	Sum
4599	239286.30

Sample SAS Job for Example A

Total Rx expenditures associated with medical visits (excluding telephone) for asthma

Weighted

The MEANS Procedure

Analysis Variable : RXXP01X SUM OF PAYMENTS RXSF01X-RXOU01X(IMPUTED)

N	Sum
4599	2132677425

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 82BX07.

NOTE: SAS initialization used:
real time 4.89 seconds
cpu time 0.67 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-059I";
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 0.12 seconds
cpu time 0.03 seconds

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

```

26      DATA ASCONDS;
27          SET IN.H61 (KEEP=CONDIDX CCCODEX);
28          IF CCCODEX="128";
29      RUN;

```

NOTE: There were 102489 observations read from the data set IN.H61.
NOTE: The data set WORK.ASCONDS has 1695 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 1695 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCONDS has 1695 observations and 2 variables.
NOTE: PROCEDURE SORT used:

real time	0.06 seconds
cpu time	0.00 seconds

```

35
36      proc print data=asconds (obs=50);
37          title3 "sample print of work.asconds - sorted by condidx";
38          title4 "COND (H61) 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	0.21 seconds
cpu time	0.00 seconds

```

40
41      PROC SORT DATA=IN.H59IF1 OUT=CLNK; BY CONDIDX; RUN;

```

NOTE: There were 314599 observations read from the data set IN.H59IF1.
NOTE: The data set WORK.CLNK has 314599 observations and 5 variables.
NOTE: PROCEDURE SORT used:

real time	3.56 seconds
cpu time	1.57 seconds

```

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

```

NOTE: There were 314599 observations read from the data set WORK.CLNK.
NOTE: There were 1695 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCLNKS has 7046 observations and 3 variables.
NOTE: DATA statement used:
real time 0.46 seconds
cpu time 0.43 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 0.07 seconds
cpu time 0.03 seconds

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

NOTE: There were 7046 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 7046 observations and 3 variables.
NOTE: PROCEDURE SORT used:
real time 0.04 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 0.01 seconds
cpu time 0.01 seconds

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

NOTE: There were 7046 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 7033 observations and 2 variables.
NOTE: DATA statement used:

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

```
75
76     *-----
77     * Get PMED records linked to asthma condition records.
78     *-----;
79     PROC SORT DATA=IN.H59A OUT=PMED; BY LINKIDX; RUN;
```

NOTE: There were 277866 observations read from the data set IN.H59A.

NOTE: The data set WORK.PMED has 277866 observations and 74 variables.

NOTE: PROCEDURE SORT used:

```
real time      2:51.98
cpu time      20.46 seconds
```

```
80
81     DATA ASPMEDS;
82         MERGE PMED (KEEP=LINKIDX RXRECIDX RXNAME RXXP01X PERWT01F)
83             ASCLNKS (IN=INASCLNK KEEP=EVNTIDX RENAME=(EVNTIDX=LINKIDX));
84         BY LINKIDX;
85         IF INASCLNK & PERWT01F>0;
86     RUN;
```

NOTE: There were 277866 observations read from the data set WORK.PMED.

NOTE: There were 7033 observations read from the data set WORK.ASCLNKS.

NOTE: The data set WORK.ASPMEDS has 9476 observations and 5 variables.

NOTE: DATA statement used:

```
real time      6.59 seconds
cpu time      0.76 seconds
```

```
87
88     proc print data=aspmeds (obs=300);
89         by linkidx;
90         id linkidx;
91         var rxrecidx rxname RXXP01X PERWT01F;
92         title3 "sample print of work.aspmeds";
93         title4 "PMED (HC-059A) 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 0.12 seconds
cpu time 0.01 seconds

```
95
96 PROC MEANS DATA=ASPMEDS N SUM;
97 VAR RXXP01X;
98 TITLE3 "Total Rx expenditures associated with asthma";
99 RUN;
```

NOTE: There were 9476 observations read from the data set WORK.ASPMEDS.
NOTE: The PROCEDURE MEANS printed page 16.
NOTE: PROCEDURE MEANS used:
real time 0.17 seconds
cpu time 0.03 seconds

```
100
101 PROC MEANS DATA=ASPMEDS N SUM;
102 VAR RXXP01X;
103 WEIGHT PERWT01F;
104 TITLE3 "Total Rx expenditures associated with asthma";
105 TITLE5 "Weighted";
106 RUN;
```

NOTE: There were 9476 observations read from the data set WORK.ASPMEDS.
NOTE: The PROCEDURE MEANS printed page 17.
NOTE: PROCEDURE MEANS used:
real time 0.01 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 3:11.21
cpu time 24.38 seconds

Sample SAS Job for Example B
 sample print of work.asconds - sorted by condidx
 COND (H61) records where cccodex=128

Obs	CONDIDX	CCCODEX
1	400060150010	128
2	400060220025	128
3	400100460013	128
4	400120250093	128
5	400150180047	128
6	400150320017	128
7	400420120055	128
8	400500160056	128
9	400630140015	128
10	400670280087	128
11	400700390037	128
12	400830280016	128
13	400840180025	128
14	400840320017	128
15	400850110076	128
16	400990200047	128
17	401160130036	128
18	401650150017	128
19	401700450040	128
20	401710240020	128
21	401840370020	128
22	401870110028	128
23	401870350010	128
24	402060410053	128
25	402160430011	128
26	402160660010	128
27	402190190014	128
28	402260280015	128
29	402350120018	128
30	402530190024	128
31	402720640014	128
32	402740320012	128
33	402970200016	128
34	403000160011	128
35	403110150117	128
36	403210170016	128
37	403210480013	128
38	403230280069	128
39	403320410016	128
40	403330360012	128
41	403340270061	128
42	403510210075	128
43	403860370035	128
44	404130470038	128
45	404210160041	128
46	404550260035	128
47	404670140024	128
48	404760860025	128
49	404770150034	128
50	404790560018	128

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

CONDIDX	EVNTIDX	EVENTYPE
400100460013	400100460012	8 PMED
	400100460029	8 PMED
	400100460036	8 PMED
	400100460043	8 PMED
400120250093	400120250196	8 PMED
400150180047	400150180038	1 MVIS
	400150180076	8 PMED
	400150180083	8 PMED
	400150180090	8 PMED
	400150180463	1 MVIS
	400150180470	1 MVIS
	400150180507	8 PMED
400150320017	400150320014	1 MVIS
	400150320021	1 MVIS
	400150320038	1 MVIS
	400150320045	1 MVIS
	400150320052	1 MVIS
	400150320069	1 MVIS
	400150320090	1 MVIS
	400150320103	1 MVIS
	400150320110	8 PMED
400420120055	400420120077	8 PMED
	400420120180	8 PMED
400500160056	400500160080	8 PMED
	400500160097	8 PMED
400630140015	400630140025	1 MVIS
	400630140049	4 STAZ
	400630140056	3 EROM
	400630140070	8 PMED
	400630140087	8 PMED
	400630140107	8 PMED
	400630140145	1 MVIS
	400630140152	8 PMED
	400630140169	8 PMED
	400630140183	8 PMED
	400630140227	8 PMED
	400630140234	8 PMED
	400630140258	8 PMED
	400670280087	400670280130
400670280147		8 PMED
400670280154		8 PMED
400670280161		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
400670280087	400670280250	8 PMED
400700390037	400700390041	8 PMED
400830280016	400830280011	8 PMED
400840180025	400840180019	2 OPAT
	400840180040	2 OPAT
	400840180095	8 PMED
	400840180108	8 PMED
	400840180115	8 PMED
	400840180122	8 PMED
	400840180146	1 MVIS
	400840180204	8 PMED
	400840180211	8 PMED
	400840180228	8 PMED
	400840180259	8 PMED
	400840180297	2 OPAT
	400840180300	2 OPAT
	400840180317	2 OPAT
	400840180331	2 OPAT
	400840180379	8 PMED
400840180386	8 PMED	
400840180393	8 PMED	
400840320017	400840320026	2 OPAT
	400840320033	2 OPAT
	400840320191	2 OPAT
400850110076	400850110226	8 PMED
	400850110308	1 MVIS
	400850110315	1 MVIS
	400850110322	1 MVIS
	400850110360	1 MVIS
	400850110377	1 MVIS
	400850110428	8 PMED
	400850110435	8 PMED
400990200047	400990200092	8 PMED

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

Obs	CONDIDX	EVNTIDX	EVENTYPE
1	400100460013	400100460012	8 PMED
2	400100460013	400100460029	8 PMED
3	400100460013	400100460036	8 PMED
4	400100460013	400100460043	8 PMED
5	400120250093	400120250196	8 PMED
6	400150180047	400150180038	1 MVIS
7	400150180047	400150180076	8 PMED
8	400150180047	400150180083	8 PMED
9	400150180047	400150180090	8 PMED
10	400150180047	400150180463	1 MVIS
11	400150180047	400150180470	1 MVIS
12	400150180047	400150180507	8 PMED
13	400150320017	400150320014	1 MVIS
14	400150320017	400150320021	1 MVIS
15	400150320017	400150320038	1 MVIS
16	400150320017	400150320045	1 MVIS
17	400150320017	400150320052	1 MVIS
18	400150320017	400150320069	1 MVIS
19	400150320017	400150320090	1 MVIS
20	400150320017	400150320103	1 MVIS
21	400150320017	400150320110	8 PMED
22	400420120055	400420120077	8 PMED
23	400420120055	400420120180	8 PMED
24	400500160056	400500160080	8 PMED
25	400500160056	400500160097	8 PMED
26	400630140015	400630140025	1 MVIS
27	400630140015	400630140049	4 STAZ
28	400630140015	400630140056	3 EROM
29	400630140015	400630140070	8 PMED
30	400630140015	400630140087	8 PMED
31	400630140015	400630140107	8 PMED
32	400630140015	400630140145	1 MVIS
33	400630140015	400630140152	8 PMED
34	400630140015	400630140169	8 PMED
35	400630140015	400630140183	8 PMED
36	400630140015	400630140227	8 PMED
37	400630140015	400630140234	8 PMED
38	400630140015	400630140258	8 PMED
39	400670280087	400670280130	8 PMED
40	400670280087	400670280147	8 PMED
41	400670280087	400670280154	8 PMED
42	400670280087	400670280161	8 PMED
43	400670280087	400670280250	8 PMED
44	400700390037	400700390041	8 PMED
45	400830280016	400830280011	8 PMED
46	400840180025	400840180019	2 OPAT
47	400840180025	400840180040	2 OPAT
48	400840180025	400840180095	8 PMED
49	400840180025	400840180108	8 PMED
50	400840180025	400840180115	8 PMED

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

Obs	EVNTIDX	EVENTYPE
1	400100460012	8 PMED
2	400100460029	8 PMED
3	400100460036	8 PMED
4	400100460043	8 PMED
5	400120250196	8 PMED
6	400150180038	1 MVIS
7	400150180076	8 PMED
8	400150180083	8 PMED
9	400150180090	8 PMED
10	400150180463	1 MVIS
11	400150180470	1 MVIS
12	400150180507	8 PMED
13	400150320014	1 MVIS
14	400150320021	1 MVIS
15	400150320038	1 MVIS
16	400150320045	1 MVIS
17	400150320052	1 MVIS
18	400150320069	1 MVIS
19	400150320090	1 MVIS
20	400150320103	1 MVIS
21	400150320110	8 PMED
22	400420120077	8 PMED
23	400420120180	8 PMED
24	400500160080	8 PMED
25	400500160097	8 PMED
26	400630140025	1 MVIS
27	400630140049	4 STAZ
28	400630140056	3 EROM
29	400630140070	8 PMED
30	400630140087	8 PMED
31	400630140107	8 PMED
32	400630140145	1 MVIS
33	400630140152	8 PMED
34	400630140169	8 PMED
35	400630140183	8 PMED
36	400630140227	8 PMED
37	400630140234	8 PMED
38	400630140258	8 PMED
39	400670280130	8 PMED
40	400670280147	8 PMED
41	400670280154	8 PMED
42	400670280161	8 PMED
43	400670280250	8 PMED
44	400700390041	8 PMED
45	400830280011	8 PMED
46	400840180019	2 OPAT
47	400840180040	2 OPAT
48	400840180095	8 PMED
49	400840180108	8 PMED
50	400840180115	8 PMED

Sample SAS Job for Example B
sample print of work.aspmeds

PMED (HC-059A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
400100460012	400100460012001	CLARITIN	76.16	18432.19
	400100460012002	CLARITIN	76.16	18432.19
400100460029	400100460029001	ALBUTEROL	17.98	18432.19
400100460036	400100460036001	NASACORT AQ	45.98	18432.19
400100460043	400100460043001	BUTISOL SODIUM	7.47	18432.19
400120250196	400120250196001	ALBUTEROL	23.98	13391.24
400150180076	400150180076001	FLOVENT	109.99	6058.14
	400150180076002	FLOVENT	109.99	6058.14
	400150180076003	FLOVENT	109.99	6058.14
400150180083	400150180083001	SEREVENT DISKUS	92.99	6058.14
	400150180083002	SEREVENT DISKUS	92.99	6058.14
400150180090	400150180090001	NEBULIZER	29.09	6058.14
400150180507	400150180507001	SINGULAIR	100.98	6058.14
	400150180507002	SINGULAIR	100.98	6058.14
400150320110	400150320110001	SINGULAIR (UNIT OF USE)	94.99	6682.32
	400150320110002	SINGULAIR (UNIT OF USE)	94.99	6682.32
	400150320110003	SINGULAIR (UNIT OF USE)	94.99	6682.32
	400150320110004	SINGULAIR (UNIT OF USE)	94.99	6682.32
400420120077	400420120077001	ADMIN.SET	16.85	7548.34
	400420120077002	ADMIN.SET	16.85	7548.34
	400420120077003	ADMIN.SET	16.85	7548.34
	400420120077004	ADMIN.SET	16.85	7548.34
	400420120077005	ADMIN.SET	16.85	7548.34
	400420120077006	ADMIN.SET	16.85	7548.34
400420120180	400420120180001	ADMIN.SET	16.85	7548.34
	400420120180002	ADMIN.SET	16.85	7548.34
	400420120180003	ADMIN.SET	16.85	7548.34
	400420120180004	ADMIN.SET	16.85	7548.34
400500160080	400500160080001	ALBUTEROL	16.37	7713.59
	400500160080002	ALBUTEROL	16.37	7713.59
	400500160080003	ALBUTEROL	16.37	7713.59
	400500160080004	ALBUTEROL	16.37	7713.59
	400500160080005	ALBUTEROL	16.37	7713.59
400500160097	400500160097001	FLOVENT	49.30	7713.59
	400500160097002	FLOVENT	49.30	7713.59
	400500160097003	FLOVENT	49.30	7713.59

Sample SAS Job for Example B
sample print of work.aspmeds

PMED (HC-059A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
400500160097	400500160097004	FLOVENT	49.30	7713.59
	400500160097005	FLOVENT	49.30	7713.59
400630140070	400630140070001	ALBUTEROL	67.44	13871.65
	400630140070002	ALBUTEROL	67.44	13871.65
400630140087	400630140087001	AEROBID	67.01	13871.65
	400630140087002	AEROBID	67.01	13871.65
	400630140087003	AEROBID	67.01	13871.65
400630140107	400630140107001	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140107002	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140107003	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140107004	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140107005	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140107006	SINGULAIR (UNIT OF USE)	165.12	13871.65
400630140152	400630140152001	ALBUTEROL	43.40	13871.65
	400630140152002	ALBUTEROL	43.40	13871.65
	400630140152003	ALBUTEROL	43.40	13871.65
400630140169	400630140169001	AEROBID	67.01	13871.65
	400630140169002	AEROBID	67.01	13871.65
	400630140169003	AEROBID	67.01	13871.65
400630140183	400630140183001	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140183002	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140183003	SINGULAIR (UNIT OF USE)	165.12	13871.65
400630140227	400630140227001	ALBUTEROL	42.82	13871.65
	400630140227002	ALBUTEROL	42.82	13871.65
400630140234	400630140234001	AEROBID	67.01	13871.65
	400630140234002	AEROBID	67.01	13871.65
	400630140234003	AEROBID	67.01	13871.65
	400630140234004	AEROBID	67.01	13871.65
	400630140234005	AEROBID	67.01	13871.65
400630140258	400630140258001	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140258002	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140258003	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140258004	SINGULAIR (UNIT OF USE)	165.12	13871.65
	400630140258005	SINGULAIR (UNIT OF USE)	165.12	13871.65
400670280130	400670280130001	CHERATUSSIN AC	11.69	6858.69
400670280147	400670280147001	CLARITIN	77.50	6858.69
400670280154	400670280154001	ADVAIR DISKUS 500/50	164.45	6858.69

Sample SAS Job for Example B
sample print of work.aspmeds

PMED (HC-059A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
400670280161	400670280161001	FLONASE	65.99	6858.69
400670280250	400670280250001	FLONASE	56.33	6858.69
400700390041	400700390041001	ALBUTEROL	74.99	17280.79
400830280011	400830280011001	ACCOLATE	58.74	2114.22
400840180095	400840180095001	ALBUTEROL	26.92	4082.26
	400840180095002	ALBUTEROL	26.92	4082.26
400840180108	400840180108001	FLOVENT	109.99	4082.26
	400840180108002	FLOVENT	109.99	4082.26
400840180115	400840180115001	SEREVENT	71.99	4082.26
	400840180115002	SEREVENT	71.99	4082.26
400840180122	400840180122001	ALBUTEROL	37.50	4082.26
400840180204	400840180204001	ALBUTEROL	26.92	4082.26
	400840180204002	ALBUTEROL	26.92	4082.26
400840180211	400840180211001	FLOVENT	109.99	4082.26
	400840180211002	FLOVENT	109.99	4082.26
400840180228	400840180228001	ALBUTEROL	222.03	4082.26
400840180259	400840180259001	FLOVENT	59.87	4082.26
400840180379	400840180379001	ALBUTEROL	26.92	4082.26
	400840180379002	ALBUTEROL	26.92	4082.26
400840180386	400840180386001	FLOVENT	109.99	4082.26
	400840180386002	FLOVENT	109.99	4082.26
400840180393	400840180393001	SEREVENT	71.99	4082.26
	400840180393002	SEREVENT	71.99	4082.26
400850110226	400850110226001	ALBUTEROL	86.10	6763.21
	400850110226002	ALBUTEROL	86.10	6763.21
400850110428	400850110428001	ATROVENT	35.20	6763.21
400850110435	400850110435001	ALBUTEROL	86.10	6763.21
	400850110435002	ALBUTEROL	86.10	6763.21
400990200092	400990200092001	ALBUTEROL	16.37	6205.83
	400990200092002	ALBUTEROL	16.37	6205.83
	400990200092003	ALBUTEROL	16.37	6205.83

Sample SAS Job for Example B
sample print of work.aspmeds

PMED (HC-059A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
400990200092	400990200092004	ALBUTEROL	16.37	6205.83
400990200105	400990200105001	SEREVENT	71.99	6205.83
	400990200105002	SEREVENT	71.99	6205.83
	400990200105003	SEREVENT	71.99	6205.83
400990200112	400990200112001	AZMACORT	77.99	6205.83
	400990200112002	AZMACORT	77.99	6205.83
	400990200112003	AZMACORT	77.99	6205.83
	400990200112004	AZMACORT	77.99	6205.83
401160130055	401160130055001	ALBUTEROL	26.49	10620.03
401650150112	401650150112001	ALBUTEROL	17.90	5825.09
401650150129	401650150129001	VANCERIL	50.99	5825.09
401650150150	401650150150001	CIPRO (W/DILUENT)	75.01	5825.09
401650150167	401650150167001	COMBIVENT	49.99	5825.09
401710240056	401710240056001	AZMACORT	54.62	14299.90
	401710240056002	AZMACORT	54.62	14299.90
401710240063	401710240063001	ALBUTEROL	11.90	14299.90
401840370052	401840370052001	SINGULAIR	96.10	9506.64
401840370076	401840370076001	MAXAIR	60.18	9506.64
401840370083	401840370083001	RHINOCORT	35.08	9506.64
401840370090	401840370090001	SEREVENT	66.64	9506.64
401840370103	401840370103001	PROVENTIL HFA (M.D.I.)	82.64	9506.64
401870110068	401870110068001	PROVENTIL	21.41	6441.33
401870350037	401870350037001	ALBUTEROL	22.98	6999.50
401870350119	401870350119001	ALBUTEROL	22.98	6999.50
402060410211	402060410211001	BRONCHO SALINE	10.29	19450.46
402160660044	402160660044001	PANFIL G	47.98	1238.52
	402160660044002	PANFIL G	47.98	1238.52
	402160660044003	PANFIL G	47.98	1238.52
	402160660044004	PANFIL G	47.98	1238.52

Sample SAS Job for Example B
 sample print of work.aspmeds

PMED (HC-059A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
402160660075	402160660075001	PANFIL G	47.98	1238.52
402160660119	402160660119001	PANFIL G	47.98	1238.52
	402160660119002	PANFIL G	47.98	1238.52
	402160660119003	PANFIL G	47.98	1238.52
	402160660119004	PANFIL G	47.98	1238.52
402190190034	402190190034001	ALBUTEROL	22.95	4294.92
402190190041	402190190041001	ZITHROMAX	67.75	4294.92
402190190058	402190190058001	ATROVENT	43.55	4294.92
402260280021	402260280021001	BRONCHO SALINE	11.49	11925.78
402260280045	402260280045001	BRONCHO SALINE	11.49	11925.78
402350120011	402350120011001	SINGULAIR (UNIT OF USE)	71.20	9259.38
	402350120011002	SINGULAIR (UNIT OF USE)	71.20	9259.38
	402350120011003	SINGULAIR (UNIT OF USE)	71.20	9259.38
402530190101	402530190101001	FLONASE	52.21	5804.97
	402530190101002	FLONASE	52.21	5804.97
402530190118	402530190118001	COMBIVENT	89.05	5804.97
	402530190118002	COMBIVENT	89.05	5804.97
402530190221	402530190221001	FLONASE	52.21	5804.97
	402530190221002	FLONASE	52.21	5804.97
	402530190221003	FLONASE	52.21	5804.97
	402530190221004	FLONASE	52.21	5804.97
	402530190221005	FLONASE	52.21	5804.97
402530190238	402530190238001	COMBIVENT	89.05	5804.97
	402530190238002	COMBIVENT	89.05	5804.97
	402530190238003	COMBIVENT	89.05	5804.97
	402530190238004	COMBIVENT	89.05	5804.97
	402530190238005	COMBIVENT	89.05	5804.97
402720640038	402720640038001	RIBAVIRIN	12.00	5630.79
402720640090	402720640090001	METAPROTERENOL SULFATE (S.F., CHERRY)	10.99	5630.79
402740320020	402740320020001	ALBUTEROL	42.82	8602.34
402740320044	402740320044001	ALBUTEROL	26.49	8602.34
402970200077	402970200077001	ASPIRIN/BUTALBITAL/CAFFEINE	32.99	3865.36

Sample SAS Job for Example B
sample print of work.aspmeds

PMED (HC-059A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
402970200084	402970200084001	AEROBID	61.79	3865.36
402970200091	402970200091001	ALBUTEROL	23.69	3865.36
402970200104	402970200104001	GUAIFENESIN	9.99	3865.36
402970200111	402970200111001	FLUNISOLIDE	152.12	3865.36
402970200200	402970200200001	PREDNISONE	3.90	3865.36
402970200224	402970200224001	ALBUTEROL	23.69	3865.36
	402970200224002	ALBUTEROL	23.69	3865.36
	402970200224003	ALBUTEROL	23.69	3865.36
402970200231	402970200231001	GUAIFENESIN	9.99	3865.36
402970200293	402970200293001	QVAR	52.04	3865.36
402970200320	402970200320001	ALBUTEROL	23.69	3865.36
402970200344	402970200344001	CLOTRIMAZOLE	29.96	3865.36
403000160036	403000160036001	AEROBID	59.88	6256.73
	403000160036002	AEROBID	59.88	6256.73
403000160043	403000160043001	CLARITIN	76.16	6256.73
	403000160043002	CLARITIN	76.16	6256.73
403110150675	403110150675001	THEOPHYLLINE	9.54	5459.30
	403110150675002	THEOPHYLLINE	9.54	5459.30
	403110150675003	THEOPHYLLINE	9.54	5459.30
	403110150675004	THEOPHYLLINE	9.54	5459.30
	403110150675005	THEOPHYLLINE	9.54	5459.30
403110150702	403110150702001	ALBUTEROL SULFATE (MDV)	59.96	5459.30
	403110150702002	ALBUTEROL SULFATE (MDV)	59.96	5459.30
	403110150702003	ALBUTEROL SULFATE (MDV)	59.96	5459.30
	403110150702004	ALBUTEROL SULFATE (MDV)	59.96	5459.30
	403110150702005	ALBUTEROL SULFATE (MDV)	59.96	5459.30
	403110150702006	ALBUTEROL SULFATE (MDV)	59.96	5459.30
403210480022	403210480022001	IPRATROPIUM	41.90	9525.99
403210480039	403210480039001	CROMOLYN	6.00	9525.99
403210480128	403210480128001	XOPENEX (P.F.)	50.00	9525.99
	403210480128002	XOPENEX (P.F.)	50.00	9525.99
	403210480128003	XOPENEX (P.F.)	50.00	9525.99
	403210480128004	XOPENEX (P.F.)	50.00	9525.99

Sample SAS Job for Example B
 sample print of work.aspmeds

PMED (HC-059A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
403210480128	403210480128005	XOPENEX (P.F.)	50.00	9525.99
	403210480128006	XOPENEX (P.F.)	50.00	9525.99
403210480135	403210480135001	IPRATROPIUM	41.90	9525.99
	403210480135002	IPRATROPIUM	41.90	9525.99
403210480142	403210480142001	ALBUTEROL	19.62	9525.99
	403210480142002	ALBUTEROL	19.62	9525.99
403210480159	403210480159001	SINGULAIR	96.10	9525.99
	403210480159002	SINGULAIR	96.10	9525.99
	403210480159003	SINGULAIR	96.10	9525.99
	403210480159004	SINGULAIR	96.10	9525.99
	403210480159005	SINGULAIR	96.10	9525.99
403210480166	403210480166001	PULMICORT	230.30	9525.99
	403210480166002	PULMICORT	230.30	9525.99
403210480231	403210480231001	ORAPRED	20.00	9525.99
403210480255	403210480255001	OMNICEF	105.99	9525.99
403210480279	403210480279001	XOPENEX (P.F.)	50.00	9525.99
403210480286	403210480286001	PULMICORT	230.30	9525.99
403210480306	403210480306001	SINGULAIR	96.10	9525.99
403230280075	403230280075001	AZMACORT	72.55	19457.74
403230280082	403230280082001	VITAPLEX PLUS	10.25	19457.74
403230280208	403230280208001	AZMACORT	126.24	19457.74
403230280215	403230280215001	VITAPLEX PLUS	10.25	19457.74
403320410049	403320410049001	SINGULAIR	96.10	16804.20
403320410063	403320410063001	EXTENDRYL JR	21.59	16804.20
403330360021	403330360021001	ALBUTEROL	24.99	7144.93
403340270119	403340270119001	ADVAIR DISKUS 100/50	94.00	9231.69
403860370031	403860370031001	COMBIVENT	42.34	7978.76
	403860370031002	COMBIVENT	42.34	7978.76
403860370048	403860370048001	ALBUTEROL	19.63	7978.76
	403860370048002	ALBUTEROL	19.63	7978.76

Sample SAS Job for Example B
sample print of work.aspmeds

PMED (HC-059A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
404130470046	404130470046001	TRIPLE ANTIBIOTIC	7.02	10582.91
404130470053	404130470053001	ALBUTEROL	25.35	10582.91
404130470077	404130470077001	ALBUTEROL	59.58	10582.91
404550260116	404550260116001	PULMICORT TURBUHALER	111.50	10940.94
	404550260116002	PULMICORT TURBUHALER	111.50	10940.94
404550260123	404550260123001	ALBUTEROL	14.49	10940.94
	404550260123002	ALBUTEROL	14.49	10940.94
404550260185	404550260185001	PULMICORT TURBUHALER	112.02	10940.94
	404550260185002	PULMICORT TURBUHALER	112.02	10940.94
404550260192	404550260192001	ALBUTEROL	14.49	10940.94
	404550260192002	ALBUTEROL	14.49	10940.94
404550260243	404550260243001	ALBUTEROL	14.49	10940.94
	404550260243002	ALBUTEROL	14.49	10940.94
404550260267	404550260267001	PULMICORT TURBUHALER	112.02	10940.94
	404550260267002	PULMICORT TURBUHALER	112.02	10940.94
404670140171	404670140171001	ALBUTEROL	21.41	7082.79
404760860051	404760860051001	BRONCHO SALINE	10.29	12567.27
404770150084	404770150084001	ALBUTEROL/IPRATROP	39.97	7311.39
	404770150084002	ALBUTEROL/IPRATROP	39.97	7311.39
404770150091	404770150091001	ALBUTEROL SULFATE	65.52	7311.39
404770150142	404770150142001	ORAPRED	20.00	7311.39
404770150166	404770150166001	SALMETEROL	7.01	7311.39
	404770150166002	SALMETEROL	7.01	7311.39
	404770150166003	SALMETEROL	7.01	7311.39
404770150197	404770150197001	N/F ZAFIRLUKAST	2.00	7311.39
	404770150197002	N/F ZAFIRLUKAST	2.00	7311.39
	404770150197003	N/F ZAFIRLUKAST	2.00	7311.39
404770150255	404770150255001	AMLODIPINE BESYLATE	3.50	7311.39
404770150262	404770150262001	ALBUTEROL	44.97	7311.39
404770150279	404770150279001	ALBUTEROL SULFATE	31.05	7311.39

Sample SAS Job for Example B
sample print of work.aspmeds

PMED (HC-059A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
404770150337	404770150337001	SALMETEROL	7.01	7311.39
404770150368	404770150368001	N/F ZAFIRLUKAST	167.58	7311.39
404770150659	404770150659001	ALBUTEROL	44.97	7311.39
	404770150659002	ALBUTEROL	44.97	7311.39
	404770150659003	ALBUTEROL	44.97	7311.39
404770150666	404770150666001	ALBUTEROL	63.60	7311.39
	404770150666002	ALBUTEROL	63.60	7311.39
	404770150666003	ALBUTEROL	63.60	7311.39
404770150673	404770150673001	SALMETEROL	7.01	7311.39
	404770150673002	SALMETEROL	7.01	7311.39
	404770150673003	SALMETEROL	7.01	7311.39
404770150680	404770150680001	IPRATROPIUM BROMIDE	138.96	7311.39
	404770150680002	IPRATROPIUM BROMIDE	138.96	7311.39
	404770150680003	IPRATROPIUM BROMIDE	138.96	7311.39
	404770150680004	IPRATROPIUM BROMIDE	138.96	7311.39
404840150036	404840150036001	AZMACORT INHALER	145.10	8327.04
404840150043	404840150043001	ALBUTEROL	59.58	8327.04
404840150050	404840150050001	GUAIFENEX G	10.00	8327.04
404870470033	404870470033001	ALBUTEROL	22.98	5910.14
	404870470033002	ALBUTEROL	22.98	5910.14
404870470040	404870470040001	CROMOLYN	6.00	5910.14
	404870470040002	CROMOLYN	6.00	5910.14
404870470057	404870470057001	ORAPRED	19.90	5910.14
405260140244	405260140244001	PREDNISONE	7.56	9722.48
405260140251	405260140251001	COMBIVENT	42.34	9722.48
	405260140251002	COMBIVENT	42.34	9722.48
405260140268	405260140268001	ZYBAN	98.94	9722.48
	405260140268002	ZYBAN	98.94	9722.48
405260140333	405260140333001	COMBIVENT	50.99	9722.48
	405260140333002	COMBIVENT	50.99	9722.48
405330290035	405330290035001	PREDNISONE	3.90	3431.38
405340590045	405340590045001	ALBUTEROL	18.75	15607.85

Sample SAS Job for Example B
 sample print of work.aspmeds

PMED (HC-059A) records which link to condition records coded as asthma

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
405340590052	405340590052001	SODIUM CHLORIDE 0.9% SYRINGE	131.25	15607.85
405400350081	405400350081001	ALBUTEROL	11.52	8490.21
405400350098	405400350098001	FLOVENT	59.19	8490.21
405400650051	405400650051001	SEREVENT	73.00	7915.97
405440370013	405440370013001	SINGULAIR (UNIT OF USE)	30.00	10460.24
405440370020	405440370020001	CLARITIN-D	28.60	10460.24
405440370037	405440370037001	FLOVENT	59.19	10460.24
	405440370037002	FLOVENT	59.19	10460.24
	405440370037003	FLOVENT	59.19	10460.24
	405440370037004	FLOVENT	59.19	10460.24

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

The MEANS Procedure

Analysis Variable : RXXP01X SUM OF PAYMENTS RXSF01X-RXOU01X(IMPUTED)

N	Sum
9476	508340.96

Total Rx expenditures associated with asthma

Weighted

The MEANS Procedure

Analysis Variable : RXXP01X SUM OF PAYMENTS RXSF01X-RXOU01X(IMPUTED)

N	Sum
9476	4589918293

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 82BX07.

NOTE: SAS initialization used:
real time 4.17 seconds
cpu time 0.42 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-059I";
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 0.12 seconds
cpu time 0.01 seconds
```

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

```

27      DATA ASCONDS;
28          SET IN.H61 (KEEP=CONDIDX CCCODEX);
29          IF CCCODEX="128";
30      RUN;

```

NOTE: There were 102489 observations read from the data set IN.H61.
NOTE: The data set WORK.ASCONDS has 1695 observations and 2 variables.
NOTE: DATA statement used:

real time	1.23 seconds
cpu time	0.15 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 1695 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCONDS has 1695 observations and 2 variables.
NOTE: PROCEDURE SORT used:

real time	0.07 seconds
cpu time	0.01 seconds

```

36
37      proc print data=asconds (obs=50);
38          title3 "sample print of work.asconds - sorted by condidx";
39          title4 "COND (HC-061) 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	0.25 seconds
cpu time	0.01 seconds

```

41
42      PROC SORT DATA=IN.H59IF1 OUT=CLNK; BY CONDIDX; RUN;

```

NOTE: There were 314599 observations read from the data set IN.H59IF1.
NOTE: The data set WORK.CLNK has 314599 observations and 5 variables.
NOTE: PROCEDURE SORT used:

real time	1.65 seconds
cpu time	1.21 seconds

```

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

```

NOTE: There were 314599 observations read from the data set WORK.CLNK.
NOTE: There were 1695 observations read from the data set WORK.ASCONDS.
NOTE: The data set WORK.ASCLNKS has 7046 observations and 3 variables.
NOTE: DATA statement used:
real time 0.35 seconds
cpu time 0.31 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 0.07 seconds
cpu time 0.01 seconds

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

NOTE: There were 7046 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 7046 observations and 3 variables.
NOTE: PROCEDURE SORT used:
real time 0.23 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 0.01 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 7046 observations read from the data set WORK.ASCLNKS.
NOTE: The data set WORK.ASCLNKS has 7033 observations and 2 variables.

NOTE: DATA statement used:
 real time 0.04 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.H59G (KEEP=EVNTIDX PERWT01F SEETLKPV OBXP01X);
82       IF PERWT01F > 0 & SEETLKPV NE 2;
83   RUN;
```

NOTE: There were 147490 observations read from the data set IN.H59G.
 NOTE: The data set WORK.MVIS has 142776 observations and 4 variables.
 NOTE: DATA statement used:
 real time 2.93 seconds
 cpu time 0.49 seconds

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

NOTE: There were 142776 observations read from the data set WORK.MVIS.
 NOTE: The data set WORK.MVIS has 142776 observations and 4 variables.
 NOTE: PROCEDURE SORT used:
 real time 0.42 seconds
 cpu time 0.40 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 7033 observations read from the data set WORK.ASCLNKS.
 NOTE: There were 142776 observations read from the data set WORK.MVIS.

NOTE: The data set WORK.ASMVIS has 2238 observations and 5 variables.

NOTE: DATA statement used:

```
real time      0.15 seconds
cpu time       0.15 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-059G) 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      0.01 seconds
cpu time       0.00 seconds
```

```
102
103   PROC MEANS DATA=ASMVIS N SUM;
104       VAR OBXP01X;
105       TITLE3 "Total medical visit expenditures (excluding telephone) associated with asthma";
106       RUN;
```

NOTE: There were 2238 observations read from the data set WORK.ASMVIS.

NOTE: The PROCEDURE MEANS printed page 7.

NOTE: PROCEDURE MEANS used:

```
real time      0.07 seconds
cpu time       0.00 seconds
```

```
107
108   PROC MEANS DATA=ASMVIS SUM;
109       VAR OBXP01X;
110       WEIGHT PERWT01F;
111       TITLE3 "Total medical visit expenditures (excluding telephone) associated with asthma";
112       TITLE5 "Weighted";
113       RUN;
```

NOTE: There were 2238 observations read from the data set WORK.ASMVIS.

NOTE: The PROCEDURE MEANS printed page 8.

NOTE: PROCEDURE MEANS used:

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

```
114
115
116
```

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

NOTE: The SAS System used:

```
real time      12.29 seconds
cpu time       3.37 seconds
```

Sample SAS Job for Example C
 sample print of work.asconds - sorted by condidx
 COND (HC-061) records where cccodex=128

Obs	CONDIDX	CCCODEX
1	400060150010	128
2	400060220025	128
3	400100460013	128
4	400120250093	128
5	400150180047	128
6	400150320017	128
7	400420120055	128
8	400500160056	128
9	400630140015	128
10	400670280087	128
11	400700390037	128
12	400830280016	128
13	400840180025	128
14	400840320017	128
15	400850110076	128
16	400990200047	128
17	401160130036	128
18	401650150017	128
19	401700450040	128
20	401710240020	128
21	401840370020	128
22	401870110028	128
23	401870350010	128
24	402060410053	128
25	402160430011	128
26	402160660010	128
27	402190190014	128
28	402260280015	128
29	402350120018	128
30	402530190024	128
31	402720640014	128
32	402740320012	128
33	402970200016	128
34	403000160011	128
35	403110150117	128
36	403210170016	128
37	403210480013	128
38	403230280069	128
39	403320410016	128
40	403330360012	128
41	403340270061	128
42	403510210075	128
43	403860370035	128
44	404130470038	128
45	404210160041	128
46	404550260035	128
47	404670140024	128
48	404760860025	128
49	404770150034	128
50	404790560018	128

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

CONDIDX	EVNTIDX	EVENTYPE
400100460013	400100460012	8 PMED
	400100460029	8 PMED
	400100460036	8 PMED
	400100460043	8 PMED
400120250093	400120250196	8 PMED
400150180047	400150180038	1 MVIS
	400150180076	8 PMED
	400150180083	8 PMED
	400150180090	8 PMED
	400150180463	1 MVIS
	400150180470	1 MVIS
	400150180507	8 PMED
400150320017	400150320014	1 MVIS
	400150320021	1 MVIS
	400150320038	1 MVIS
	400150320045	1 MVIS
	400150320052	1 MVIS
	400150320069	1 MVIS
	400150320090	1 MVIS
	400150320103	1 MVIS
	400150320110	8 PMED
400420120055	400420120077	8 PMED
	400420120180	8 PMED
400500160056	400500160080	8 PMED
	400500160097	8 PMED
400630140015	400630140025	1 MVIS
	400630140049	4 STAZ
	400630140056	3 EROM
	400630140070	8 PMED
	400630140087	8 PMED
	400630140107	8 PMED
	400630140145	1 MVIS
	400630140152	8 PMED
	400630140169	8 PMED
	400630140183	8 PMED
	400630140227	8 PMED
	400630140234	8 PMED
	400630140258	8 PMED
	400670280087	400670280130
400670280147		8 PMED
400670280154		8 PMED
400670280161		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
400670280087	400670280250	8 PMED
400700390037	400700390041	8 PMED
400830280016	400830280011	8 PMED
400840180025	400840180019	2 OPAT
	400840180040	2 OPAT
	400840180095	8 PMED
	400840180108	8 PMED
	400840180115	8 PMED
	400840180122	8 PMED
	400840180146	1 MVIS
	400840180204	8 PMED
	400840180211	8 PMED
	400840180228	8 PMED
	400840180259	8 PMED
	400840180297	2 OPAT
	400840180300	2 OPAT
	400840180317	2 OPAT
	400840180331	2 OPAT
	400840180379	8 PMED
400840180386	8 PMED	
400840180393	8 PMED	
400840320017	400840320026	2 OPAT
	400840320033	2 OPAT
	400840320191	2 OPAT
400850110076	400850110226	8 PMED
	400850110308	1 MVIS
	400850110315	1 MVIS
	400850110322	1 MVIS
	400850110360	1 MVIS
	400850110377	1 MVIS
	400850110428	8 PMED
	400850110435	8 PMED
400990200047	400990200092	8 PMED

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

Obs	CONDIDX	EVNTIDX	EVENTYPE
1	400100460013	400100460012	8 PMED
2	400100460013	400100460029	8 PMED
3	400100460013	400100460036	8 PMED
4	400100460013	400100460043	8 PMED
5	400120250093	400120250196	8 PMED
6	400150180047	400150180038	1 MVIS
7	400150180047	400150180076	8 PMED
8	400150180047	400150180083	8 PMED
9	400150180047	400150180090	8 PMED
10	400150180047	400150180463	1 MVIS
11	400150180047	400150180470	1 MVIS
12	400150180047	400150180507	8 PMED
13	400150320017	400150320014	1 MVIS
14	400150320017	400150320021	1 MVIS
15	400150320017	400150320038	1 MVIS
16	400150320017	400150320045	1 MVIS
17	400150320017	400150320052	1 MVIS
18	400150320017	400150320069	1 MVIS
19	400150320017	400150320090	1 MVIS
20	400150320017	400150320103	1 MVIS
21	400150320017	400150320110	8 PMED
22	400420120055	400420120077	8 PMED
23	400420120055	400420120180	8 PMED
24	400500160056	400500160080	8 PMED
25	400500160056	400500160097	8 PMED
26	400630140015	400630140025	1 MVIS
27	400630140015	400630140049	4 STAZ
28	400630140015	400630140056	3 EROM
29	400630140015	400630140070	8 PMED
30	400630140015	400630140087	8 PMED
31	400630140015	400630140107	8 PMED
32	400630140015	400630140145	1 MVIS
33	400630140015	400630140152	8 PMED
34	400630140015	400630140169	8 PMED
35	400630140015	400630140183	8 PMED
36	400630140015	400630140227	8 PMED
37	400630140015	400630140234	8 PMED
38	400630140015	400630140258	8 PMED
39	400670280087	400670280130	8 PMED
40	400670280087	400670280147	8 PMED
41	400670280087	400670280154	8 PMED
42	400670280087	400670280161	8 PMED
43	400670280087	400670280250	8 PMED
44	400700390037	400700390041	8 PMED
45	400830280016	400830280011	8 PMED
46	400840180025	400840180019	2 OPAT
47	400840180025	400840180040	2 OPAT
48	400840180025	400840180095	8 PMED
49	400840180025	400840180108	8 PMED
50	400840180025	400840180115	8 PMED

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

Obs	EVNTIDX	EVENTYPE
1	400100460012	8 PMED
2	400100460029	8 PMED
3	400100460036	8 PMED
4	400100460043	8 PMED
5	400120250196	8 PMED
6	400150180038	1 MVIS
7	400150180076	8 PMED
8	400150180083	8 PMED
9	400150180090	8 PMED
10	400150180463	1 MVIS
11	400150180470	1 MVIS
12	400150180507	8 PMED
13	400150320014	1 MVIS
14	400150320021	1 MVIS
15	400150320038	1 MVIS
16	400150320045	1 MVIS
17	400150320052	1 MVIS
18	400150320069	1 MVIS
19	400150320090	1 MVIS
20	400150320103	1 MVIS
21	400150320110	8 PMED
22	400420120077	8 PMED
23	400420120180	8 PMED
24	400500160080	8 PMED
25	400500160097	8 PMED
26	400630140025	1 MVIS
27	400630140049	4 STAZ
28	400630140056	3 EROM
29	400630140070	8 PMED
30	400630140087	8 PMED
31	400630140107	8 PMED
32	400630140145	1 MVIS
33	400630140152	8 PMED
34	400630140169	8 PMED
35	400630140183	8 PMED
36	400630140227	8 PMED
37	400630140234	8 PMED
38	400630140258	8 PMED
39	400670280130	8 PMED
40	400670280147	8 PMED
41	400670280154	8 PMED
42	400670280161	8 PMED
43	400670280250	8 PMED
44	400700390041	8 PMED
45	400830280011	8 PMED
46	400840180019	2 OPAT
47	400840180040	2 OPAT
48	400840180095	8 PMED
49	400840180108	8 PMED
50	400840180115	8 PMED

Sample SAS Job for Example C

sample print of work.asmvis

unique evntidxs from work.asclinks that are non-telephone MVIS (HC-059G) events

Obs	EVNTIDX	EVENTYPE	SEETLKPV	OBXP01X	PERWT01F
1	400150180038	1 MVIS	1	0.00	6058.14
2	400150180463	1 MVIS	1	90.54	6058.14
3	400150180470	1 MVIS	1	65.61	6058.14
4	400150320014	1 MVIS	1	54.34	6682.32
5	400150320021	1 MVIS	1	71.54	6682.32
6	400150320038	1 MVIS	1	16.50	6682.32
7	400150320045	1 MVIS	1	89.50	6682.32
8	400150320052	1 MVIS	1	89.50	6682.32
9	400150320069	1 MVIS	1	54.34	6682.32
10	400150320090	1 MVIS	1	32.32	6682.32
11	400150320103	1 MVIS	1	71.54	6682.32
12	400630140025	1 MVIS	1	59.00	13871.65
13	400630140145	1 MVIS	1	62.24	13871.65
14	400840180146	1 MVIS	1	175.00	4082.26
15	400850110308	1 MVIS	1	58.80	6763.21
16	400850110315	1 MVIS	1	96.31	6763.21
17	400850110322	1 MVIS	1	52.00	6763.21
18	400850110360	1 MVIS	1	29.75	6763.21
19	400850110377	1 MVIS	1	41.03	6763.21
20	401650150016	1 MVIS	1	78.80	5825.09
21	401870350013	1 MVIS	1	81.56	6999.50
22	402160660102	1 MVIS	1	37.94	1238.52
23	402260280014	1 MVIS	1	400.00	11925.78
24	402260280038	1 MVIS	1	215.14	11925.78
25	402530190036	1 MVIS	1	37.96	5804.97
26	402530190043	1 MVIS	1	93.74	5804.97
27	402530190125	1 MVIS	1	68.16	5804.97
28	402530190132	1 MVIS	1	129.00	5804.97
29	402530190149	1 MVIS	1	175.92	5804.97
30	402530190245	1 MVIS	1	108.68	5804.97
31	402530190276	1 MVIS	1	93.74	5804.97
32	402720640014	1 MVIS	1	42.40	5630.79
33	402720640021	1 MVIS	1	96.80	5630.79
34	402720640069	1 MVIS	1	26.15	5630.79
35	402970200015	1 MVIS	1	343.39	3865.36
36	402970200039	1 MVIS	1	0.00	3865.36
37	402970200046	1 MVIS	1	0.00	3865.36
38	402970200053	1 MVIS	1	24.58	3865.36
39	402970200128	1 MVIS	1	225.00	3865.36
40	402970200135	1 MVIS	1	122.71	3865.36
41	402970200142	1 MVIS	1	0.00	3865.36
42	402970200159	1 MVIS	1	0.00	3865.36
43	402970200166	1 MVIS	1	81.96	3865.36
44	402970200262	1 MVIS	1	203.49	3865.36
45	402970200286	1 MVIS	1	0.00	3865.36
46	403000160012	1 MVIS	1	153.92	6256.73
47	403000160029	1 MVIS	1	244.76	6256.73
48	403210170015	1 MVIS	1	12.00	6296.54
49	403210480046	1 MVIS	1	36.00	9525.99
50	403210480053	1 MVIS	1	36.00	9525.99

Sample SAS Job for Example C

Total medical visit expenditures (excluding telephone) associated with asthma

The MEANS Procedure

Analysis Variable : OBP01X SUM OF OBSF01X - OBOT01X (IMPUTED)

N	Sum
2238	184239.30

Sample SAS Job for Example C

Total medical visit expenditures (excluding telephone) associated with asthma

Weighted

The MEANS Procedure

Analysis Variable : OBP01X SUM OF OBSF01X - OBOT01X (IMPUTED)

Sum

1528629532

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 82BX07.

NOTE: SAS initialization used:
 real time 1.81 seconds
 cpu time 0.40 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-059I";
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     * Calculate the expenditures for prescribed medicines associated
10    * with insulin reported by the household as an other medical expense.
11    *****;
12
13    PROC FORMAT;
14        VALUE EVENTYPE
15            1 = "1 MVIS"
16            2 = "2 OPAT"
17            3 = "3 EROM"
18            4 = "4 STAZ"
19            5 = "5 DVIS"
20            6 = "6 OMED"
21            7 = "7 HVIS"
22            8 = "8 PMED";
```

NOTE: Format EVENTYPE has been output.

```
23
24        VALUE OMTYPE
25            -9 = '-9 NOT ASCERTAINED'
26            -8 = '-8 DK'
27            -7 = '-7 REFUSED'
28            -1 = '-1 INAPPLICABLE'
29            1 = '1 GLASSES OR CONTACT LENSES'
30            2 = '2 INSULIN'
```



```

31         3 = '3 DIABETIC EQUIPMENT/SUPPLIES'
32         4 = '4 AMBULANCE SERVICES'
33         5 = '5 ORTHOPEDIC ITEMS'
34         6 = '6 HEARING DEVICES'
35         7 = '7 PROSTHESIS'
36         8 = '8 BATHROOM AIDS'
37         9 = '9 MEDICAL EQUIPMENT'
38        10 = '10 DISPOSABLE SUPPLIES'
39        11 = '11 ALTERATIONS/MODIFICATIONS'
40        91 = '91 OTHER'
41         ;

```

NOTE: Format OMTYPE has been output.

```
42         RUN;
```

NOTE: PROCEDURE FORMAT used:

```

real time      0.10 seconds
cpu time       0.00 seconds

```

```

43
44         *-----
45         * Get other medical records for insulin for persons with positive weights.
46         *-----;
47
48        DATA OMED;
49          SET IN.H59C (KEEP=EVNTIDX PERWT01F OMTYPEX);
50          IF PERWT01F > 0 & OMTYPEX = 2;
51        RUN;

```

NOTE: There were 9376 observations read from the data set IN.H59C.

NOTE: The data set WORK.OMED has 606 observations and 3 variables.

NOTE: DATA statement used:

```

real time      0.34 seconds
cpu time       0.04 seconds

```

```

52
53        proc print data=omed (obs=100);
54          var evntidx OMTYPEX PERWT01F;
55          format OMTYPEX omtype.;
56          title3 "sample print of OMED (HC-059C) records where OMTYPEX=2";
57        run;

```

NOTE: There were 100 observations read from the data set WORK.OMED.

NOTE: The PROCEDURE PRINT printed pages 1-2.

NOTE: PROCEDURE PRINT used:

```

real time      0.25 seconds
cpu time       0.01 seconds

```

```

58
59         *-----
60         * Get PMED IDs linked to the OMED events which were for insulin.
61         *-----;
62
63        PROC SORT DATA=IN.H59IF2 OUT=RXLK; BY EVNTIDX; RUN;

```

NOTE: There were 60519 observations read from the data set IN.H59IF2.

NOTE: The data set WORK.RXLK has 60519 observations and 5 variables.

NOTE: PROCEDURE SORT used:

real time	0.43 seconds
cpu time	0.28 seconds

```

64
65     proc print data=rxlk (obs=150);
66         by evtidx;
67         id evtidx;
68         var linkidx eventype;
69         format eventype eventype.;
70         title3 "sample print of Rx+event link file records (HC-59IF2) - sorted by evtidx";
71     run;

```

NOTE: There were 150 observations read from the data set WORK.RXLK.

NOTE: The PROCEDURE PRINT printed pages 3-7.

NOTE: PROCEDURE PRINT used:

real time	0.07 seconds
cpu time	0.03 seconds

```

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

```

NOTE: There were 1756 observations read from the data set WORK.RXLK.

WHERE eventype=6;

NOTE: The data set WORK.OMEDRXLK has 1756 observations and 5 variables.

NOTE: DATA statement used:

real time	0.01 seconds
cpu time	0.01 seconds

```

76     proc print data=omedrxlk (obs=120);
77         by evtidx;
78         id evtidx;
79         var linkidx eventype;
80         format eventype eventype.;
81         title3 "sample print of work.omedrxlk - sorted by evtidx";
82         title4 "Rx+event link file records (HC-59IF2) where eventype=6 (omed)";
83     run;

```

NOTE: There were 120 observations read from the data set WORK.OMEDRXLK.

NOTE: The PROCEDURE PRINT printed pages 8-12.

NOTE: PROCEDURE PRINT used:

real time	0.01 seconds
cpu time	0.01 seconds

```

84
85     DATA PMEDIDS;
86         MERGE RXLK (IN=INRXLK KEEP=EVNTIDX LINKIDX EVENTYPE)
87             OMED (IN=INOMED KEEP=EVNTIDX);
88     BY EVNTIDX;

```

```
89     IF INRXLK & INOMED;
90     RUN;
```

```
NOTE: There were 60519 observations read from the data set WORK.RXLK.
NOTE: There were 606 observations read from the data set WORK.OMED.
NOTE: The data set WORK.PMEDIDS has 587 observations and 3 variables.
NOTE: DATA statement used:
      real time           0.07 seconds
      cpu time            0.06 seconds
```

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

```
NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE PRINT printed pages 13-14.
NOTE: PROCEDURE PRINT used:
      real time           0.01 seconds
      cpu time            0.00 seconds
```

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

```
NOTE: There were 587 observations read from the data set WORK.PMEDIDS.
NOTE: The data set WORK.PMEDIDS has 587 observations and 3 variables.
NOTE: PROCEDURE SORT used:
      real time           0.01 seconds
      cpu time            0.00 seconds
```

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

```
NOTE: There were 50 observations read from the data set WORK.PMEDIDS.
NOTE: The PROCEDURE PRINT printed page 15.
NOTE: PROCEDURE PRINT used:
      real time           0.01 seconds
      cpu time            0.00 seconds
```

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

NOTE: There were 587 observations read from the data set WORK.PMEDIDS.
 NOTE: The data set WORK.PMEDIDS has 587 observations and 1 variables.
 NOTE: DATA statement used:
 real time 0.01 seconds
 cpu time 0.01 seconds

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

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

```
117
118
119     *-----
120     * Get PMED records for OMED event which were for insulin.
121     *-----;
122     PROC SORT DATA=IN.H59A OUT=PMED; BY LINKIDX; RUN;
```

NOTE: There were 277866 observations read from the data set IN.H59A.
 NOTE: The data set WORK.PMED has 277866 observations and 74 variables.
 NOTE: PROCEDURE SORT used:
 real time 3:09.89
 cpu time 17.78 seconds

```
123
124     DATA OMPMEDS;
125         MERGE PMED (KEEP=LINKIDX RXRECIDX RXXP01X PERWT01F RXNAME)
126             PMEDIDS (IN=A);
127         BY LINKIDX;
128         IF A & PERWT01F>0;
129     RUN;
```

NOTE: There were 277866 observations read from the data set WORK.PMED.
 NOTE: There were 587 observations read from the data set WORK.PMEDIDS.
 NOTE: The data set WORK.OMPAMEDS has 2130 observations and 5 variables.
 NOTE: DATA statement used:
 real time 4.71 seconds
 cpu time 0.95 seconds

```
130
131     proc print data=ompmeds (obs=200);
132         by linkidx;
133         id linkidx;
134         var rxrecidx rxname RXXP01X PERWT01F;
135         title3 "sample print of work.pmeds";
136         title4 "PMED (HC-059A) records for unique linkidxs in work.pmedids";
```

137 run;

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

NOTE: The PROCEDURE PRINT printed pages 17-22.

NOTE: PROCEDURE PRINT used:

real time	0.11 seconds
cpu time	0.01 seconds

138

139 PROC MEANS DATA=OMPMEDS N SUM;

140 VAR RXXP01X;

141 TITLE3 "Total Rx expenditures associated with other medical expenses for insulin";

142 RUN;

NOTE: There were 2130 observations read from the data set WORK.OMPMEDS.

NOTE: The PROCEDURE MEANS printed page 23.

NOTE: PROCEDURE MEANS used:

real time	0.18 seconds
cpu time	0.01 seconds

143

144 PROC MEANS DATA=OMPMEDS N SUM;

145 VAR RXXP01X;

146 WEIGHT PERWT01F;

147 TITLE3 "Total Rx expenditures associated with other medical expenses for insulin";

148 TITLE5 "Weighted";

149 RUN;

NOTE: There were 2130 observations read from the data set WORK.OMPMEDS.

NOTE: The PROCEDURE MEANS printed page 24.

NOTE: PROCEDURE MEANS used:

real time	0.01 seconds
cpu time	0.00 seconds

150

151

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

NOTE: The SAS System used:

real time	3:20.20
cpu time	19.81 seconds

Sample SAS Job for Example D
sample print of OMED (HC-059C) records where OMTYPEX=2

Obs	EVNTIDX	OMTYPEX	PERWT01F
1	401790360016	2 INSULIN	2703.67
2	401790360105	2 INSULIN	2703.67
3	402010110027	2 INSULIN	5928.25
4	402010110154	2 INSULIN	5928.25
5	402010110229	2 INSULIN	5928.25
6	402640180037	2 INSULIN	4740.96
7	402640180171	2 INSULIN	4740.96
8	402640180260	2 INSULIN	4740.96
9	402760190048	2 INSULIN	12596.76
10	402760190137	2 INSULIN	12596.76
11	402760190226	2 INSULIN	12596.76
12	402790140029	2 INSULIN	11843.00
13	402950100042	2 INSULIN	9121.94
14	402950100340	2 INSULIN	9121.94
15	402970130039	2 INSULIN	6340.94
16	403030100015	2 INSULIN	7363.66
17	403030100060	2 INSULIN	7363.66
18	403030100128	2 INSULIN	7363.66
19	403770150035	2 INSULIN	6340.55
20	403770150326	2 INSULIN	6340.55
21	404070180056	2 INSULIN	11774.97
22	404070180138	2 INSULIN	11774.97
23	404070180183	2 INSULIN	11774.97
24	404220100029	2 INSULIN	11421.52
25	404220100245	2 INSULIN	11421.52
26	404910180142	2 INSULIN	4323.14
27	404910180320	2 INSULIN	4323.14
28	404930130037	2 INSULIN	2568.91
29	404930130277	2 INSULIN	2568.91
30	404930130380	2 INSULIN	2568.91
31	404930200068	2 INSULIN	3190.97
32	404930200171	2 INSULIN	3190.97
33	404930200260	2 INSULIN	3190.97
34	405450650033	2 INSULIN	6704.50
35	405650150136	2 INSULIN	6899.91
36	406250160047	2 INSULIN	5118.49
37	406250160136	2 INSULIN	5118.49
38	406880180020	2 INSULIN	8986.10
39	406880180075	2 INSULIN	8986.10
40	407770250120	2 INSULIN	6471.81
41	407770250411	2 INSULIN	6471.81
42	409050280037	2 INSULIN	5780.52
43	410270260387	2 INSULIN	7819.48
44	410820200171	2 INSULIN	10874.49
45	410820200284	2 INSULIN	10874.49
46	411100120010	2 INSULIN	10608.83
47	411100120072	2 INSULIN	10608.83
48	411330390027	2 INSULIN	8575.06
49	411330390116	2 INSULIN	8575.06
50	411330390212	2 INSULIN	8575.06
51	411620190291	2 INSULIN	4384.55
52	411990930376	2 INSULIN	10433.90
53	411990930489	2 INSULIN	10433.90

Sample SAS Job for Example D
 sample print of OMED (HC-059C) records where OMTYPEX=2

Obs	EVNTIDX	OMTYPEX	PERWT01F
54	413130250067	2 INSULIN	13555.55
55	413130250238	2 INSULIN	13555.55
56	413130250430	2 INSULIN	13555.55
57	413400110239	2 INSULIN	8739.59
58	413400110506	2 INSULIN	8739.59
59	413400110688	2 INSULIN	8739.59
60	413520170017	2 INSULIN	10292.15
61	413520170137	2 INSULIN	10292.15
62	414090180194	2 INSULIN	13130.21
63	414090180389	2 INSULIN	13130.21
64	414130250103	2 INSULIN	5622.93
65	415160240025	2 INSULIN	3739.27
66	415160240107	2 INSULIN	3739.27
67	415160240203	2 INSULIN	3739.27
68	416050180050	2 INSULIN	3547.38
69	416050180365	2 INSULIN	3547.38
70	416050180601	2 INSULIN	3547.38
71	416090180057	2 INSULIN	5243.46
72	416090180235	2 INSULIN	5243.46
73	416090180468	2 INSULIN	5243.46
74	416170140029	2 INSULIN	10696.97
75	416460180139	2 INSULIN	10696.20
76	416650170018	2 INSULIN	2281.29
77	416650540019	2 INSULIN	1514.57
78	416900290074	2 INSULIN	7928.84
79	416900290156	2 INSULIN	7928.84
80	416900290396	2 INSULIN	7928.84
81	417250110065	2 INSULIN	11130.29
82	417250110178	2 INSULIN	11130.29
83	417250110301	2 INSULIN	11130.29
84	417290120055	2 INSULIN	2555.89
85	418020180254	2 INSULIN	17914.50
86	418170180096	2 INSULIN	7099.84
87	418170180394	2 INSULIN	7099.84
88	418650140130	2 INSULIN	8204.96
89	419360220257	2 INSULIN	19667.60
90	420030120090	2 INSULIN	13719.24
91	420510250051	2 INSULIN	12923.63
92	420510250140	2 INSULIN	12923.63
93	420510250222	2 INSULIN	12923.63
94	420930170116	2 INSULIN	9503.61
95	420980170040	2 INSULIN	5946.09
96	420980170393	2 INSULIN	5946.09
97	421920280038	2 INSULIN	9680.91
98	421920280223	2 INSULIN	9680.91
99	421920280367	2 INSULIN	9680.91
100	421940230027	2 INSULIN	5730.46

Sample SAS Job for Example D
 sample print of Rx+event link file records (HC-59IF2) - sorted by evtidx

EVNTIDX	LINKIDX	EVENTYPE
400010130020	400010130051	1 MVIS
400010130037	400010130044	6 OMED
400010130068	400010130075	6 OMED
400010200075	400010200082	1 MVIS
400070150018	400070150025	1 MVIS
400070150049	400070150056	3 EROM
400100150029	400100150118	1 MVIS
400110130013	400110130020	1 MVIS
400110130037	400110130068	5 DVIS
400110130044	400110130068	5 DVIS
400110200044	400110200051	2 OPAT
400110370013	400110370020	1 MVIS
400110370037	400110370044	1 MVIS
	400110370051	1 MVIS
400120250014	400120250069	1 MVIS
400120250021	400120250076	1 MVIS
400120250038	400120250076	1 MVIS
400120250083	400120250090	1 MVIS
400120250110	400120250134	2 OPAT
	400120250141	2 OPAT
400130170019	400130170071	4 STAZ
	400130170088	4 STAZ
	400130170095	4 STAZ
	400130170108	4 STAZ
	400130170115	4 STAZ
	400130170122	4 STAZ
	400130170139	4 STAZ
	400130170146	4 STAZ
	400130170153	4 STAZ
	400130170160	4 STAZ
400130240160	400130240259	1 MVIS

Sample SAS Job for Example D
 sample print of Rx+event link file records (HC-59IF2) - sorted by evtidx

EVNTIDX	LINKIDX	EVENTYPE
400150180014	400150180052	3 EROM
400150180021	400150180069	1 MVIS
400150180038	400150180076	1 MVIS
	400150180083	1 MVIS
	400150180090	1 MVIS
400150180134	400150180487	2 OPAT
400150180141	400150180494	2 OPAT
400150320090	400150320110	1 MVIS
400170190012	400170190050	1 MVIS
400170190029	400170190067	1 MVIS
400170190149	400170190156	1 MVIS
	400170190163	1 MVIS
	400170190170	1 MVIS
	400170190187	1 MVIS
400170260050	400170260067	1 MVIS
	400170260074	1 MVIS
400170260101	400170260149	1 MVIS
400180180015	400180180022	1 MVIS
400180180039	400180180046	1 MVIS
400180350012	400180350029	3 EROM
400190150014	400190150083	1 MVIS
	400190150090	1 MVIS
	400190150103	1 MVIS
	400190150110	1 MVIS
	400190150127	1 MVIS
	400190150134	1 MVIS
400190150052	400190150141	1 MVIS
400190150069	400190150076	6 OMED
400190150165	400190150209	1 MVIS
400190150172	400190150209	1 MVIS
400190150196	400190150216	1 MVIS

Sample SAS Job for Example D

sample print of Rx+event link file records (HC-59IF2) - sorted by evtndix

EVNTIDX	LINKIDX	EVENTYPE
400190150292	400190150312	1 MVIS
	400190150329	1 MVIS
	400190150336	1 MVIS
	400190150343	1 MVIS
	400190150350	1 MVIS
	400190150367	1 MVIS
400190220052	400190220083	1 MVIS
400190220069	400190220076	6 OMED
400190220305	400190220456	1 MVIS
	400190220463	1 MVIS
400190220312	400190220487	1 MVIS
400190220329	400190220494	1 MVIS
400190390045	400190390254	1 MVIS
400190390069	400190390261	1 MVIS
400190390165	400190390254	1 MVIS
400190390196	400190390278	1 MVIS
400200100035	400200100042	1 MVIS
400200270028	400200270035	1 MVIS
400200270080	400200270131	1 MVIS
400230180015	400230180039	1 MVIS
400230180022	400230180046	1 MVIS
400230180077	400230180104	1 MVIS
	400230180111	1 MVIS
400230180091	400230180128	1 MVIS
400230320053	400230320104	1 MVIS
400230490015	400230490022	1 MVIS
	400230490039	1 MVIS
400250210017	400250210024	1 MVIS
400280170016	400280170061	5 DVIS
	400280170078	5 DVIS

Sample SAS Job for Example D
 sample print of Rx+event link file records (HC-59IF2) - sorted by evtidx

EVNTIDX	LINKIDX	EVENTYPE
400280240023	400280240030	1 MVIS
400290360092	400290360105	1 MVIS
400290430054	400290430078	1 MVIS
400290430061	400290430085	1 MVIS
400300180052	400300180069	1 MVIS
	400300180076	1 MVIS
400300180090	400300180110	1 MVIS
400340190014	400340190196	1 MVIS
	400340190209	1 MVIS
	400340190216	1 MVIS
400340190021	400340190223	1 MVIS
400340190189	400340190230	2 OPAT
400340190590	400340190709	1 MVIS
	400340190716	1 MVIS
	400340190723	1 MVIS
400340190603	400340190709	1 MVIS
	400340190716	1 MVIS
	400340190723	1 MVIS
400350300016	400350300023	1 MVIS
	400350300030	1 MVIS
400350300047	400350300054	1 MVIS
400350470016	400350470023	1 MVIS
400360130011	400360130100	3 EROM
400360130028	400360130117	2 OPAT
	400360130124	2 OPAT
	400360130131	2 OPAT
	400360130148	2 OPAT
400360130066	400360130155	4 STAZ
	400360130162	4 STAZ
	400360130179	4 STAZ
400380140010	400380140027	1 MVIS
	400380140034	1 MVIS
	400380140041	1 MVIS

Sample SAS Job for Example D

sample print of Rx+event link file records (HC-59IF2) - sorted by evtidx

EVNTIDX	LINKIDX	EVENTYPE
400380140010	400380140058	1 MVIS
400400190102	400400190157	1 MVIS
400400190119	400400190164	1 MVIS
	400400190171	1 MVIS
400400190133	400400190140	6 OMED
400400190397	400400190400	6 OMED
400400190688	400400190695	6 OMED
400420120022	400420120053	1 MVIS
	400420120060	1 MVIS
	400420120077	1 MVIS
	400420120084	1 MVIS
	400420120091	1 MVIS
	400420120104	1 MVIS
400420120135	400420120166	2 OPAT
400450280031	400450280106	1 MVIS
	400450280113	1 MVIS
400460130017	400460130031	1 MVIS
400470180017	400470180093	1 MVIS
	400470180106	1 MVIS
	400470180113	1 MVIS
400470180199	400470180322	1 MVIS
	400470180339	1 MVIS
400470180295	400470180353	1 MVIS
400480140128	400480140173	3 EROM
400490490014	400490490038	1 MVIS

Sample SAS Job for Example D
 sample print of work.omedrxlk - sorted by evtidx
 Rx+event link file records (HC-59IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
400010130037	400010130044	6 OMED
400010130068	400010130075	6 OMED
400190150069	400190150076	6 OMED
400190220069	400190220076	6 OMED
400400190133	400400190140	6 OMED
400400190397	400400190400	6 OMED
400400190688	400400190695	6 OMED
400520460018	400520460025	6 OMED
400850110048	400850110055	6 OMED
400850110182	400850110199	6 OMED
401790360016	401790360023	6 OMED
401790360105	401790360112	6 OMED
402010110027	402010110034	6 OMED
402010110041	402010110058	6 OMED
402010110154	402010110161	6 OMED
402010110178	402010110185	6 OMED
402010110229	402010110236	6 OMED
402010110243	402010110250	6 OMED
402160120043	402160120050	6 OMED
402640180013	402640180020	6 OMED
402640180037	402640180044	6 OMED
402640180171	402640180188	6 OMED
402640180260	402640180277	6 OMED
402640180335	402640180342	6 OMED
402760190024	402760190031	6 OMED

Sample SAS Job for Example D
 sample print of work.omedrxlk - sorted by evtidx
 Rx+event link file records (HC-59IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
402760190048	402760190055	6 OMED
402760190137	402760190144	6 OMED
402760190151	402760190168	6 OMED
402760190226	402760190233	6 OMED
402790140029	402790140036	6 OMED
402790140043	402790140050	6 OMED
402830160075	402830160082	6 OMED
402950100042	402950100059	6 OMED
402950100066	402950100073	6 OMED
402950100326	402950100333	6 OMED
402950100340	402950100357	6 OMED
402970130039	402970130046	6 OMED
402970130053	402970130060	6 OMED
403030100015	403030100022	6 OMED
403030100039	403030100046	6 OMED
403030100060	403030100077	6 OMED
403030100084	403030100091	6 OMED
403030100128	403030100135	6 OMED
403030100142	403030100159	6 OMED
403070180242	403070180259	6 OMED
403350240082	403350240099	6 OMED
403770150035	403770150042	6 OMED
403770150059	403770150066	6 OMED
403770150162	403770150179	6 OMED
403770150326	403770150333	6 OMED

Sample SAS Job for Example D
 sample print of work.omedrxlk - sorted by evtidx
 Rx+event link file records (HC-59IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
403770150340	403770150357	6 OMED
403780150127	403780150134	6 OMED
403980210032	403980210049	6 OMED
404010160012	404010160029	6 OMED
404010160194	404010160207	6 OMED
404070180032	404070180049	6 OMED
404070180056	404070180063	6 OMED
404070180138	404070180145	6 OMED
404070180152	404070180169	6 OMED
404220100029	404220100036	6 OMED
404220100245	404220100252	6 OMED
404220100269	404220100276	6 OMED
404230160284	404230160291	6 OMED
404230160955	404230160962	6 OMED
404400140156	404400140163	6 OMED
404910180053	404910180060	6 OMED
404910180142	404910180159	6 OMED
404910180166	404910180173	6 OMED
404910180320	404910180337	6 OMED
404910180344	404910180351	6 OMED
404930130037	404930130044	6 OMED
404930130051	404930130068	6 OMED
404930130277	404930130284	6 OMED
404930130291	404930130304	6 OMED
404930130380	404930130397	6 OMED

Sample SAS Job for Example D
 sample print of work.omedrxlk - sorted by evtidx
 Rx+event link file records (HC-59IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
404930130400	404930130417	6 OMED
404930200068	404930200075	6 OMED
404930200082	404930200099	6 OMED
404930200171	404930200188	6 OMED
404930200195	404930200208	6 OMED
404930200260	404930200277	6 OMED
404930200284	404930200291	6 OMED
404980100026	404980100033	6 OMED
405010120298	405010120301	6 OMED
405120250194	405120250207	6 OMED
405310150057	405310150064	6 OMED
405310150146	405310150153	6 OMED
405450650033	405450650040	6 OMED
405450650057	405450650064	6 OMED
405650150047	405650150054	6 OMED
405650150136	405650150143	6 OMED
405650150150	405650150167	6 OMED
405650150256	405650150263	6 OMED
406060140155	406060140162	6 OMED
406250160047	406250160054	6 OMED
406250160061	406250160078	6 OMED
406250160136	406250160143	6 OMED
406250160150	406250160167	6 OMED
406350190031	406350190048	6 OMED
406350190240	406350190257	6 OMED

Sample SAS Job for Example D
 sample print of work.omedrxlk - sorted by evtidx
 Rx+event link file records (HC-59IF2) where eventype=6 (omed)

EVNTIDX	LINKIDX	EVENTYPE
406700120084	406700120091	6 OMED
406880180020	406880180037	6 OMED
406880180044	406880180051	6 OMED
406880180075	406880180082	6 OMED
406880180099	406880180102	6 OMED
407140260452	407140260469	6 OMED
407140260476	407140260483	6 OMED
407450410033	407450410040	6 OMED
407770250120	407770250137	6 OMED
407770250144	407770250151	6 OMED
407770250411	407770250428	6 OMED
407770250435	407770250442	6 OMED
408010130058	408010130065	6 OMED
408130110034	408130110041	6 OMED
408130110096	408130110109	6 OMED
408340290054	408340290061	6 OMED
408410190095	408410190108	6 OMED
408630170034	408630170041	6 OMED
409050280037	409050280044	6 OMED
409050280075	409050280082	6 OMED

Sample SAS Job for Example D
 sample print of work.pmedids - sorted by evtidx
 work.rx1k records for omed events for insulin

EVNTIDX	LINKIDX	EVENTYPE
401790360016	401790360023	6 OMED
401790360105	401790360112	6 OMED
402010110027	402010110034	6 OMED
402010110154	402010110161	6 OMED
402010110229	402010110236	6 OMED
402640180037	402640180044	6 OMED
402640180171	402640180188	6 OMED
402640180260	402640180277	6 OMED
402760190048	402760190055	6 OMED
402760190137	402760190144	6 OMED
402760190226	402760190233	6 OMED
402790140029	402790140036	6 OMED
402950100042	402950100059	6 OMED
402950100340	402950100357	6 OMED
402970130039	402970130046	6 OMED
403030100015	403030100022	6 OMED
403030100060	403030100077	6 OMED
403030100128	403030100135	6 OMED
403770150035	403770150042	6 OMED
403770150326	403770150333	6 OMED
404070180056	404070180063	6 OMED
404070180138	404070180145	6 OMED
404220100029	404220100036	6 OMED
404220100245	404220100252	6 OMED
404910180142	404910180159	6 OMED

Sample SAS Job for Example D
 sample print of work.pmedids - sorted by evtidx
 work.rx1k records for omed events for insulin

EVNTIDX	LINKIDX	EVENTYPE
404910180320	404910180337	6 OMED
404930130037	404930130044	6 OMED
404930130277	404930130284	6 OMED
404930130380	404930130397	6 OMED
404930200068	404930200075	6 OMED
404930200171	404930200188	6 OMED
404930200260	404930200277	6 OMED
405450650033	405450650040	6 OMED
405650150136	405650150143	6 OMED
406250160047	406250160054	6 OMED
406250160136	406250160143	6 OMED
406880180020	406880180037	6 OMED
406880180075	406880180082	6 OMED
407770250120	407770250137	6 OMED
407770250411	407770250428	6 OMED
409050280037	409050280044	6 OMED
410270260387	410270260394	6 OMED
410820200171	410820200188	6 OMED
410820200284	410820200291	6 OMED
411100120010	411100120027	6 OMED
411330390027	411330390034	6 OMED
411330390116	411330390123	6 OMED
411330390212	411330390229	6 OMED
411620190291	411620190304	6 OMED
411990930376	411990930383	6 OMED

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

Obs	EVNTIDX	LINKIDX	EVENTYPE
1	401790360016	401790360023	6 OMED
2	401790360105	401790360112	6 OMED
3	402010110027	402010110034	6 OMED
4	402010110154	402010110161	6 OMED
5	402010110229	402010110236	6 OMED
6	402640180037	402640180044	6 OMED
7	402640180171	402640180188	6 OMED
8	402640180260	402640180277	6 OMED
9	402760190048	402760190055	6 OMED
10	402760190137	402760190144	6 OMED
11	402760190226	402760190233	6 OMED
12	402790140029	402790140036	6 OMED
13	402950100042	402950100059	6 OMED
14	402950100340	402950100357	6 OMED
15	402970130039	402970130046	6 OMED
16	403030100015	403030100022	6 OMED
17	403030100060	403030100077	6 OMED
18	403030100128	403030100135	6 OMED
19	403770150035	403770150042	6 OMED
20	403770150326	403770150333	6 OMED
21	404070180056	404070180063	6 OMED
22	404070180138	404070180145	6 OMED
23	404220100029	404220100036	6 OMED
24	404220100245	404220100252	6 OMED
25	404910180142	404910180159	6 OMED
26	404910180320	404910180337	6 OMED
27	404930130037	404930130044	6 OMED
28	404930130277	404930130284	6 OMED
29	404930130380	404930130397	6 OMED
30	404930200068	404930200075	6 OMED
31	404930200171	404930200188	6 OMED
32	404930200260	404930200277	6 OMED
33	405450650033	405450650040	6 OMED
34	405650150136	405650150143	6 OMED
35	406250160047	406250160054	6 OMED
36	406250160136	406250160143	6 OMED
37	406880180020	406880180037	6 OMED
38	406880180075	406880180082	6 OMED
39	407770250120	407770250137	6 OMED
40	407770250411	407770250428	6 OMED
41	409050280037	409050280044	6 OMED
42	410270260387	410270260394	6 OMED
43	410820200171	410820200188	6 OMED
44	410820200284	410820200291	6 OMED
45	411100120010	411100120027	6 OMED
46	411330390027	411330390034	6 OMED
47	411330390116	411330390123	6 OMED
48	411330390212	411330390229	6 OMED
49	411620190291	411620190304	6 OMED
50	411990930376	411990930383	6 OMED

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

Obs	LINKIDX
1	401790360023
2	401790360112
3	402010110034
4	402010110161
5	402010110236
6	402640180044
7	402640180188
8	402640180277
9	402760190055
10	402760190144
11	402760190233
12	402790140036
13	402950100059
14	402950100357
15	402970130046
16	403030100022
17	403030100077
18	403030100135
19	403770150042
20	403770150333
21	404070180063
22	404070180145
23	404220100036
24	404220100252
25	404910180159
26	404910180337
27	404930130044
28	404930130284
29	404930130397
30	404930200075
31	404930200188
32	404930200277
33	405450650040
34	405650150143
35	406250160054
36	406250160143
37	406880180037
38	406880180082
39	407770250137
40	407770250428
41	409050280044
42	410270260394
43	410820200188
44	410820200291
45	411100120027
46	411330390034
47	411330390123
48	411330390229
49	411620190304
50	411990930383

Sample SAS Job for Example D
 sample print of work.pmeds
 PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
401790360023	401790360023001	INSULIN NOVOLIN	50.60	2703.67
	401790360023002	INSULIN NOVOLIN	50.60	2703.67
	401790360023003	INSULIN NOVOLIN	50.60	2703.67
	401790360023004	INSULIN NOVOLIN	50.60	2703.67
401790360112	401790360112001	INSULIN NOVOLIN	50.60	2703.67
	401790360112002	INSULIN NOVOLIN	50.60	2703.67
	401790360112003	INSULIN NOVOLIN	50.60	2703.67
402010110034	402010110034001	HUMULIN R (VIAL)	25.30	5928.25
	402010110034002	HUMULIN R (VIAL)	25.30	5928.25
402010110161	402010110161001	HUMALOG (CARTRIDGE)	62.23	5928.25
	402010110161002	HUMALOG (CARTRIDGE)	62.23	5928.25
	402010110161003	HUMALOG (CARTRIDGE)	62.23	5928.25
	402010110161004	HUMALOG (CARTRIDGE)	62.23	5928.25
	402010110161005	HUMALOG (CARTRIDGE)	62.23	5928.25
	402010110161006	HUMALOG (CARTRIDGE)	62.23	5928.25
402010110236	402010110236001	HUMULIN N (VIAL)	25.30	5928.25
	402010110236002	HUMULIN N (VIAL)	25.30	5928.25
	402010110236003	HUMULIN N (VIAL)	25.30	5928.25
	402010110236004	HUMULIN N (VIAL)	25.30	5928.25
402640180044	402640180044001	NOVOLIN INSULIN	100.57	4740.96
	402640180044002	NOVOLIN INSULIN	100.57	4740.96
402640180188	402640180188001	NOVOLIN INSULIN	100.57	4740.96
	402640180188002	NOVOLIN INSULIN	100.57	4740.96
	402640180188003	NOVOLIN INSULIN	100.57	4740.96
	402640180188004	NOVOLIN INSULIN	100.57	4740.96
	402640180188005	NOVOLIN INSULIN	100.57	4740.96
	402640180188006	NOVOLIN INSULIN	100.57	4740.96
402640180277	402640180277001	NOVOLIN INSULIN	100.57	4740.96
	402640180277002	NOVOLIN INSULIN	100.57	4740.96
	402640180277003	NOVOLIN INSULIN	100.57	4740.96
	402640180277004	NOVOLIN INSULIN	100.57	4740.96
402760190055	402760190055001	INSULIN NOVOLIN	106.08	12596.76
	402760190055002	INSULIN NOVOLIN	106.08	12596.76
	402760190055003	INSULIN NOVOLIN	106.08	12596.76
	402760190055004	INSULIN NOVOLIN	106.08	12596.76
402760190144	402760190144001	INSULIN NOVOLIN	106.08	12596.76
	402760190144002	INSULIN NOVOLIN	106.08	12596.76
	402760190144003	INSULIN NOVOLIN	106.08	12596.76
	402760190144004	INSULIN NOVOLIN	106.08	12596.76

Sample SAS Job for Example D
 sample print of work.pmeds
 PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
402760190233	402760190233001	INSULIN NOVOLIN	106.08	12596.76
	402760190233002	INSULIN NOVOLIN	106.08	12596.76
	402760190233003	INSULIN NOVOLIN	106.08	12596.76
402790140036	402790140036001	INSULIN NOVOLIN	106.08	11843.00
	402790140036002	INSULIN NOVOLIN	106.08	11843.00
	402790140036003	INSULIN NOVOLIN	106.08	11843.00
402950100059	402950100059001	NOVOLIN INSULIN	100.57	9121.94
402950100357	402950100357001	NOVOLIN INSULIN	100.57	9121.94
402970130046	402970130046001	NOVOLIN INSULIN	100.57	6340.94
	402970130046002	NOVOLIN INSULIN	100.57	6340.94
	402970130046003	NOVOLIN INSULIN	100.57	6340.94
	402970130046004	NOVOLIN INSULIN	100.57	6340.94
	402970130046005	NOVOLIN INSULIN	100.57	6340.94
	402970130046006	NOVOLIN INSULIN	100.57	6340.94
	402970130046007	NOVOLIN INSULIN	100.57	6340.94
	402970130046008	NOVOLIN INSULIN	100.57	6340.94
403030100022	403030100022001	NOVOLIN INSULIN	100.57	7363.66
403030100077	403030100077001	NOVOLIN INSULIN	100.57	7363.66
	403030100077002	NOVOLIN INSULIN	100.57	7363.66
403030100135	403030100135001	NOVOLIN INSULIN	100.57	7363.66
	403030100135002	NOVOLIN INSULIN	100.57	7363.66
403770150042	403770150042001	NOVOLIN 70/30 (VIAL)	42.00	6340.55
	403770150042002	NOVOLIN 70/30 (VIAL)	42.00	6340.55
	403770150042003	NOVOLIN 70/30 (VIAL)	42.00	6340.55
	403770150042004	NOVOLIN 70/30 (VIAL)	42.00	6340.55
403770150333	403770150333001	INSULIN NOVOLIN	106.08	6340.55
	403770150333002	INSULIN NOVOLIN	106.08	6340.55
	403770150333003	INSULIN NOVOLIN	106.08	6340.55
	403770150333004	INSULIN NOVOLIN	106.08	6340.55
404070180063	404070180063001	INSULIN NOVOLIN	106.08	11774.97
404070180145	404070180145001	INSULIN NOVOLIN	106.08	11774.97
404220100036	404220100036001	HUMULIN R (VIAL)	77.99	11421.52
404220100252	404220100252001	HUMULIN R (VIAL)	27.99	11421.52
	404220100252002	HUMULIN R (VIAL)	27.99	11421.52
	404220100252003	HUMULIN R (VIAL)	27.99	11421.52
	404220100252004	HUMULIN R (VIAL)	27.99	11421.52

Sample SAS Job for Example D
 sample print of work.pmeds
 PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
404220100252	404220100252005	HUMULIN R (VIAL)	27.99	11421.52
404910180159	404910180159001	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180159002	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180159003	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180159004	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180159005	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180159006	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
404910180337	404910180337001	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180337002	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180337003	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180337004	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180337005	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180337006	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180337007	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180337008	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180337009	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
	404910180337010	RELION/NOVOLIN 70/30 (VIAL)	24.10	4323.14
404930130044	404930130044001	INSULIN NOVOLIN	106.08	2568.91
404930130284	404930130284001	INSULIN, HUMAN NPH	25.30	2568.91
	404930130284002	NOVOLIN N (VIAL)	25.30	2568.91
	404930130284003	INSULIN, HUMAN NPH	25.30	2568.91
404930130397	404930130397001	NOVOLIN N (VIAL)	25.30	2568.91
	404930130397002	INSULIN, HUMAN NPH	25.30	2568.91
404930200075	404930200075001	NOVOLIN INSULIN	100.57	3190.97
404930200188	404930200188001	NOVOLIN 70/30 (VIAL)	25.30	3190.97
	404930200188002	NOVOLIN 70/30 (VIAL)	25.30	3190.97
	404930200188003	NOVOLIN 70/30 (VIAL)	25.30	3190.97
	404930200188004	NOVOLIN 70/30 (VIAL)	25.30	3190.97
404930200277	404930200277001	NOVOLIN 70/30 (VIAL)	25.30	3190.97
	404930200277002	NOVOLIN 70/30 (VIAL)	25.30	3190.97
	404930200277003	NOVOLIN 70/30 (VIAL)	25.30	3190.97
405450650040	405450650040001	INSULIN NOVOLIN	50.60	6704.50
	405450650040002	INSULIN NOVOLIN	50.60	6704.50
405650150143	405650150143001	INSULIN NOVOLIN	30.30	6899.91
	405650150143002	INSULIN NOVOLIN	30.30	6899.91
	405650150143003	INSULIN NOVOLIN	30.30	6899.91
	405650150143004	INSULIN NOVOLIN	30.30	6899.91
	405650150143005	INSULIN NOVOLIN	30.30	6899.91

Sample SAS Job for Example D
 sample print of work.pmeds
 PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
406250160054	406250160054001	NOVOLIN R (VIAL)	75.90	5118.49
	406250160054002	NOVOLIN R (VIAL)	75.90	5118.49
	406250160054003	NOVOLIN R (VIAL)	75.90	5118.49
	406250160054004	NOVOLIN R (VIAL)	75.90	5118.49
	406250160054005	NOVOLIN R (VIAL)	75.90	5118.49
	406250160054006	NOVOLIN R (VIAL)	75.90	5118.49
	406250160054007	NOVOLIN R (VIAL)	75.90	5118.49
	406250160054008	NOVOLIN R (VIAL)	75.90	5118.49
406250160143	406250160143001	NOVOLIN N (VIAL)	75.90	5118.49
	406250160143002	NOVOLIN N (VIAL)	75.90	5118.49
406880180037	406880180037001	NOVOLIN INSULIN	100.57	8986.10
	406880180037002	NOVOLIN INSULIN	100.57	8986.10
	406880180037003	NOVOLIN INSULIN	100.57	8986.10
	406880180037004	NOVOLIN INSULIN	100.57	8986.10
406880180082	406880180082001	NOVOLIN INSULIN	100.57	8986.10
407770250137	407770250137001	HUMULIN 70/30 (VIAL)	50.60	6471.81
	407770250137002	HUMULIN 70/30 (VIAL)	50.60	6471.81
	407770250137003	HUMULIN 70/30 (VIAL)	50.60	6471.81
	407770250137004	HUMULIN 70/30 (VIAL)	50.60	6471.81
	407770250137005	HUMULIN 70/30 (VIAL)	50.60	6471.81
	407770250137006	HUMULIN 70/30 (VIAL)	50.60	6471.81
407770250428	407770250428001	HUMULIN 70/30 (VIAL)	50.60	6471.81
	407770250428002	HUMULIN 70/30 (VIAL)	50.60	6471.81
	407770250428003	HUMULIN 70/30 (VIAL)	50.60	6471.81
	407770250428004	HUMULIN 70/30 (VIAL)	50.60	6471.81
	407770250428005	HUMULIN 70/30 (VIAL)	50.60	6471.81
409050280044	409050280044001	NOVOLIN INSULIN	100.57	5780.52
	409050280044002	NOVOLIN INSULIN	100.57	5780.52
410270260394	410270260394001	INSULIN NOVOLIN	106.08	7819.48
	410270260394002	INSULIN NOVOLIN	106.08	7819.48
	410270260394003	INSULIN NOVOLIN	106.08	7819.48
	410270260394004	INSULIN NOVOLIN	106.08	7819.48
	410270260394005	INSULIN NOVOLIN	106.08	7819.48
410820200188	410820200188001	INSULIN NOVOLIN	50.60	10874.49
410820200291	410820200291001	INSULIN NOVOLIN	50.60	10874.49
	410820200291002	INSULIN NOVOLIN	50.60	10874.49
	410820200291003	INSULIN NOVOLIN	50.60	10874.49
	410820200291004	INSULIN NOVOLIN	50.60	10874.49
411100120027	411100120027001	INSULIN NOVOLIN	106.08	10608.83

Sample SAS Job for Example D
 sample print of work.pmeds
 PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
411100120027	411100120027002	INSULIN NOVOLIN	106.08	10608.83
	411100120027003	INSULIN NOVOLIN	106.08	10608.83
411330390034	411330390034001	INSULIN NOVOLIN	106.08	8575.06
	411330390034002	INSULIN NOVOLIN	106.08	8575.06
	411330390034003	INSULIN NOVOLIN	106.08	8575.06
	411330390034004	INSULIN NOVOLIN	106.08	8575.06
	411330390034005	INSULIN NOVOLIN	106.08	8575.06
411330390123	411330390123001	INSULIN NOVOLIN	106.08	8575.06
	411330390123002	INSULIN NOVOLIN	106.08	8575.06
	411330390123003	INSULIN NOVOLIN	106.08	8575.06
	411330390123004	INSULIN NOVOLIN	106.08	8575.06
	411330390123005	INSULIN NOVOLIN	106.08	8575.06
	411330390123006	INSULIN NOVOLIN	106.08	8575.06
	411330390123007	INSULIN NOVOLIN	106.08	8575.06
	411330390123008	INSULIN NOVOLIN	106.08	8575.06
411330390229	411330390229001	INSULIN NOVOLIN	106.08	8575.06
	411330390229002	INSULIN NOVOLIN	106.08	8575.06
	411330390229003	INSULIN NOVOLIN	106.08	8575.06
411620190304	411620190304001	HUMULIN-NPH	21.13	4384.55
	411620190304002	HUMULIN-NPH	21.13	4384.55
	411620190304003	HUMULIN-NPH	21.13	4384.55
	411620190304004	HUMULIN-NPH	21.13	4384.55
	411620190304005	HUMULIN-NPH	21.13	4384.55
	411620190304006	HUMULIN-NPH	21.13	4384.55
	411620190304007	HUMULIN-NPH	21.13	4384.55
	411620190304008	HUMULIN-NPH	21.13	4384.55
411990930383	411990930383001	INSULIN NOVOLIN	106.08	10433.90
411990930496	411990930496001	INSULIN NOVOLIN	106.08	10433.90
413130250074	413130250074001	INSULIN NOVOLIN	106.08	13555.55
413130250245	413130250245001	NOVOLIN INSULIN	100.57	13555.55
413130250447	413130250447001	NOVOLIN INSULIN	100.57	13555.55
413400110246	413400110246001	HUMALOG (VIAL)	95.40	8739.59
	413400110246002	HUMALOG (VIAL)	143.10	8739.59
	413400110246003	HUMALOG (VIAL)	95.40	8739.59
	413400110246004	HUMALOG (VIAL)	95.40	8739.59
	413400110246005	HUMALOG (VIAL)	95.40	8739.59
	413400110246006	HUMALOG (VIAL)	143.10	8739.59
	413400110246007	HUMALOG (VIAL)	143.10	8739.59
	413400110246008	HUMALOG (VIAL)	95.40	8739.59

Sample SAS Job for Example D
 sample print of work.pmeds

PMED (HC-059A) records for unique linkidxs in work.pmedids

LINKIDX	RXRECIDX	RXNAME	RXXP01X	PERWT01F
413400110513	413400110513001	HUMALOG (VIAL)	95.40	8739.59
	413400110513002	HUMALOG (VIAL)	95.40	8739.59
	413400110513003	HUMALOG (VIAL)	95.40	8739.59
	413400110513004	HUMALOG (VIAL)	95.40	8739.59
413400110695	413400110695001	HUMULIN R (VIAL)	75.90	8739.59
	413400110695002	HUMULIN R (VIAL)	75.90	8739.59
413520170024	413520170024001	NOVOLIN INSULIN	100.57	10292.15
	413520170024002	NOVOLIN INSULIN	100.57	10292.15
	413520170024003	NOVOLIN INSULIN	100.57	10292.15

Sample SAS Job for Example D

Total Rx expenditures associated with other medical expenses for insulin

The MEANS Procedure

Analysis Variable : RXXP01X SUM OF PAYMENTS RXSF01X-RXOU01X(IMPUTED)

N	Sum
2130	156566.48

Sample SAS Job for Example D

Total Rx expenditures associated with other medical expenses for insulin

Weighted

The MEANS Procedure

Analysis Variable : RXXP01X SUM OF PAYMENTS RXSF01X-RXOU01X(IMPUTED)

N	Sum
2130	1346125461